



SCHOOL FINANCE SERIES

# Essential Building Blocks for State School Finance Systems and Promising State Practices

David Hinojosa



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## Executive Summary

In statehouses across the United States, policymakers annually debate how best to fund public education and how best to distribute those funds. The complexity of school finance issues facing state legislators and policymakers, however, can be daunting. To provide greater clarity and reliable information, this report offers guidance about how to create well-balanced, equitable, and efficient school finance systems focused on ensuring meaningful educational opportunities for all students.

Substantial and growing research shows that money, particularly when well spent, leads to improved student performance and lifetime outcomes, especially for underserved students. The costs for failing to adequately and equitably educate all children are high for states. A cost analysis from 2007 found that a student who does not graduate from high school costs the economy approximately \$240,000 over his or her lifetime in terms of lower tax contributions, higher reliance on Medicaid, higher rates of criminal activity, and higher reliance on welfare. In contrast, a high school graduate earns an estimated \$630,000 more over a lifetime compared to a student who drops out. With inflation, these increased earnings would be even higher today—reaching about \$765,000 per high school graduate.

Creating a strong, equitable school finance system is a challenging but achievable task. This report includes a discussion of two critical foundational steps for developing a high-quality, equitable, and efficient school finance system; describes the essential building blocks used for designing that system; and includes a brief overview of three states that serve as examples for creating more equitable, high-quality school finance systems.

### Foundational Steps: Creating Standards, Goals, and Revenues for High-Quality, Equitable Education

Developing high standards and goals for public education is the **first essential step** in creating a strong, sustainable school finance system. Setting these goals and standards provides a clear target to aim for when designing a school finance system. Most state standards and goals typically fit within one or more of the following categories:

- Citizenship-based goals and standards—preparing productive and engaged citizens who are ready to participate fully in a democratic society
- Knowledge- and skills-based goals and standards—helping students acquire—the essential knowledge and skills necessary to master core subjects and a well-rounded curriculum
- Educational opportunity-based goals and standards—focusing on the importance of accessing essential educational opportunities to be successful in school

These standards and goals, if they are to be effective, must be based on strong equity principles. Equity in the school finance context refers to two important principles: (1) the provision of necessary and meaningful educational opportunities tied to the specific learning needs of all children, such as English learner (EL) students or students with disabilities, as well as to legitimate cost differences for school district types; and (2) the equitable distribution of resources among school districts, regardless of arbitrary factors such as property wealth.

The **second essential step** is to identify steady and adequate revenue sources to support the instructional, operational, and capital costs of a strong, equitable school finance system. In 2012–13, approximately 46% of revenues for public education came from local taxes, 45% from states, and 9% from the federal government.

Because most taxes are susceptible to various volatile economic activities, a good rule of thumb is to have a mix of taxes that are more stable and help offset any inherent inequities among school communities. In addition, states should emphasize progressive taxes (such as graduated personal and corporate income taxes) and business franchise taxes, or a mixture of progressive taxes and taxes that are less regressive (such as statewide property taxes). State land trusts and permanent school funds in several states, such as those in New Mexico and Texas, can also provide critical resources to support school finance.

## The Essential Building Blocks

Identifying the essential evidence-based building blocks of a strong, equitable school finance system allows legislators and policymakers to focus on creating and implementing school finance laws and policies based on student need. Below, we describe several key building blocks and the opportunities they provide for achieving greater equity.

1. The “**regular program allotment**,” (or “basic allotment”) makes up the bulk of education spending because it is intended to cover all costs associated with providing a standardized, quality education. These costs include salaries and benefits for essential personnel and non-personnel costs, adjusted by factors such as regional cost indices, diseconomies of scale that account for increased costs for small or rural districts, and inflation. Key findings include:
  - Teacher, administrator, and support staff salaries and benefits should be based on comparable wages in similar careers to build a stronger pipeline of essential personnel. High teacher turnover frequently results from low compensation, inadequate preparation and mentoring, and unsupportive working conditions. Estimates of teacher turnover costs range between \$7.3 billion and \$8.5 billion annually.
  - On the non-personnel side, essential costs include curriculum development, textbooks, technology, libraries, supplemental materials and supplies, student and family engagement, extracurricular and cocurricular activities, security, and maintenance.
2. **Special student programming** allotments reflect the special educational needs of certain student groups. For example, research shows that underserved students—including English learners; students deemed at risk due to poverty, foster care status, homelessness, or other conditions; and students with disabilities—often require additional educational resources to achieve the standards and goals set by states. Research shows that several kinds of investments can improve outcomes for at-risk students, ranging from smaller class sizes and tutoring to summer school enrichment programs to reduce summer learning loss and wraparound services to ensure health, mental health, and social services supports.

Approaches to funding special student needs include weighted student formulas, which increase the base foundation amount for each student by a particular proportion, or “weight” or increase the pupil count (typically referred to as a weighted student count). Categorical aid formulas, which add specified dollar amounts beyond the basic formula for statutorily prescribed



programming, are another approach. Such funds are usually allocated annually for specific purposes (for example, summer school or EL programs) and may be less reliable because they often expand or contract with political or economic changes.

Legislators and policymakers should ensure that the weights reflect the actual costs of the special programs and that arbitrary limitations are not set that conflict with the research. For example, some states limit funding for EL programs to 2 years, despite strong evidence showing that it takes between 4 and 7 years to acquire English proficiency.

3. **Other special program allotments or costs** include career and technology education (CTE) and high-quality pre-k, among other programs that address educational requirements necessary for a high-quality, equitable school system. As with the other building blocks, each program should reflect current, actual costs to ensure meaningful opportunity for all student groups and all school district types.

With respect to preschool, for example, funding should reflect the costs of research-based, essential elements of high-quality programs, including well-trained instructors, high-quality materials, expanded-day programs, and small pupil-to-teacher ratios.

