

# The Early Childhood Workforce Qualifications Calculator (EC WQC) User Guide

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Welcome to the EC WQC! As a reminder, the purpose of this tool is to provide state leaders with estimates of the funding needed to increase the qualifications of their states' current early care and education (ECE) workforce. The tool will generate a state-specific cost estimate that can be used by leaders to inform policy recommendations that increase ECE workforce qualifications.

We recognize that many factors contribute to providing high-quality early care and education. While this calculator focuses on the cost of raising specific educational qualifications for select groups as a means of further supporting the ECE workforce, it does not consider other indicators of quality in its calculation. We hope that this calculator will be a starting point for future iterations in which other quality indicators are incorporated.

This user guide provides supplemental support and instructions as users progress through the EC WQC. For reference, a screenshot of each step is provided for each section. The EC WQC works best on a computer, but is also compatible with mobile devices. The EC WQC is not compatible with Internet Explorer.

The EC WQC is made up of the following steps.

- Getting started
- Section 1. Number of ECE teachers by role, age group, and program type
- Section 2. Current educational qualifications of the ECE workforce in your state
- Section 3. Credentials required by your state
- Section 4. Your state's goals for educational attainment
- Section 5. Tuition and fees
- Cost Estimate

In each step, you will be asked to fill in as much information and data as you have available to help generate cost estimates. In cases for which you do not have data available, the EC WQC will use data from national and state data sources.

# Getting Started

## Getting started

### 1. Please select your state.

Click to select

### 2. Please identify the program type(s), age group(s), and teacher category(ies) of the ECE workforce for which you are interested in examining costs for increasing qualifications.

#### Program type

- Head Start/Pre-K
- School-Sponsored Center
- All Other Center-Based Programs
- Family Child Care Homes

#### Age group

- Infant/Toddler
- Preschool-Age Children

#### Teacher category

- Lead Teachers
- Assistant Teachers

## Cost estimate

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First, select your state by clicking the response bubble. Upon clicking, a list of states will appear. You must select one state to continue. Next, select the sub-population(s) of the ECE workforce you are interested in examining.

**Important:** To move on to the next step, you must select at least one sub-population from each category (program type, age group, and teacher). You may select multiple sub-populations within each category.

Once you select the sub-populations you want to examine, the tool will begin to generate a basic cost estimate on the right-hand side of the screen. This cost estimate is based on national and state data from the U.S. Department of Labor (DoL) and the National Survey of Early Care and Education (NSECE) and is *not* the final estimate. To generate the most accurate cost estimate, [complete all five sections of the EC WQC](#). The cost estimate will continue to update based on the additional information you provide. [See the appendix for more information about the data sources used in this tool.](#)

# Section 1. Number of early care and education (ECE)

## 1. Number of ECE teachers by role, age group, and program type

Please confirm or enter the number of ECE teachers in your state.

If you have a more accurate estimate from a state registry or workforce study, please edit the numbers below.

Please note: Our estimates appear in **orange**; values you enter will appear in **blue**.

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**LEAD TEACHERS** Infant/toddlers

Head Start/Pre-K	106
School-Sponsored Center	22

**LEAD TEACHERS** Preschool-age children\*

Head Start/Pre-K	941
School-Sponsored Center	112

\*Family Child Care Homes that serve mixed-age groups of children (i.e., infants and toddlers, and preschool-age children) are included in the preschool-age category.

Data estimates come from (1) the number of teachers serving infant/toddler or preschool-age children in the National Survey of Early Care and Education (NSECE), and (2) state proportional data for numbers of "childcare workers", "teacher assistants", and "preschool teachers" in data from the U.S. Department of Labor.

This section will ask you to confirm or enter the number of ECE teachers in your state by role and age group served. The section is pre-populated with estimates based on national and state data from the DoL and the NSECE. These estimates appear in orange. You may edit the numbers if you have a more accurate estimate. Any values you enter will appear in blue.

The type of teacher (for example, lead teacher) will appear highlighted in a blue bubble, and the age group of children served will appear next to the blue bubble (for example, preschool-age children). Program type appears left of the table below the role and age group. These highlighted bubbles are based on the sub-populations of interest you selected in the first section. If you would like to make changes, you can scroll up and edit the sub-populations of interest.

