

## Overview

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### Equitable Distribution of Teachers: ESSA Requirements

The Elementary and Secondary Education Act (ESEA), reauthorized as the Every Student Succeeds Act (ESSA), requires state education agencies (SEAs) to evaluate annually whether low-income and minority students are taught disproportionately by ineffective, out-of-field, or inexperienced teachers compared to their higher-income, non-minority peers.<sup>1</sup> ESSA also requires local education agencies (LEAs) accepting Title I-A funds to submit plans to address any such disparities.<sup>2</sup>

This document explains the Colorado Department of Education’s (CDE) Equitable Distribution of Teachers (EDT) methodology. These specifications are provided so that analyses may be replicated by any district who wishes to review local data.

### EDT Analysis and Reporting

CDE’s Federal Programs Unit annually conducts two EDT analyses. The first looks at distribution of teachers by student poverty rates; the second by minority students enrolled. Small LEAs (enrollment less than 1,000 or no more than one school per grade span) are exempt from these analyses. Calculations are based on data LEAs submit through the Human Resources and December Count collections. Only full-time equivalent (FTE) data for teachers of core courses are included in EDT analyses.

CDE compares data of the district’s first quartile (highest poverty or minority) schools to its fourth quartile (lowest poverty or minority) schools to identify any gaps in percentage of effective, in-field, and experienced core-course FTE (see definitions in table below). If a district has schools in the highest poverty/minority quartile, but *not* in the corresponding lowest, the highest quartile percentages are compared to the State’s lowest quartile percentages.<sup>3</sup> Analyses are conducted separately for each indicator of teacher quality (effective, in-field, and experienced) for poverty and minority quartiles. This results in six possible data points for each district (see sample data in Table 2 below). Each LEA is provided EDT results at the district and school level to address any *identified* disparities. When an inequitable distribution is identified, a percentage point gap is reported and highlighted in red.

Colorado’s [ESSA State Plan](#) defines ineffective, out-of-field, and inexperienced as follows:

### Colorado EDT Indicator Definitions

Indicator	Definition
<b>Ineffective</b>	Teacher’s evaluation rating, based on Colorado’s Educator Quality Standards, is Ineffective or Partially Effective. Half of this rating is based on professional practices; half is based on measures of student learning/outcomes.
<b>Out-of-Field</b>	Teachers without at least one of the following, in the subject they teach: <ul style="list-style-type: none"> <li>• Endorsement on a Colorado teaching license.</li> <li>• Degree (bachelor’s or higher).</li> <li>• 36 semester hours (24 hours grandfathered in for 2017-18).</li> <li>• Passing a State Board of Education-approved content exam (currently the ETS Praxis Series).</li> </ul>
<b>Inexperienced</b>	Teachers with less than 3 full years of K-12 teaching experience (regardless of State).



## EDT Methodology

### Data Used

As noted above, only core course teacher FTE is included in EDT analyses. Core courses include 0010 (General Elementary), 0015 (General Grade 7, 8), 0070 (Co-Alt Exclusively), the 0200s (Art), 0500s (English Language Arts), 0600s (Foreign Languages), 1100s (Math), 1200s (Music), 1300s (Natural Sciences), 1500s (Social Sciences), 0070 (Special Ed., Co-Alt exclusively), and 1700s (Special Ed. - Elementary). Teaching subject area codes can be found at [http://www.cde.state.co.us/datapipeline/inter\\_staff](http://www.cde.state.co.us/datapipeline/inter_staff).

CDE includes only K-12 teacher FTE data with the following codes in the Human Resources collection:

Data Category	Data Element & Explanation
Job Classification	201 (General Ed.), 202 (Special Ed.), 206 (Title I).
Employment status	Actively employed (codes 11, 12, 13).

CDE uses October Count data to establish school poverty and minority percentages. Students are considered low-income if they are marked eligible for free or reduced cost meals (FRM). They are considered minority if they do not identify as exclusively White (e.g., American Indian, Asian, Black, Hispanic, Pacific Islander, more than one ethnicity).