4. **Facilities funding**, including capital expenditures, is neglected by many states. Between 1994 and 2013, states assumed only 18% of total capital costs, with the bulk of the remaining costs falling on the backs of local taxpayers. These circumstances create inequalities in access to safe, modern schoolhouses, along with insufficient investment needed to maintain existing facilities and to address increasing student populations. Between 2011 and 2013, investments for new and existing facilities averaged \$99 billion per year across the country. However, the need was estimated at \$145 billion per year.

Some states, including Rhode Island, Massachusetts, and Wyoming, assume much larger shares of capital costs. Strategies for easing or eliminating debt financing include allowing school districts to use the state's credit rating and providing greater debt assistance to lower wealth communities.

5. **Other key funding areas** include transportation, technology investments, and innovation or improvement funds. Critical considerations include:
  - Ensuring that transportation allocations take into account the various factors that impact costs, including the number of students per square mile, age of transportation vehicles, location of schools, and presence of dangerous road crossings.
  - Adding technology funding to the traditional categories of state investment, since the role of technology in education has expanded greatly over the past 20 years and is now an essential tool for students. Technology's promise as a learning aid remains unfulfilled, in part because underserved communities cannot make sufficient investments on their own.
  - Ensuring that additional funds for "enrichment" and "innovation" beyond the regular program, which are typically made available outside the equalized systems, are equitably provided so they do not increase problems of access for students in low-wealth communities.

## State Model School Finance Systems

Three states are discussed in further detail for their comprehensive, more equitable school finance designs—Minnesota, New Jersey, and Massachusetts. While each of the three systems could be further improved, overall they reflect strong systematic approaches to providing meaningful opportunity for all student groups. The following is a brief description of each state’s approach.

**Minnesota** provides equity revenue to help low-wealth districts gain access to the funds they need. Districts receive an additional weight of (0.60) for each student on the free lunch program and (0.50) for students on the reduced-price lunch program. The state also requires districts to create local plans about how they will use the funds and account for the expenditures. The state recently created funding for a voluntary pre-k program for 4-year-olds, although it only allocates an additional weight of (0.60) for each participant. Specialized programming funds are allocated for pursuing racial and economic integration and to provide support for the state’s Native American population.

**New Jersey’s** equalization formula considers property wealth and aggregate income to determine the state’s share of school district budgets. The state’s weighted formula approach for high-need students is one of the strongest in the nation. It ties research on quality and costs with funding allocations, and the formulas are tied to an adequacy budget. It adjusts funding for at-risk students to address concentration of student poverty based on a sliding scale of the percentage of students participating in the free and reduced-priced lunch program. Funding for high-quality full-day pre-k programs for 3- and 4-year-olds is provided for all students enrolled in the highest poverty districts, and the state provides resources to assist with certification and training for all preschool teachers.

**Massachusetts** creates foundation budgets for each district, which are intended to reflect the cost of providing an adequate education. The state has developed a “Model School Budget” with the assistance of an economist and a group of superintendents, which allocates additional funding for a range of pupil needs and types of programs. The state applies a wage adjustment factor to salary-related budget items, which is intended to address potential wage differences across the state. This factor is computed based on the latest average wage data maintained by the state’s Department of Employment for analyzing 23 labor market areas in the state. Several studies have found that the state’s revised finance system increased student achievement. Since Massachusetts adopted the law it has become—and it remains—the nation’s highest achieving state.

While the challenge of creating and implementing economically efficient and equitable school funding designs is complex, research shows it is a problem that can be solved. Several states have made significant strides in creating funding programs that are economically efficient and provide all students with the opportunity to learn.

## Introduction

In statehouses across the United States, policymakers engage annually in debates about how best to fund public education and how best to distribute those funds.<sup>1</sup> Education represents the largest categorical expenditure in most states, and logically so: Nearly every person living in the U.S. passes through schoolhouse doors, and no other public profession requires as many employees. While few can expect unanimous agreement on a school funding solution, this report identifies the essential building blocks for ensuring that every public school district has equitable access to the resources it needs to provide the meaningful educational opportunities that will allow every child to succeed both inside and outside the classroom.

While school finances alone will not solve all our educational woes, substantial and growing research shows that money, particularly when well spent, can lead to greater educational opportunities and, in turn, improved student performance and lifetime outcomes, especially for underserved students.<sup>2</sup>

Indeed, the cost for failing to properly invest in a high-quality public education for all children has graver implications than those that impact the student. Specifically, according to a 2007 study, a student who does not graduate from high school is estimated to cost the economy, “approximately \$240,000 over his or her lifetime in terms of lower tax contributions, higher reliance on Medicaid, ... higher rates of criminal activity, and higher reliance on welfare.”<sup>3</sup> These costs are exponential at the community, state, and national levels. In contrast, a student earning a high school diploma or equivalent would earn \$630,000 more over a lifetime compared to a dropout.<sup>4</sup> With inflation, these increased earnings would be even higher today—reaching about \$765,000 per high school graduate.

Money, particularly when well spent, can lead to greater educational opportunities and, in turn, improved student performance and lifetime outcomes, especially for underserved students.

Creating a strong, equitable school finance system that provides an excellent education is a challenging but achievable task. This report provides policymakers and advocates who write school finance laws essential guidance to ensure a more equitable and efficient school finance system centered on student need. We begin with a discussion of the two critical foundational steps for developing a high-quality, equitable school finance system. We next discuss the essential building blocks for designing that system, which are grounded in legitimate and necessary costs reflecting meaningful student learning and opportunity. We end with a brief overview of three states that stand out as examples for creating more equitable, high-quality school finance systems.

# The Foundation: Standards and Goals Matched With Stable Revenues for a High-Quality, Equitable Education

## High Standards and Goals

The first step in creating a strong, sustainable school finance system is developing high public education standards and goals that ensure a high-quality, equitable education for all students. Doing so makes certain that the desired outcome is clear as each state designs its school finance system.

