



## Overview

### 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 how the Colorado Department of Education (CDE) compiles and evaluates Equitable Distribution of Teachers (EDT) data and provides guidance to support LEAs to meet statutory requirements. This document also highlights strategies and funding opportunities LEAs may use to address EDT gaps.

### 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<sup>1</sup> (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 1 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:

**Table 1: 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).



**Table 2: Sample District EDT Results**

	Teacher Experience			Teacher In Field			Teacher Effective		
Quartile	Quartile 1 (highest)	Quartile 4 (lowest)	Q4 - Q1 difference	Quartile 1 (highest)	Quartile 4 (lowest)	Q4 - Q1 difference	Quartile 1 (highest)	Quartile 4 (lowest)	Q4 - Q1 difference
Indicator	% experienced	% experienced		% in-field	% in-field		% effective	% effective	
Poverty	69.28	72.22	7.94	95.71	95.27	-0.44	93.58	99.14	5.56
Minority	-	93.44	-	-	95.14	-	-	97.50	-

Note on this table: Where results are provided under “Q4-Q1 difference” column, and highlighted in red, an EDT gap was identified. Where no number is provided, e.g., “-”, the LEA had no schools that fell into that quartile. As indicated above, if the LEA has schools in the highest poverty or minority quartile (Q1), but no schools in the lowest poverty or minority quartile (Q4), the LEA Q1 schools are compared to the state percentage for Q4. If an LEA has no schools in Q1 for poverty or minority, that LEA does not receive an EDT result – this situation is demonstrated in the table for “Minority”.

## Frequently Asked Questions

### Are districts required to submit any data to CDE for these analyses?

CDE’s Federal Programs Unit uses data captured through the Human Resources and October Count collections. No additional data are required.

### How are the EDT analyses calculated, specifically?

CDE has posted an explanation of the EDT analysis methodology on the [CDE Federal Programs website](#).

### When are EDT analyses conducted and results disseminated?

All necessary data become available after April of each year. Allowing time for analyses and validation, results typically will be available by mid-May.

### How are data made available?

CDE publicly reports LEA-level results, and shares school-level data with LEAs through a secure file transfer system. This process protects any personally identifiable information (PII) that could be extrapolated from school-level data.

### Are districts required to conduct their own EDT analysis?

Districts are not required to perform local EDT analyses. CDE will disseminate EDT results for districts that have more than one school per grade-span (elementary, middle, high) or more than 1,000 students enrolled. Smaller LEAs can request EDT results to inform their comprehensive needs assessment and help them reflect on how human capital factors may contribute to student performance challenges.

### Are districts recommended to conduct their own analyses?

Because CDE completes EDT analyses towards the end of a given school year (e.g., EDT results for SY2018-19 are released around May 2019), LEAs may want to conduct their own analyses earlier to allow for current-school year planning and action steps.

### How do I engage local stakeholders to address EDT results?

Districts identified with educator equity gaps can empower district leadership, school leaders, teachers, parents and families, and community stakeholders with EDT information to inform planning efforts. Stakeholders should be informed that EDT analyses are required under ESSA to ensure equitable student access to effective, in-field, and experienced educators. To protect PII, districts are encouraged to apply data protection practices. CDE recommends sharing:



- Percentages, not numbers. For example, “4% of FTE in high poverty schools are out-of-field,” rather than “6 FTE in high poverty schools are out-of-field.”
- Data in ranges. For example, “3%-6% of FTE teachers in high poverty schools are out-of-field.”

A PowerPoint template for LEAs to use when engaging stakeholders on EDT is available on the Federal Programs [website](#).

When informed of educator equity gaps, stakeholders are better positioned to provide input on prioritizing challenges and developing solutions to fit local context. Districts can use EDT results to facilitate conversations with stakeholders about what gaps are occurring (educator effectiveness, in-field status, or experience), in which schools (highest poverty, minority, or both), and potential causes. Districts should utilize [Teaching and Learning Conditions in Colorado \(TLCC\)](#) survey responses to understand educators’ perceptions of working conditions, leadership, and where applicable, reasons for leaving schools.