### Poverty Analysis

Per Federal reporting requirements, CDE designates schools as elementary or secondary according to grade configuration, to correct for secondary students' reticence to sign up for subsidized meals. CDE considers schools that include grades 5 and below as elementary. If grade 6, 7, or 8 is included in a school with grade 5 or lower, that school retains elementary status. Schools for which grade 6 is the lowest are designated secondary. If a school includes grade 9, no matter the grade configuration, it is considered secondary. For example:

Elementary	Secondary
K-6	6-12
K-8	5-10
5-8	9-12
K-5	7-12
	K-9

Within these separate elementary and secondary categories, all Colorado K-12 public schools are ranked highest to lowest based on percentage of FRM students (no PK). Schools are then divided into four quartiles. In other words, each elementary school's poverty quartile is determined relative to all other elementary schools in Colorado. Schools with FRM percentages at or above the 75<sup>th</sup> percentile fall into the first (highest) poverty quartile. Schools with student FRM percentages below the 25<sup>th</sup> percentile are in the fourth (lowest) poverty quartile.

For 2017-18, the following FRM percentages determined into which poverty quartile each school fell.

Elementary		Secondary	
Quartile	% FRL cut-points	Quartile	% FRL cut-points
1	72.94%	1	65.07%
2	47.86%	2	43.75%
3	21.83%	3	24.15%
4	0%	4	0%

CDE combines elementary and secondary school poverty quartile designations to test within-district proportionality between the highest and lowest poverty schools (or state percentage, if there are no lowest quartile schools). The percentages of ineffective, inexperienced, and out-of-field teachers in the highest quartile schools are compared to percentages in the lowest quartile schools (or state average if district has no lowest quartile schools).



**Minority Analysis**

Minority quartiles are not configured for elementary and secondary separately. CDE calculates the percentage of students who do not identify as exclusively White (e.g., American Indian, Asian, Black, Hispanic, Pacific Islander, more than one ethnicity) for each school. Schools are ranked by their percentage of minority students. Those with minority enrollments at or above the 75<sup>th</sup> percentile constitute the first (highest) minority quartile. Schools with minority enrollment percentages below the 25<sup>th</sup> percentile make up the fourth (lowest) minority quartile.

For 2017-18, the following FRM percentages determined minority quartile:

All Schools	
Quartile	% Minority cut-points
1	67.25%
2	38.13%
3	22.85%
4	0%

CDE tests for within-district disparities in the percentages of inexperienced, out-of-field, or ineffective teacher FTE between the highest and lowest minority schools (or State percentage, if applicable).

**EDT Calculations by Teacher Experience, In-Field Status, and Effectiveness**

Analyses of teacher experience and in-field status are based on FTE from all teachers of core courses; effectiveness analyses use only FTE of teachers of core courses who were rated on effectiveness. The total rated FTE in each district’s highest poverty/minority schools is combined; the same procedure is done for the lowest poverty/minority schools. These totals serve as the denominators used to calculate the percentages described below.

**Experience:** FTE of teachers with 3 or more years of experience is summed and divided by the FTE totals separately for the district’s highest and lowest poverty/minority schools. The percentage of experienced FTE in the highest poverty/minority schools is compared to the percentage of experienced FTE in the lowest poverty/minority schools. If the experienced FTE percentage in the district’s highest poverty/minority schools is lower than that of the lowest poverty/minority schools, the district is considered to have an equity gap based on teacher experience.

**In-Field:** FTE of teachers determined to be in-field (endorsement, degree, 36 credit hours, or passed content test) is divided by the FTE totals separately for the highest and lowest poverty/minority schools. The percentage of in-field FTE in the highest poverty/minority schools is compared to the percentage of in-field FTE in the lowest poverty/minority schools. If the in-field percentage in the highest poverty/minority schools falls below that of the lowest poverty/minority schools, the district is considered to have an equity gap based on in-field teachers.

**Effectiveness:** FTE of teachers rated effective in the highest poverty/minority quartile is divided by the total FTEs that received effectiveness ratings, separately for the highest and lowest poverty/minority schools. The percentage of effective FTE in the highest poverty/minority schools is compared to the percentage of effective FTE in the lowest poverty/minority schools. If the percentage of effective FTE in the highest poverty/minority schools falls below that of the lowest poverty/minority schools, the district is considered to have an equity gap based on teacher effectiveness.

**Endnotes**

<sup>1</sup> ESSA, §1111 (g)(2)(b)

<sup>2</sup> ESSA, §1112 (b)(2)

<sup>3</sup> Quartiles are developed using Colorado student October Count poverty and minority data.