All states have developed some version of these standards and goals, though few incorporate strong equity principles. These standards and goals typically fit within one of the following categories or a combination thereof: **citizenship-based**, preparing productive and engaged citizens who are ready to participate fully in a democratic society; **knowledge- and skills-based**, acquiring the essential knowledge and skills necessary to master core subjects and a well-rounded curriculum; or **educational opportunity-based**, focusing on the importance of accessing essential educational opportunities to be successful in school.<sup>5</sup> Nearly all state goals and standards are based on having all students graduate college- and/or career-ready, and they frequently incorporate inputs (e.g., revenue, teachers) and outputs (e.g., graduation rates, college readiness, and test scores). These standards and goals should reflect high expectations and equity in opportunity for all students.

Equity in the school finance context refers to two important principles. The first of these is the provision of necessary and meaningful educational opportunities tied to specific learning needs of all children, such as English learner (EL) students or students with disabilities, as well as to the legitimate cost differences for school districts. For example, some school districts with significant numbers of high-need students may struggle with recruiting and retaining high-quality teachers. States with policies that provide systemic supports to remedy the inequitable access to high-quality teachers will be better positioned to serve all schoolchildren and meet their stated standards and goals.

Second, in the more traditional sense, equity is about the equitable distribution of resources among school districts, regardless of arbitrary factors such as property wealth.<sup>6</sup> For school finance systems relying on disparate revenues collected from local taxes, equity ensures that low-property-wealth communities have equal access as high-property-wealth communities to similar resources when taxing at similar rates, taking into account legitimate cost differences and student demographics as noted above.<sup>7</sup> States can measure levels of equity through various frameworks, including equity of inputs, equity of outcomes, and equity of opportunity to achieve a specific level of outcomes.<sup>8</sup>

## Steady and Adequate Revenues

The second foundational component of creating a strong, equitable state school finance system is identifying steady and adequate revenue streams to support both instructional and operational costs, as well as capital costs.

State and local revenue sources vary in their stability and efficiency, from “inconsistent year-to-year” to “somewhat stable” to “predictable and guaranteed.”<sup>9</sup> Nationally, approximately 46% of revenues for public education in the 2012–13 school year was generated from local taxes, compared to 45% from state governments and 9% from the federal government.<sup>10</sup> Raising revenue for education primarily through disparate local property taxes results in inequity. State lawmakers can help mitigate interdistrict inequities through appropriate legislation that provides additional state aid to low-wealth districts.

Raising revenue for education primarily through disparate local property taxes results in inequity. State lawmakers can help through appropriate legislation that provides additional state aid to low-wealth districts.

States tend to rely on several different revenue sources to help support public education, including income taxes, sales taxes, business franchise taxes, motor vehicle taxes, tobacco and alcohol taxes, lottery proceeds, gasoline taxes, and mineral taxes.<sup>11</sup> Because several taxes are susceptible to various volatile economic activities, a good rule of thumb is to have a good mix of taxes that are more stable and help offset any inherent inequities between school communities.<sup>12</sup> In addition, to ensure that low- and middle-income taxpayers are not disproportionately burdened, states should emphasize progressive taxes (such as graduated personal and corporate income taxes) and business franchise taxes, or a mixture of progressive taxes and taxes that are less regressive (such as statewide property taxes).<sup>13</sup> State land trusts and permanent school funds in several states, such as those in New Mexico and Texas, generate revenues based on the sale and investment of publicly owned property and can provide critical resources to support school finance.<sup>14</sup>

## The Essential Building Blocks

With a solid foundation in place that includes high-quality standards and goals grounded in equity, and with stable and sufficient revenue sources identified, states can next leverage the essential building blocks of a strong, equitable school finance system. In this section, we describe several key building blocks and discuss barriers and opportunities to achieving greater equity for each. We also identify promising state practices for each.

### Regular Program Allotment

The regular program allotment (also known as the “basic” or “foundation” allotment) makes up the bulk of education funding because it is intended to cover all costs associated with providing a standardized, quality education. Often, these amounts are set according to prior years’ appropriations or existing revenues and bear no relationship to the actual costs of educating students to meet the standards or costs reflective of best practices identified in the field.<sup>15</sup> A minority of states set base amounts using studies that estimated the actual costs of providing a basic education.<sup>16</sup> Estimating the costs for the regular program can be difficult because of the many personnel, programs, and services it covers, but some states have achieved this (see later discussions on New Jersey and Massachusetts). Regardless of whether a state engages in a full-blown cost analysis, there are critical learning opportunities that must be considered. Chief among these key considerations are teacher salaries and benefits that allow schools to recruit, hire, and retain high-quality, effective teachers.

Effective teaching is the single most influential in-school factor impacting student learning and therefore requires significant investment to ensure a steady pipeline of highly educated, well-prepared teachers.<sup>17</sup> Because teachers comprise the largest proportion of personnel, their salaries and benefits consume the lion’s share of public education expenditures, estimated at 60% of state education budgets.<sup>18</sup> Consequently, teacher salaries tend to drive much debate in public policy.

The reality is that most states do not allocate sufficient funds to sustain a strong teacher pipeline. A national report by the Learning Policy Institute highlighted widespread current shortages, noting low teacher salaries as one of the key factors.<sup>19</sup> When comparing salaries of beginning teachers to entry-level positions requiring similar degrees in other fields, U.S. teachers earn 20% less, on average, even after accounting for differences in the work year, and that gap increases to 30% by mid-career. Teacher salaries are so low in 30 states that “mid-career teachers who head families of four or more qualify for three or more public benefit programs, such as subsidized children’s health insurance or free or reduced-price school meals.”<sup>20</sup>

Effective teaching is the single most influential in-school factor impacting student learning and therefore requires significant investment to ensure a steady pipeline of highly educated, well-prepared teachers.