**Does any identified disproportionality require a plan?**

Yes. According to ESSA, any identified disproportionality constitutes grounds for developing a plan to address inequitable student access to effective, in-field, and experienced teachers and excellent school leaders.

**How do I know if an EDT gap is significant, relative to gaps in other Colorado districts?**

CDE is developing a process to make EDT gap size more actionable and afford LEAs more flexibility.

**Where do I submit my educator equity plan?**

Currently, this plan is captured in the Consolidated Application for Federal funds (Title I, Question #4). Consolidated applications are due by June 30<sup>th</sup> each year. If the June 30<sup>th</sup> deadline cannot be met, gaps must be addressed within the subsequent school year. CDE is gathering stakeholder input regarding the most appropriate way to collect plans.

**Are districts required to reassign teachers to different classrooms or schools to address EDT findings?**

Districts with educator equity gaps may elect to make staffing changes to address disparities. However, reassigning teachers is not a requirement under ESSA, and may not address the root causes of this human capital issue. LEAs are encouraged to approach EDT issues collaboratively with stakeholders to develop plans that address compensation systems, hiring practices, educator supports, and working conditions. Plans may include a variety of strategies and supports.

**What should be considered when developing a plan to address EDT results?**

ESSA requires that districts develop and submit a plan to address any identified disparities in student access to experienced, in-field, and effective educators. CDE encourages districts with identified gaps to consider leading factors that influence teacher recruitment and retention<sup>4</sup> when developing a plan to increase equitable access to educators:

- Salaries and other forms of compensation.
- Preparation and costs to entry.
- Hiring and personnel management.
- Induction for new teachers.
- Working conditions: Supports for all teachers.

Factor	What Research Says	Example District Practices
<p><b>Salaries and other forms of compensation</b></p>	<ul style="list-style-type: none"> <li>• Salaries have a measurable impact on the distribution of teachers across, and within districts. Teachers are more likely to leave districts or schools that pay lower wages.<sup>5</sup></li> <li>• Increased salaries are associated with decreased proportions of non-credentialed, non-permanent, and inexperienced teachers, as well as decreased turnover rates.<sup>6</sup></li> <li>• Turnover comes at a cost. One study found that for every teacher who leaves, costs to recruit and hire their replacement range from \$4,300 (small rural districts) to \$18,000 (large urban districts).<sup>7</sup></li> </ul>	<ul style="list-style-type: none"> <li>• Prioritize equitable educator compensation for schools identified for Comprehensive Support and Targeted Support, as well as those with the highest poverty rates.</li> <li>• Offer hiring bonuses or annual performance compensation to attract experienced educators to teach in high-need subjects and schools. Couple this strategy with positive, supportive working conditions.</li> <li>• Develop a district career ladder policy to explicitly articulate growth and salary opportunities for teachers who take on leadership responsibilities, such as mentoring new teachers or expert coaching, while remaining primarily in the classroom.</li> <li>• Award bonuses to teachers who pursue continued development, such as National Board Certification (NBC).</li> </ul>