To improve the accuracy of cost estimates, we recommend that you enter your state's most recent and accurate data whenever possible. To enter your own data, click on the cell you would like to change and enter your state's data for each sub-population. Once you make changes to the data, it will turn blue to indicate that your data are being used.

Some family child care home providers may serve both infants and toddlers and preschool-age children. For any providers that serve multiple age groups (i.e., mixed-age delivery), please include them in the number of family child care providers serving preschool-age children.

If you do not have data for a specific item in the calculator, the EC WQC automatically populates estimates based on national data sources (orange values). To confirm an estimate (orange values), simply leave the cell as is. This data entry format will be repeated for each role and age group sub-population selected in the previous section (Getting Started).

## Section 2. Current educational qualifications

### 2. Current educational qualifications of the ECE workforce in your state

Please confirm or enter the following estimates for the current educational qualifications of the ECE workforce based on your sub-populations of interest. We have included estimates for your state based on the National Survey of Early Care and Education (NSECE).

Categories below are mutually exclusive. Always choose a category associated with the established number of credit hours. For example, if a teacher has a Child Development Associate (CDA) credential and some college, then he/she has "CDA but no degree."

If you have more accurate estimates from a state registry or workforce study, please edit the numbers below. Please note: Our estimates appear in **orange**; values you enter will appear in **blue**.

**LEAD TEACHERS** Infant/toddlers

Program type	Some college or less (%)	CDA but no degree (%)	Associate's degree (%)	Bachelor's degree and above (%)
Head Start/Pre-K	5.5	32.2	29.5	32.9
School-Sponsored Center	4.8	1.5	76.2	17.5

**LEAD TEACHERS** Preschool-age children

Program type	Some college or less (%)	CDA but no degree (%)	Associate's degree (%)	Bachelor's degree and above (%)
Head Start/Pre-K	3.4	5.9	24	66.8
School-Sponsored Center	11.9	3.8	1.1	83.2

This section will ask you to confirm estimates or enter your own data for the current educational qualifications of ECE teachers in your state.

As in the previous section, estimated values appear in orange and the values you enter will appear in blue. The type of teacher (for example, lead teacher) can be found within the blue bubble and the age of children served can be found to the right of the blue bubble. In the tables below teacher type and age of

children served, program type appears on the left-most column, and educational qualifications appear in the remaining columns. The tool will generate a different table for each unique role and age group you selected in the Getting Started section.

To confirm an estimate (orange values), simply leave the cells as is. To enter your own data, click on the cell you would like to change and enter your state’s data for each sub-population. To improve the accuracy of the cost estimate, we recommend that you enter your state’s most recently available and accurate data.

## Section 3. State credentials

### 3. Credentials required by your state

Does your state require any ECE teachers to have state credentials?

Yes  No

Does this credential count for credit toward a degree program (i.e., an associate’s or bachelor’s degree)?

Yes  No

Where applicable, depending on teacher type and student age, please specify whether the credential is equivalent to the CDA. If not equivalent to the CDA, please enter the number of credit hours the credential counts toward.

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**LEAD TEACHERS** Infant/toddlers

Head Start/Pre-K	<input checked="" type="checkbox"/> CDA equivalent	120
School-Sponsored Center	<input type="checkbox"/> CDA equivalent	25

**LEAD TEACHERS** Preschool age children

Head Start/Pre-K	<input checked="" type="checkbox"/> CDA equivalent	120
School-Sponsored Center	<input type="checkbox"/> CDA equivalent	25

This section will ask you about the ECE credentials in your state. Depending on your answer to the first question (“Does your state require any ECE teachers to have state credentials?”), the tool may prompt you to answer additional questions. If your state does not require any ECE teachers to have a credential, or if your state’s credential does not count toward credit in a degree program, select no and proceed to Section 4.

If your state *does* have a credential that counts toward credit for a degree program, select yes; you will be asked to enter follow-up data regarding the number of credit hours that the credential counts toward.

The type of teacher (for example, lead teacher) can be found within the blue bubble and the age of children served (for example, preschool age) can be found to the right of the blue bubble. In the tables below each population and age group served, program type appears in the left-most column and credit hours are found in the remaining columns. The tool will generate a different table for each unique teacher type and age group you have selected.