High teacher turnover frequently results from low compensation, inadequate preparation and mentoring, and unsupportive working conditions. Teacher attrition is about 8% nationally in the U.S., which is twice the rate of high-achieving nations such as Finland and Singapore. In addition, about 8% of teachers leave their schools to move to other schools or states in search of higher pay. High teacher turnover not only jeopardizes student learning,<sup>21</sup> but it also costs districts money, with estimates of this cost ranging between \$7.3 billion and \$8.5 billion annually.<sup>22</sup>

Failure to properly invest in a strong teacher pipeline can lead to harmful policies, such as lowering teacher certification requirements to address teacher shortages.<sup>23</sup> Alabama, Arizona, New Mexico, and Utah, for example, allow schools to hire teachers who do not have a bachelor's degree or any training or certification.<sup>24</sup>

To ensure teacher salaries are competitive, states can compare teacher salaries and benefits with those in other careers requiring similar skill sets and degrees.<sup>25</sup> States should also fund the costs of other essential teacher supports that can improve student learning, including strong teacher preparation, mentoring, and professional development programs.<sup>26</sup> These investments increase effectiveness and reduce turnover, saving significant funds that must otherwise be spent on the results of student failures and the costs of teacher turnover.

States must also consider class size limits that are optimal for student learning. Lower class sizes—especially for younger students and those who have struggled academically—not only lead to higher student achievement and student engagement,<sup>27</sup> but they can also positively impact school climate and teacher recruitment and retention.<sup>28</sup>

On the essential personnel side, other costs covered by the regular program allotment include competitive salaries and benefits for school and district administrators, curriculum specialists, counselors, librarians, nurses, custodial staff, transportation workers, and cafeteria staff, among others.

On the non-personnel side, essential costs include curriculum development, textbooks, technology, libraries, supplemental materials and supplies, student and family engagement, extracurricular and cocurricular activities, security, maintenance, data collection, and monitoring. Real transportation costs must also be considered, if not separately covered.

States typically allocate funding for the regular program allotment via pupil counts, full-time equivalent personnel, and other triggers through one of four general formula types:<sup>29</sup>

1. Foundation programs (37 states) provide a uniform guarantee per pupil, with state and local district funding.
2. District power equalization systems (two states) provide funding that varies based on local tax rates.
3. Flat grants (one state) provide a uniform amount per pupil from state funds, with localities able to add funding to this amount.
4. Combination systems (nine states) combine two or more of the above formulas.

## Promising Practices

A growing number of states use the preferred foundation program to collect and distribute funds to public school districts. The foundation formula alone does not resolve equity problems; what also matters is the amount collected, how it is collected, and whether it is disbursed equitably, taking the educational needs of students into account. Massachusetts, described in detail later in this report, developed a “foundation budget” based, in part, on actual costs for different kinds of programs and students. It is derived by multiplying the number of students at each school level, adjusting those enrollment figures by type of student (e.g., EL student and vocational education), multiplying those numbers by various education spending categories (e.g., teacher compensation, professional development, building maintenance), and then adding together those amounts to arrive at the foundation budget. Additional funding for students from low-income families and special education students is also part of the formula.<sup>30</sup>

New Jersey and Massachusetts are among the states with the highest allotments after adjusting for regional differences. They do a much better job of distributing total funding to high-poverty districts by accounting more meaningfully for students in at-risk circumstances, including EL students and students from low-income families.<sup>31</sup> These adjustments help drive equity by allocating additional student-based funding to those districts educating more high-need students.

Figure 1 from the 2017 report, *Is school funding fair: A national report card*, shows how states compare to one another in terms of distribution fairness, accounting for impacts from student poverty. (Funding levels are also important and are available in the report card, though not depicted in Figure 1.) Figure 1 shows that among the states that spend more on districts with a greater number of students in poverty, Delaware, Minnesota, New Jersey, and Massachusetts also have high levels of spending adequacy. We discuss three of these states later as examples of promising systems.

Some states consider other important factors. For example, California, Massachusetts, and New Jersey allocate higher levels of funding for high school students to meet the higher costs associated with a wider range of coursework and programs. Minnesota, recognizing the important link between educated parents and increased parental engagement, provides funding for adult education.

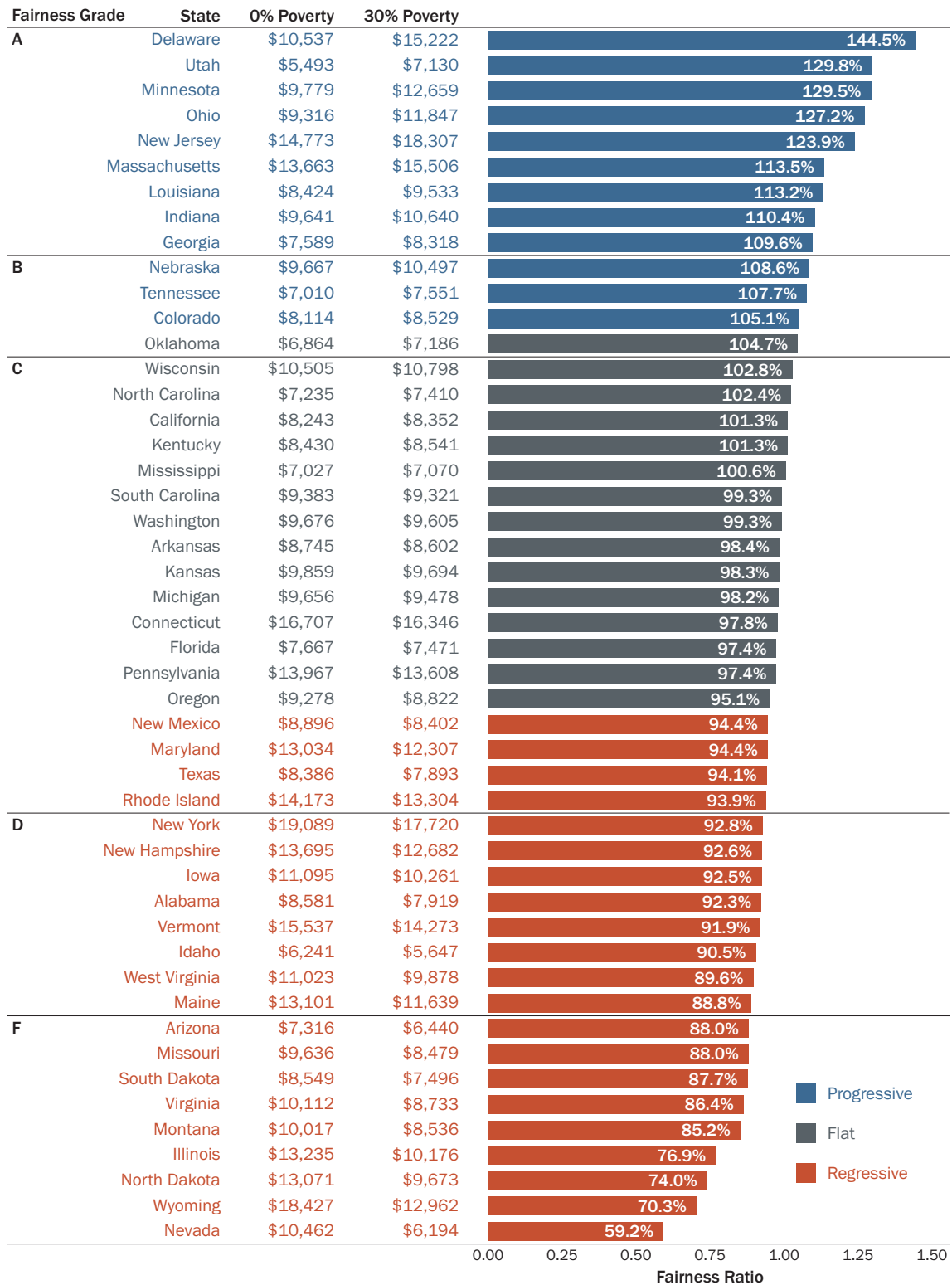
In addition, states can create greater opportunity and equity for high-need, rural, and small-size school districts by adjusting their regular program allotment by other factors, including regional cost indices, small and sparse adjustments, and/or inflationary factors. Although some states may provide separate allotments to account for these factors, the practice of adjusting the regular allotment based on a formula weight is often considered the better practice, because it allows for more transparency in determining adjustments in subsequent years.