Factor	What Research Says	Example District Practices
<p><b>Preparation and costs to entry</b></p>	<ul style="list-style-type: none"> <li>Teachers in districts with career ladder policies are less likely to leave the profession overall, and report increased job satisfaction.<sup>8</sup></li> <li>There is a strong link between teacher preparation and retention. A national study found that teachers who had 1+ semesters of practice teaching prior to entering their own classroom were three times <i>less</i> likely to leave teaching after one year than those with no practice teaching.<sup>9</sup></li> <li>Those who simultaneously teach while undergoing preparation are disproportionately concentrated in high-need schools, typically low-performing with large proportions of low-income and minority students.<sup>10</sup></li> <li>Several studies have found that alternatively certified teachers leave the profession at higher rates than regularly certified teachers, and that disparities are larger in high-minority schools.<sup>11</sup></li> <li>Career pathway programs are associated with higher recruitment and retention rates of diverse teachers.<sup>12</sup></li> </ul>	<ul style="list-style-type: none"> <li>Offer loan forgiveness for educators who commit to high-need schools for a set amount of time. Offer awards that are substantial enough to cover all or a large proportion of tuition.</li> <li>For districts where housing costs present a financial challenge, offer housing assistance stipends.</li> <li>Partner with local universities to foster a teacher pipeline that addresses school and district teaching shortage areas. Offer training opportunities for student teachers to build relationships, and recruit them to teach locally.</li> <li>Develop a career pathway program to offer non-certified teachers and paraprofessionals the opportunity to become fully certified teachers in return for commitment to teach for a period of time.</li> </ul>
<p><b>Hiring and personnel management</b></p>	<ul style="list-style-type: none"> <li>Teachers hired after the start of the school year are generally less effective and more likely to leave than those hired in advance of the school year.<sup>13</sup></li> <li>High-performing, high-need schools invest substantial time in hiring processes that provide district and school leaders a good sense of candidates' fit, and offer candidates the chance to meet potential colleagues at prospective schools.<sup>14</sup></li> <li>In response to seeing 80% of resignations and 40% of retirement announcements occur after May 1 each year, one large urban school district incentivized early announcement of separation with a small stipend.<sup>15</sup></li> </ul>	<ul style="list-style-type: none"> <li>Use technology and clear communication to streamline application submission and processing.</li> <li>Frontload teacher recruitment and interviews in advance of summer break. Make offers to qualified candidates as early as possible, ideally before the end of the current school year.</li> <li>Forge partnerships with local universities to hold career fairs and send district recruiters to speak with prospective teachers.</li> <li>Empower, and compensate, school leaders and teachers to staff recruitment fairs and interview candidates.</li> <li>Incentivize early announcement of intent to separate with a small stipend. This will facilitate proactive hiring processes and help secure more qualified teachers.</li> </ul>
<p><b>Induction for new teachers</b></p>	<ul style="list-style-type: none"> <li>Teachers who start strong are more likely to become and remain effective teachers over time.<sup>16</sup></li> <li>A national study found that, while most 1<sup>st</sup> year teachers participate in induction programs, fewer report having a mentor (73%), receiving common planning time with teachers in their subject (58%), or having a reduced teaching schedule (12%), which research finds to be effective practices.</li> <li>Novice teachers in low-income schools are less likely to have even 3 conversations with their mentors about classroom management, lesson planning, or instruction during their 1<sup>st</sup> year of teaching, compared to peers in high-income schools.<sup>17</sup></li> </ul>	<ul style="list-style-type: none"> <li>Prioritize supports for inexperienced teachers by offering robust induction programs that include reduced teaching load, extra classroom assistance, mentors who work closely and often with new teachers, and common planning time with teachers in the same subject.</li> <li>Utilize the <a href="#">Colorado Educator Induction Guidelines</a> and approval process to improve district induction programming and supports continuously.</li> </ul>
<p><b>Working Conditions: Supports for all teachers</b></p>	<ul style="list-style-type: none"> <li>There is evidence that pairing teachers with a demonstrated track record of student growth with teachers needing additional instructional support, to provide instructional feedback, results in student learning growth and positive culture.<sup>18</sup></li> <li>Quality of school leadership support, communication, and leadership style often determine whether teachers leave or stay in the</li> </ul>	<ul style="list-style-type: none"> <li>Pair teachers needing support with teacher mentors that have a demonstrated track record of student growth. Create the time and structure for mentors to provide feedback on observations, lesson plans, etc.<sup>22</sup></li> <li>Regularly conduct needs assessments, using data from staff surveys, to identify areas of professional learning most needed and desired.</li> </ul>



Factor	What Research Says	Example District Practices
	<p>profession, even more than salaries.<sup>19</sup> Several studies show that support from principals and other school leaders is a strong predictor of teacher attrition, particularly in hard-to-staff schools.<sup>20</sup></p> <ul style="list-style-type: none"> <li>Relationships among teachers and administrators significantly impact teacher retention in hard-to-staff schools. One study of a major urban district found that found more than 75% of the variation among teacher retention rates was explained by their reports of “climate and organization of work at their school.”<sup>21</sup></li> </ul>	<ul style="list-style-type: none"> <li>Provide school leadership robust support and expert supervision to develop: (1) effective management techniques that ensure teachers have necessary resources, communication channels, and sensible budgets; (2) teacher evaluations for providing supportive, meaningful, and ongoing feedback to improve and grow teachers;<sup>23</sup> (3) inclusive decision-making that includes listening to teachers’ ideas and engaging them in change, and providing them autonomy.</li> <li>School leaders can foster working conditions that raise teacher retention by promoting: (1) an inclusive environment of respect and trust among colleagues; (2) formal structures that encourage collaboration; and (3) a shared mission and “can-do” attitude.<sup>24</sup></li> </ul>