For each sub-population of interest, you will then be asked whether the state credential is equivalent to a Child Development Associate (CDA) credential. If the credential is equivalent to a CDA, check the CDA equivalent boxes for each relevant population. Once those boxes are checked, an automatic value will appear in the right-hand cells. If the credential is *not* equivalent to a CDA, click in the corresponding cell and enter the number of credit hours your state's credential counts toward a degree. Data used to generate the number of hours needed to obtain a CDA come from the [Council for Professional Recognition](#). The number of hours needed to obtain a CDA is consistent across all states, so all values will appear in black, not orange or blue. To improve the accuracy of the cost estimate, we recommend that you enter your state's most recent and accurate data if these are different from the estimates provided.

## Section 4. Your state's goals

### 4. Your state's goals for educational attainment

Please select the educational goal(s) your state is hoping to achieve for its ECE workforce.

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**LEAD TEACHERS** Infant/toddlers

Head Start/Pre-K	<input type="radio"/> Associate's <input type="radio"/> Bachelor's
School-Sponsored Center	<input type="radio"/> Associate's <input type="radio"/> Bachelor's

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**LEAD TEACHERS** Preschool-age children

Head Start/Pre-K	<input type="radio"/> Associate's <input type="radio"/> Bachelor's
School-Sponsored Center	<input type="radio"/> Associate's <input type="radio"/> Bachelor's

This section will ask you to indicate your state's goals for the educational attainment of the ECE workforce. At this point, the EC WQC only offers the option to select the associate's or bachelor's degree as educational attainment choices. For each sub-population, please select the corresponding educational goal (associate's or bachelor's degree).

The type of teacher (for example, lead teacher) can be found within the blue bubble and the age of children served (for example, preschool age) can be found to the right of the blue bubble. In the tables below each teacher type and age group served, program type appears on the left with educational qualifications on the right. The tool will generate a different table for each unique role and age group you have selected.

## Section 5. Tuition and fees

### 5. Tuition and fees

According to data from [CollegeCalc](#), we estimate the average tuition fees and cost of obtaining state educational goals. If you have more accurate estimates of tuition and fees, please edit the numbers below.

Please note: Our estimates appear in **orange**; values you enter will appear in **blue**.

Average tuition for two-year Associate's degree (per year)

Note: Tuition estimates come from [CollegeCalc](#) for Early Childhood Education and Teaching major.

This section will ask you to confirm the tool's estimates or enter your own data about tuition and fees for each educational goal. To confirm an estimate (orange values), simply leave the cell as is. To enter your own data, click in the cell you would like to change and enter your state's tuition data for each educational goal. To improve the accuracy of cost estimates, we recommend that you enter your state's most recent data. As in previous sections, the estimated values appear in orange and the values you enter will appear in blue.

## Cost estimate

: for Early Childhood Education and Teaching major.

### Cost estimate

\$9,550,746

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#### **Congratulations, you've reached the end!**

Remember, this is only an estimate and may over- or under-calculate the costs needed to increase ECE workforce qualifications, based on the accuracy of the data provided. We encourage everyone to use the estimate generated by the EC WQC as a starting point for discussing new policies regarding educational goals for the ECE workforce, rather than using it as a formal policy or budget recommendation.

While this tool plays a role in supporting the early care and education workforce, we hope to be able to expand it to include more indicators of quality. We also hope your state will find the tool useful and encourage you to share it with others in your network, both within your state and beyond!

If you have any questions regarding this tool, please contact Winnie Li at [wli@childtrends.org](mailto:wli@childtrends.org).

**TOPICS: EARLY CHILDHOOD, EARLY CHILDHOOD WORKFORCE**

Congratulations! You have completed the EC WQC. Upon completion of the calculator, you will see further instructions for using your state's generated cost estimate (see #1 in the screenshot above). The final cost estimate for increasing educational qualifications of your state's ECE workforce can be found on the right side of the screen (see #2 in the screenshot above).

The cost calculated by the EC WQC is an estimate generated through a combination of pre-loaded state and national data sources (e.g., DoL, NSECE) and/or state-specific data you have entered. This figure is only an estimate and may over- or under-calculate costs needed to increase workforce qualifications. We encourage all users to use the estimate generated by the EC WQC as a starting point for discussing new policies regarding educational goals for the ECE workforce, rather than using it as a formal policy or budget recommendation. Specifically, this estimate is intended to help states think through an approach of how best to phase in new qualifications for the ECE workforce given the anticipated costs, such as developing a multi-year timeline or starting with increasing qualifications within a specific sector of the ECE workforce.