## Regional cost indices

States with regional cost indices employ varying cost of living adjustments and comparable wage indices. Though sometimes useful in states with wide-ranging geographic and economic diversity, cost-of-living adjustments should be examined carefully because they can also sometimes exacerbate inequities between high-wealth and low-wealth communities. Because high-wealth districts often have higher costs of living, they stand to benefit more from cost-of-living adjustments.<sup>32</sup> However, teachers employed by high-wealth districts may live in other districts, and thus the extra cost-of-living adjustment may not directly impact them. In addition, the



**Figure 1**  
**State Funding Distribution, 2014**



Source: Adapted from Baker, B., Farrie, D., Johnson, M., Luhm, T., & Sciarra, D. G. (2017). *Is school funding fair? A national report card*. Philadelphia, PA: Education Law Center.

high-wealth districts may already generate additional funding and present more appealing teaching environments compared to other districts, so the higher cost-of-living adjustment may not always be needed to attract personnel.

Some states, including Massachusetts, Ohio, and Tennessee, use a range of comparable wage indices to adjust funding. These policies are intended to address differences between teacher wages and wages in other similarly situated professions to avoid teacher attrition. Other states use a variation of comparable wage indices that incorporate several different factors impacting teacher salaries and teacher recruitment. Wage indices also may incorporate cost-of-living adjustments; the adjustments' potential negative impact on equity can be mitigated by the inclusion of equity factors impacting actual working conditions.<sup>33</sup>

### Promising Practice

Texas's variation of a comparable wage index, known as the cost of education index, attempts to adjust for various conditions across the state by considering district size, teacher salaries in neighboring districts, and the percentage of students from low-income families in the district.<sup>34</sup> Although Texas's data used for the index needs to be updated, and the state may want to consider applying the index to the entire basic allotment instead of just one half of the allotment, the state's policy, which incorporates several factors implicating equity, is a step in the right direction. Similarly, in Alaska, the "district cost factor" also accounts for several pertinent cost considerations, including differences in wages, travel, energy, goods, and shipping.<sup>35</sup>

### Small and sparse district adjustments

Several states provide adjustments based on the size and sparsity of the school districts. These adjustments attempt to address added costs resulting from diseconomies of scale, including smaller school and classroom sizes, greater transportation costs, and financial incentives for teachers and school leaders to teach in rural settings.

In 2010–11, rural school districts accounted for more than half (57%) of all operational school districts, while 20% of districts were in suburban areas, 18% in towns, and 5% in cities. Rural districts educated only 24% of the total student population.<sup>36</sup>

Thirty-two states provide adjustments to address sparsity and/or size of the school or school district.<sup>37</sup> Of these, 25 provide adjustments for size, and 15 adjust for sparsity.

### Promising Practice

While basing funding for size and sparsity through weights applied to the regular program allotment is a sensible practice, some states consider other factors for extremely isolated, low-enrollment schools. Kansas, for example, has a linear formula for districts enrolling between 100 and 1,622 students to address the diseconomies of scale for smaller districts. Beyond this formula, to acknowledge the costs of very small districts, its sparsity formula approximately doubles the foundation allotment for districts enrolling 100 or fewer students, and this weight decreases for each additional pupil up to 1,622.<sup>38</sup>

## Inflationary factor

Adding an inflationary factor to school funding can help ensure education resources keep pace with other rising costs. During the most recent economic recession, several states cut education costs. Five years after the recession, 34 states provided less total state funding per student in 2014 than they did in 2008, after adjusting for inflation.<sup>39</sup>

Several indices may be used, including the comparable wage index, the consumer price index, the gross domestic product deflator, the net services index of the Bureau of Labor Statistics, or the elementary and secondary school price index.<sup>40</sup> Some commentators suggest that using the comparable wage index is a more valid measure than the consumer price index. They reason that whereas the wage index allows policymakers to compare wages in other similar industries to wages for teachers, the consumer price index—the primary resource for schools—measures increased costs for the price of goods, which is not as pertinent when looking at the primary cost drivers in education.<sup>41</sup>