**How can ESEA funds be leveraged to address gaps identified through EDT analyses?**

In addition to using other ESEA program funds and state grants, LEAs can leverage Title II-A funds to address EDT gaps. As explicitly stated in the preamble to ESEA Title II, “The purpose of this title is to provide ...subgrants to local educational agencies to...provide low-income and minority students greater access to effective teachers, principals, and other school leaders.”<sup>25</sup> Specifically, Title II prioritizes funding for Comprehensive or Targeted Support schools, as well as those with the highest poverty rates.<sup>26</sup>

When developing the application for use of Title II funds, LEAs are required to meaningfully consult with teachers, principals, other school leaders, paraprofessionals, specialized instructional support personnel, parents, community partners, and other organizations or partners.<sup>27</sup> In addition, ESSA requires LEAs evaluate comprehensive programs supported through Title II funding.

Allowable uses of Title II funds include, but are not limited to:

- Implementing differential and incentive pay for teachers in high-need schools and subject areas, and specialty areas (e.g., serving ELs and SWDs), which may include performance-based compensation.
- Developing pathways for educator advancement and professional growth, with an emphasis on leadership opportunities, which may include hybrid teacher/leader and leadership positions, multiple career paths, pay differentiation and incentives for effective educators to receive additional certifications in high-need areas.
- Creating educator induction or mentoring programs to improve classroom instruction and student learning and achievement, and increase the retention of new and effective educators.
- Developing and providing training for school leaders, coaches, mentors, and evaluators on accurately differentiating performance, providing useful feedback, and using evaluation results to inform decision-making about professional development, improvement strategies, and personnel decisions.
- Developing feedback mechanisms to improve working conditions in schools, including periodic and public reporting of educator support and working conditions feedback.

**What State resources are available to help attract and retain experienced, effective, and in-field teachers?**

Districts experiencing teacher shortages may also leverage [competitive grants](#) developed by the Colorado State Legislature to attract, retain, and grow effective teachers. Small districts, in particular, may benefit from these grant opportunities:

Table 3. Available Grant Opportunities

Bill	Lead Agency	Funding	Grant Eligibility	Use of Funds	Grant Timeline
<a href="#">HB 18-1002</a> <b>Rural School District Teaching Fellowship</b>	CO Dept. of Higher Education (CDHE)	\$528,042 (FY 2019-20) \$10,000 stipend per teacher	Rural district, charter school, or BOCES within shortage area in partnership with public or private IHE	Cost of attending an approved educator prep program	Applications will be collected annually beginning in the 2018-19 school year
<a href="#">HB 18-1412</a> <b>Retaining</b>	CDE	\$3,000,000 (FY 2018-19 through FY2020-21)	School districts, BOCES, charter schools	One or more specific teacher retention strategies	Application open Nov. 2018 Annual application



Bill	Lead Agency	Funding	Grant Eligibility	Use of Funds	Grant Timeline
<b>Teachers Grant Program</b>		Continuous spending authority over 3 years 2% admin set-aside			
<b><a href="#">SB 18-085</a> Financial Incentives for Education in Rural Areas</b>	CDHE	\$240,000 (FY2019-20)  40 rural teacher student stipends - \$2,800	Districts on behalf of teachers	Stipends for teachers in rural areas for alternative prep courses; concurrent enrollment, National Board, or special service provider certification	Managed by the <a href="#">Colorado Center for Rural Education</a>

For more information, contact Jeremy Meredith at [Meredith\\_j@cde.state.co.us](mailto:Meredith_j@cde.state.co.us) or Alexandra Tolentino at [Tolentino\\_A@cde.state.co.us](mailto:Tolentino_A@cde.state.co.us).