# Appendix: Description of Data Sources

This tool uses state and national data from the U.S. Department of Labor (DoL) and the National Survey of Early Care and Education (NSECE) to create estimates for each state. Data related to the cost of educational qualifications comes from CollegeCalc.org via the U.S. Department of Education and the Council for Professional Recognition. More information about each data source can be found below.

## Department of Labor, Bureau of Labor Statistics

- **What is the Bureau of Labor Statistics?** The Bureau of Labor Statistics (BLS) is a division of the Department of Labor. BLS generates data pulled from Occupational Employment Statistics using a model-based estimation methodology developed by the BLS Office of Employment Research and Program Development.
- **What BLS data were used?** We used state and national data through May 2018 Occupational Employment and Wage Estimates. For each state, we calculated the total number of people employed in each of the three employment categories below. We then divided each state's total employment by national total employment to obtain the state percentage of early care and education (ECE) workers.
  - Number of administrators in preschool and child care centers (SOC code 119031)
  - Number of child care workers (SOC code 399011)
  - Number of preschool teachers (SOC code 252011)
- **Limitations of BLS data:** We understand that the three employment categories may not represent the full universe of the ECE workforce. However, since we are calculating the proportion of ECE workers in one state in relative comparison to the national total, we think the percentage estimate from BLS data can be used as a good proxy for the true estimate of a state's percentage of the ECE workforce.

For more information on the OES MB3 estimates, please visit: <https://www.bls.gov/oes/oes-mb3-methods.htm>.

For more information on BLS Occupational Employment Statistics, please go to: <https://www.bls.gov/oes/home.htm>.

## National Survey of Early Care and Education

- **What is the NSECE?** The National Survey of Early Care and Education is an ongoing study of the early care and education (ECE) landscape in the United States. The study investigates the availability of ECE and how families utilize care through multiple series of surveys, questionnaires, and interviews. The most recent data available are from 2012.

- **What NSECE data were used?** We used data from three nationally representative surveys conducted in 2012 to generate estimates in the EC WQC. These were surveys of home-based providers, center-based providers, and the center-based provider workforce. The data used included:
  - **Caregivers working with infants/toddlers (birth to 35 months)**
    - Number of teachers/lead teachers (centers) or home-based teachers/caregivers (home-based providers)
    - Number of assistant teachers/aides (centers only)
    - Number of teachers/lead teachers (centers) or home-based teachers/caregivers (home-based providers)
    - Number of assistant teachers/aides (centers only)
  - **Caregivers working with preschool-age children (36 to 71 months, not K-8 school-aged)**
    - Number of teachers/lead teachers (centers) or home-based teachers/caregivers (home-based providers)
    - Number of assistant teachers/aides (centers only)
    - Number of teachers/lead teachers (centers) or home-based teachers/caregivers (home-based providers)
    - Number of assistant teachers/aides (centers only)
- **Limitations of NSECE data:** Availability of up-to-date data is one of the primary limitations of NSECE data. The most recent NSECE data are from 2012. While the ECE landscape has most likely changed since the time of data collection, the NSECE data currently provide the most comprehensive collection available on the ECE workforce.

For more information on the NSECE study, please visit:

<https://www.norc.org/Research/Projects/Pages/national-survey-of-early-care-and-education.aspx>.

## State tuition

We used data from CollegeCalc – Early Childhood Education and Training (see link below) to obtain state tuition costs. For six states without tuition fees from the data source (Alabama, Connecticut, Idaho, Rhode Island, South Carolina, and Virginia), we used the national average of state tuition from other states.

For more information on state tuition costs, please go to: <http://www.collegecalc.org/majors/early-childhood-education-and-teaching/>.

## Child Development Associate cost

The cost of the Child Development Associate (CDA) credential was retrieved from the Council for Professional Recognition, which administers the CDA National Credentialing Program. The cost to obtain a CDA is the same across all states.

For more information on the Council for Professional Recognition or the CDA credential, please go to: <https://www.cdacouncil.org/index.php>.