Colorado is one of a few states that has a constitutional provision mandating an inflationary factor; however, it is offset by a separate provision known as a “negative factor” that operates to remove or reduce the inflationary factor.<sup>42</sup>

### Promising Practice

Massachusetts is one of the few states using an inflationary factor.<sup>43</sup> Other states reportedly used inflationary indices in the recent past but do not appear to be including those any longer.<sup>44</sup>

## Special Student Programming

As the public school population continues to grow in diversity along race, language, and socioeconomic status, states must continue to adapt their school finance systems to meet the special needs of certain children. Although the regular program allotment should reach the standard educational needs of every child, many children require additional or modified opportunities. These include groups of students that schools typically struggle to educate adequately based on circumstances in their underserved communities (e.g., economically disadvantaged or low income), their personal characteristics (e.g., students with disabilities or gifted and talented students), or sometimes both (e.g., EL students who temporarily lack full English proficiency and may also reside in an underserved community).<sup>45</sup> Collectively, these student groups are referred to as “high-need” students.

Approaches to funding student needs can include weighted student formulas, which increase the base foundation amount for each such student or increase the pupil count (typically referred to as a weighted student count); categorical aid formulas, which add various amounts of additional funding beyond the basic formula for specific, statutorily prescribed programming; or reimbursement of costs within certain parameters (see Table 1). In most cases, the preferred approach is through weighted student formulas because this method allows the funding for high-need students to rise together with the foundation formula if it is increased, and it focuses funding on student need.

**Table 1**  
**Promising Practices in Special Student Programming**

<b>Student Category</b>	<b>Promising Practices</b>	<b>State Examples</b>
<b>At-Risk Students</b>	Provide funding for at-risk students, though the amount, identification, and method of distribution vary significantly	43 states
	Provide additional funding for escalating enrollment of students considered at risk to address concentration effects on student performance	California, Minnesota, and New Jersey
	Provide additional funds supporting school integration funding that support magnet schools and intra- or interdistrict transfers that have the result of integrating schools	Connecticut, Minnesota, and New Jersey
	Provide additional state funds for other special populations (e.g., additional state funds targeted at multicultural programs, the needs of Native American students)	Minnesota and New Mexico
<b>English Learners</b>	Provide additional funding for EL education	46 of 50 states adopted this practice. Of those, 34 allocate funds based on a weighted formula funding, and the remainder provide it through categorical funding or reimbursement.
<b>Students With Disabilities</b>	Allocate additional funds for severe, exceptional conditions	Alabama
	Apply weights for varying disabilities, including weights for children with multiple disabilities	Arizona and Texas
<b>Gifted and Talented (GT) Students</b>	Provide additional funding for GT programs (most states cap funding)	32 states
	Provide weighted formulas	11 states
	Allocate funding per number of GT students	Virginia
	Adopt a limited reimbursement policy	North Dakota
	Allocate funds through noncompetitive and competitive grants	5 states
<b>Career and Technology Education (CTE)</b>	Allocate funds based on categorical funding	37 states
	Allocate CTE funds and adjust the amount for relative wealth, resulting in lower wealth districts generating a higher adjusted weight	Pennsylvania

## Funding and opportunities for at-risk students

At-risk students frequently include those students who are likely to be retained in their grade level or not graduate. Forty-three states provide funding for at-risk students, though the amount, identification, and method of distribution vary significantly.<sup>46</sup> Students considered at risk may include students from low-income families, who now account for half the nation's student population, as well as homeless students, low-performing students, foster students, and pregnant and parenting students. Typically, most states use the number of students identified for free and reduced-priced meals under the National School Lunch Act as a proxy for being at risk.<sup>47</sup> However, because some students and parents do not fill out applications for the lunch program for a variety of reasons (e.g., stigma), other states are trying to get more accurate counts by examining other factors, including parental educational attainment levels and community poverty indicators.

Students from low-income families often encounter several learning challenges that can be addressed, in part, with additional resources and opportunities on the front end of schooling. For example, smaller class sizes—below 17 students per class—have been shown to close the achievement gap for students from low-income families.<sup>48</sup> High-quality pre-kindergarten also has had a demonstrable effect on closing the achievement gap. Researchers recently studied four states with quality preschool programs—Michigan, North Carolina, Washington, and West Virginia—and each showed positive outcomes for children.<sup>49</sup> Financial recruitment incentives for attracting highly effective faculty and school leaders to high-need schools have also been shown to close achievement gaps.<sup>50</sup>

States can also consider the costs of implementing, for example, successful dropout prevention programs, summer school classes (to prevent loss of learning as well as to accelerate learning),<sup>51</sup> high-quality tutoring,<sup>52</sup> and other research-based supports. To address social and academic needs of underserved communities, states also may need to consider obtaining grants to fund holistic wraparound services, such as those offered through community schools, which have been found to increase achievement for students from low-income families.<sup>53</sup>

### Promising Practices

Some states provide additional funding for escalating enrollment of students considered at risk to address higher costs of meeting the learning needs of more concentrated numbers of at-risk students.<sup>54</sup> California, for example, provides a 20% additional weight for each student from a low-income family or who is an English learner or in foster care. The state also provides an additional 50% of the state base grant to districts when, in combination, the number of high-need students exceeds a 55% threshold.<sup>55</sup>

States also may consider funding targeted to meet the needs of historically disadvantaged special populations. Minnesota and New Mexico, for example, provide additional state funds targeted to the needs of Native American students and multicultural programs.<sup>56</sup>

School integration funding can also lead to improved student performance.<sup>57</sup> Connecticut, Minnesota, and New Jersey provide additional funds supporting school integration programs. These funds support magnet schools and intra- or interdistrict transfers that have the result of integrating schools.

## Funding and opportunities for English learners

Nationally, EL students account for roughly 1 out of 10 students, ranging from 22% in California to 1% in West Virginia.<sup>58</sup> As the number of EL students continues to rise, and more schools are being held responsible for their learning as a separate group in accountability systems, the urgency is heightened for states to more appropriately and effectively meet the diverse learning needs of EL students.