**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.
- <sup>4</sup> Podolsky, A., Kini, T., Bishop, J., & Darling-Hammond, L. (2016). *Solving the Teacher Shortage: How to Attract and Retain Excellent Educators*. Palo Alto, CA: Learning Policy Institute. Available at [https://learningpolicyinstitute.org/sites/default/files/product-files/Solving\\_Teacher\\_Shortage\\_Attract\\_Retain\\_Educators\\_REPORT.pdf](https://learningpolicyinstitute.org/sites/default/files/product-files/Solving_Teacher_Shortage_Attract_Retain_Educators_REPORT.pdf).
- <sup>5</sup> Leib Sutchter, Linda Darling-Hammond, and Desiree Carver-Thomas. (2016). *A Coming Crisis in Teaching? Teacher Supply, Demand, and Shortages in the U.S.* (Palo Alto, CA: Learning Policy Institute. Available at [https://learningpolicyinstitute.org/sites/default/files/product-files/A\\_Coming\\_Crisis\\_in\\_Teaching\\_REPORT.pdf](https://learningpolicyinstitute.org/sites/default/files/product-files/A_Coming_Crisis_in_Teaching_REPORT.pdf).
- <sup>6</sup> Frank Adamson and Linda Darling-Hammond. (2011). *Speaking of Salaries: What It Will Take to Get Qualified, Effective Teachers in All Communities* (Washington, DC: Center for American Progress. Available at <https://edpolicy.stanford.edu/sites/default/files/publications/speaking-salaries-what-it-will-take-get-qualified-effective-teachers-all-communities.pdf>.
- <sup>7</sup> Thomas G. Carroll, *Policy Brief: The High Cost of Teacher Turnover*, Prepared for the National Commission on Teaching and America’s Future (Washington, DC: 2007).
- <sup>8</sup> Timothy Silman and S. Glazerman, *Teacher Bonuses for Extra Work: A Profile of Missouri’s Career Ladder Program*, Mathematica Policy Research, Inc. (2009): 1–58.
- <sup>9</sup> Richard Ingersoll, Lisa Merrill, and Henry May, *What Are the Effects of Teacher Education and Preparation on Beginning Teacher Attrition?*, Consortium for Policy Research in Education, University of Pennsylvania, CPRE Report (#RR-82) (2014).
- <sup>10</sup> Katrina Woodworth, Jennifer Bland, Roneeta Guha, Patrick Shields, Marjorie Wechsler, Juliet Tiffany Morales, and Victoria Tse, *The Status of the Teaching Profession 2009: Full Report* (Santa Cruz, CA: The Center for the Future of Teaching and Learning, 2009).
- <sup>11</sup> Christopher Redding and Thomas M. Smith, “Easy in, Easy out: Are Alternatively Certified Teachers Turning Over at Increased Rates?” *American Educational Research Journal* (2016); Leib Sutchter, Linda Darling-Hammond, and Desiree Carver-Thomas, *A Coming Crisis in Teaching? Teacher Supply, Demand, and Shortages in the U.S.* (Palo Alto, CA: Learning Policy Institute, 2016); Linda Darling-Hammond, Deborah J. Holtzman, Su Jin Gatlin, and Julian Vasquez Heilig, “Does Teacher Preparation Matter? Evidence about Teacher Certification, Teach for America, and Teacher Effectiveness,” *Education Policy Analysis Archives* 13, no. 42 (2005).
- <sup>12</sup> Beatriz Chu Clewell and Ana Maria Villegas, *Absence Unexcused: Ending Teacher Shortages in High-Need Areas, Evaluating the Pathways to Teaching Careers Program* (Washington, DC: Urban Institute, 2001).