EL students acquire language proficiency throughout the day, so all teachers who engage EL students should be trained on effective language strategies.

Policymakers, educators, and school finance experts often misunderstand the educational needs of EL students, which can lead to inequitable policies. Some states, for example, may either offer a substantially lower weight for English learner programs than other students' needs, or they may offset the EL weight by a low-income weight, based on a mistaken belief that English learner educational needs are the same as those of students from low-income families. However, EL students have language acquisition needs and, if they come from underserved communities, may have other learning needs impacted by those conditions. Though related, these needs involve different strategies.<sup>59</sup>

Examples of critical research-based opportunities for English learners include professional development for teachers and school leaders targeted at the social and academic needs of EL students; summer school to retain and improve English proficiency; forgivable loans or service scholarships to recruit and prepare certified language program teachers, as well as stipends to attract and retain them in districts; specialized materials and technology related to the implementation of the language program; newcomer programs; high-quality before- and after-school tutoring related to their language acquisition; and smaller class size for the language classes.<sup>60</sup> Other needs may arise depending on the types of specialized language programs offered, such as dual language or bilingual transitional programs. When language programs are appropriately supported and implemented, the results are impressive, with EL students outperforming non-EL students.<sup>61</sup>

Some states arbitrarily limit EL funding to a set number of hours in a day (for example, an hour for language learning support) or to a specific number of years, regardless of the learning needs of EL students. EL students, for example, acquire language proficiency throughout the day, so all teachers who engage EL students should be trained on effective language strategies. California was the first state to require all teachers to learn strategies for teaching English learners as part of preservice or in-service education. Other states and university-based teacher preparation programs have since followed suit.

EL students also come from diverse backgrounds, including some with highly educated parents who do not speak English, others as refugees from war-torn countries and with little education, and still others as U.S.-born citizens with parents educated in U.S. schools. Accordingly, just as funding should not be limited to the number of hours participating in a specific language program, neither

should states limit funding to a specified number of years. Colorado, for example, limits EL funding to 2 years, despite strong evidence showing that it takes at least 4 to 7 years for EL students to acquire English proficiency.<sup>62</sup>

Nationally, 46 out of 50 states reportedly provide additional funding for EL education. Of those, 34 allocate funds based on weighted formula funding, and the remainder provide it through categorical funding or reimbursement.<sup>63</sup>

### Promising Practices

Texas recognizes the diverse learning needs of EL students and does not restrict funding based on the number of years in a program or the number of program hours in a day, though its weight is low at only 0.10 (10% of the adjusted basic allotment). Maryland's weight for EL students is the greatest at (0.99). Maine's EL funding ranges between 50% and 70%, depending on EL density.<sup>64</sup> The weight is important, but so, too, is the base amount that the weight is multiplied against, such as the foundation allotment or another figure. States should also consider these factors when determining the sufficiency of the weight.

### Funding and opportunities for students with disabilities

Special education is another area of funding that is substantial and requires attention. Although several states do not require school districts to report on special education expenditures, estimates from over a decade ago found that additional expenditures for special education services nearly doubled the regular program expenditures.

Funding for students with disabilities can be complex, as educational needs vary depending on the disability, important federal program requirements must be met, and concerns arise from the under- and overidentification of students with disabilities.

Typically, states allocate funds for special education services based on four primary methods: (1) per-pupil funding through a weighted system or via flat grants, (2) percentage reimbursement of costs, (3) instructional or teacher units, and (4) census data. Funding based on student census counts may be appealing to some policymakers because it may help rein in potential overidentification and related costs. However, concerns remain over the inequitable distribution of special education funds and the failure to target funding to students actually in need of services, among other issues.<sup>65</sup> Because census counts are based on estimates from surveys and not based on actual counts of students with disabilities, census-based funding may result in under-identifying the number of students in need of services.

Categories of disabilities vary from state to state, with some basing the weight on the specific type of disability, others on the instructional arrangement (e.g., resource or self-contained classroom), and still others on added support needs.<sup>66</sup>

Five dimensions and related costs should be considered when determining the necessary resources and associated costs: (1) type of environment (departmental or nondepartmental); (2) grade levels served; (3) service prototype, including type of placement and percentage of time in placement (regular classroom, specialized classroom, or separate facility); (4) primary disability; and (5) student need (curricular, behavioral, or medical-physical adaptations to instruction).<sup>67</sup>

## Promising Practices

Some states, including Alabama, have acknowledged the excessive costs related to supporting students with severe, exceptional disabilities and allocate funds between 4 and 10 times the regular program funding.<sup>68</sup> Arizona identifies 11 weights for varying disabilities, including weights for children with multiple disabilities.

## Funding and opportunities for gifted and talented students

In 2012, 3.2 million students enrolled in gifted and talented (GT) programs across the United States.<sup>69</sup> Washington, DC, had the fewest students identified at 62, and California had the most at 516,607.

While valid civil rights concerns remain regarding the frequent underrepresentation of students of color in GT programs, these programs can serve a critical purpose when implemented equitably and justly. Studies show that failure to appropriately engage GT students places their social, academic, and emotional development at risk.<sup>70</sup> Consequently, several states have responded to their GT students' special educational needs by providing additional funding to help cover the cost of GT programs.

While valid civil rights concerns remain regarding the frequent underrepresentation of students of color in gifted and talented programs, these programs can serve a critical purpose when implemented equitably and justly.

Thirty-two states provide additional funding for GT programs, and most states cap funding. Only 11 states provide weighted formulas. North Dakota has a limited reimbursement policy, and the remaining states provide funding through noncompetitive and competitive grants.<sup>71</sup>

## Promising Practice

Virginia, for example, funds GT programs by allocating one instructional position per 1,000 GT students.<sup>72</sup> Texas applies a weight of (0.12) but caps the percentage of students eligible for funding at no more than 5% in a district to address potential overidentification issues.