- <sup>13</sup> John P. Papay and Matthew A. Kraft, “Delayed Teacher Hiring and Student Achievement: Missed Opportunities in the Labor Market or Temporary Disruptions?,” (2015): 25, [http://scholar.harvard.edu/files/mkraft/files/papay\\_kraft\\_late\\_hire\\_and\\_student\\_achievement.pdf](http://scholar.harvard.edu/files/mkraft/files/papay_kraft_late_hire_and_student_achievement.pdf); Nathan D. Jones, Adam Maier, and Erin Grogan, “The Extent of Late-Hiring and Its Relationship with Teacher Turnover: Evidence from Michigan,” *Society for Research on Educational Effectiveness* (2011).
- <sup>14</sup> Nicole S. Simon, Susan Moore Johnson, and Stefanie K. Reinhorn, “A Quest for ‘The Very Best’: Teacher Recruitment in Six Successful, High-Poverty, Urban Schools,” Working Paper, The Project on the Next Generation of Teachers, Harvard Graduate School of Education (Cambridge, MA: 2015). See also, Lillian Mongeau, “Teachers Wanted: Passion a Must, Patience Required, Pay Negligible,” *Hechinger Report*, September 9, 2015, <http://hechingerreport.org/teachers-wanted-passion-a-must-patience-required-pay-negligible/>.
- <sup>15</sup> The New Teacher Project, “Teacher Hiring, Transfer, & Evaluation in San Francisco Unified School District,” (2009), [http://tntp.org/assets/documents/TNTP\\_SFUSD\\_Full\\_Report\\_020509F.pdf](http://tntp.org/assets/documents/TNTP_SFUSD_Full_Report_020509F.pdf); United Educators of San Francisco, “2014 UESF Contract Tentative Agreement,” <http://www.uesf.org/wp-content/uploads/2014-TA-summary.pdf>.
- <sup>16</sup> Allison Atteberry, Susanna Loeb, and James Wyckoff, “Do First Impressions Matter? Improvement in Early Career Teacher Effectiveness,” NBER Working Paper No. 19096 (Cambridge, MA: National Bureau of Economic Research, 2013).
- <sup>17</sup> Kardos and Johnson, “New Teachers’ Experiences of Mentoring: The Good, the Bad, and the Inequity,” *Journal of Educational Change* 11, no. 1 (2010): 23–44.
- <sup>18</sup> Tennessee Department of Education (2016). *Research Finds Positive Effects of the Instructional Partnership Initiative (IPI)*. Available at [https://team-tn.org/wp-content/uploads/2015/08/IPI-Positive-Effects-June-2016\\_final.pdf](https://team-tn.org/wp-content/uploads/2015/08/IPI-Positive-Effects-June-2016_final.pdf).
- <sup>19</sup> Podolsky, Bishop, & Darling-Hammond. (2016). *Solving the Teacher Shortage: How to Attract and Retain Excellent Educators*. Palo Alto, CA: Learning Policy Institute.
- <sup>20</sup> Amy L. Hughes, John J. Matt, and Frances L. O’Reilly, “Principal Support Is Imperative to the Retention of Teachers in Hard-to-Staff Schools,” *Journal of Education and Training Studies* 3, no. 1 (2015): 129–134; A. Chris Torres, “Is This Work Sustainable? Teacher Turnover and Perceptions of Workload in Charter Management Organizations,” *Urban Education* (2014): 1–24; Jason A. Grissom, “Can Good Principals Keep Teachers in Disadvantaged Schools? Linking Principal Effectiveness to Teacher Satisfaction and Turnover in Hard-to-Staff Environments,” *Teachers College Record* 113, no. 11 (2011): 2552–2585.
- <sup>21</sup> Elaine Allensworth, Stephen Ponisciak, Christopher Mazzeo, *The Schools Teachers Leave: Teacher Mobility in Chicago Public Schools* (Chicago, IL: Consortium on Chicago School Research; The University of Chicago Urban Education Institute, 2009).
- <sup>22</sup> Colorado Department of Education (2015). *High Achieving Schools Study: Synthesis Report*. Available at <https://www.cde.state.co.us/hfn-overall-findings>.
- <sup>23</sup> Ibid.
- <sup>24</sup> Ibid.
- <sup>25</sup> ESSA, §2001
- <sup>26</sup> ESSA, §2102(b)(2)(C)



<sup>27</sup> ESSA, §2102(b)(3)(A)