## Career and Technology Education

Career-technical education (CTE) is a critical need in all states for all students, not only those who may not plan on immediately attending college. Although there was a decline in career and technology education course enrollment between 1990 and 2009, some CTE programs, including the health sciences and public services, experienced high growth rates.<sup>73</sup> While states must ensure that schools do not track underserved students into CTE programs, many states see the need and the benefits in preparing students for high-demand careers that require specialized skill sets and technical certifications.<sup>74</sup>



The Education Commission of the States recommends four policies to ensure greater quality and access to CTE:

1. Responsibility for course fees should not fall to students or parents.
2. Course content and instructor credentials must mirror those of traditional postsecondary instructors.
3. Courses should incorporate industry curriculum and standards and lead to certification.
4. States should ensure course transferability, both to other public technical schools' CTE programs and for academic admissions and transfer coursework.<sup>75</sup>

Costs for CTE programs are generally estimated to be between 20% and 40% above general education costs.<sup>76</sup> Cost drivers include lower pupil-to-teacher ratios, as well as specialized equipment and supplies.<sup>77</sup> States typically allocate funds based on categorical funding, on funding area CTE centers, or through the regular program allotment.<sup>78</sup>

### Promising Practices

In 2012, 37 states allocated funds through categorical funding.<sup>79</sup> Because pupil-to-teacher ratios may be lower, and these programs are not intended for any group of students, unit-based formulas (formulas based on, for example, the number of instructors or administrators employed by a local education agency or the equipment used to deliver instruction) may be advantageous over the often preferred student-based formulas. Tennessee offers a simpler approach to unit-based funding compared to other states, allocating one teacher for every 16.67 CTE students, and provides funding for transportation in areas where students need to travel to another school for CTE programs.<sup>80</sup> Pennsylvania has a unique, potentially more equitable, approach. It allocates CTE funds and adjusts the amount for relative wealth, resulting in lower wealth districts generating a higher adjusted weight.<sup>81</sup>

### High-Quality Pre-K

As more state policymakers become aware of the tremendous educational and long-term economic benefits of pre-kindergarten programs, pre-k continues to grow in popularity across the country, with enrollment in state-funded programs doubling between 2000 and 2013.<sup>82</sup> Several states, however, face significant challenges with access, quality, and funding. Eighty-three percent of 4-year-old children in the highest wealth quintile attend preschool, compared to only 50% in the lowest quintile. And while research shows promising returns in terms of high-quality pre-k programs closing achievement and high school attainment gaps between students from low-income families and others, several states have failed to properly invest in high-quality pre-k.<sup>83</sup>

While research shows promising returns in terms of high-quality pre-k programs closing achievement and high school attainment gaps between students from low-income families and others, several states have failed to properly invest in high-quality pre-k.

In a study of 15 essential elements of a high-quality pre-k program, researchers found only 9 out of 41 states and four cities funding pre-k programs that met at least 10 of the 15 criteria.<sup>84</sup> Several of these necessary elements demand resources, including education requirements for teachers, length of day, class size, and pupil-to-teacher ratios.

Nationally, pre-k funding increased between 2015–16 and 2016–17 by \$480 million. However, six states (Idaho, Montana, New Hampshire, North Dakota, South Dakota, and Wyoming) failed to provide state funds to support pre-k programs. Only nine states include pre-k in their school funding formulas.<sup>85</sup>

### Promising Practices

New Jersey continues to have one of the strongest pre-k programs in terms of funding and quality. Combining state and federal Head Start and child care program funding, where available, New Jersey's full-day pre-k program serves all 3- and 4-year-old students in the highest poverty districts. Evidence shows it has helped close the achievement gap.<sup>86</sup> Oklahoma enacted universal full-day pre-k and, like New Jersey, combines funding from the state with Head Start programs. Its pre-k program has also demonstrated success for participating students.<sup>87</sup> Alabama's state funding increased by 33% between 2015–16 and 2016–17 (though still low) and met all quality benchmarks set by the National Institute for Early Education Research.<sup>88</sup> Since 2005–06, its state pre-k enrollment rose from 1,026 students to 14,598 students, although 65% of 4-year-old children statewide remain unenrolled.

### Facilities

The condition of school facilities has been correlated to school climate, student achievement, absenteeism, and teacher retention.<sup>89</sup> Yet facilities funding typically reflects even greater inequities between high-wealth and low-wealth school communities than instructional and operational costs. With many schools aging<sup>90</sup> and student enrollment growing, states must prioritize facilities funding.

Between 2011 and 2013, capital investment in new and existing facilities across the nation averaged \$99 billion per year. However, these expenditures pale in comparison to the need, estimated at \$145 billion per year. Twelve states pay nothing for facilities. Between 1994 and 2013, states contributed only 18% of total capital costs toward facilities.<sup>91</sup>

Because states frequently rely on local property taxpayers to carry the brunt of facilities costs, and property values often differ greatly, inequity can be a pervasive problem. For example, Texas's low investment in facilities for property-poor districts resulted in the highest quintile of school districts by property wealth generating five times more per penny of tax effort compared to the lowest quintile.<sup>92</sup> This means that wealthy districts can invest much more—and more easily—in expanding and improving facilities, while poor districts struggle to maintain and build lower quality school buildings.

## Promising Practices

Some states assume much larger shares of construction costs than others. For example, Rhode Island (78%), Massachusetts (67%), Wyoming (63%), and Connecticut (57%) increase equity by having the state assume most of the responsibility for facilities.<sup>93</sup> States can increase equity and sufficiency of facilities funding by ensuring the maintenance of a stable funding source specifically for facilities and protecting against economic impacts by setting an annual minimum spending amount.<sup>94</sup> In addition, states should eliminate, or at least ease, debt financing by allowing school districts to use the state’s credit rating and providing greater debt assistance to lower wealth communities.<sup>95</sup> Wyoming is one of the lowest debt states because it provides funding for facilities on the front end, thus requiring local communities to rely only minimally on long-term bonds.<sup>96</sup>

## Transportation

Transportation costs vary greatly between and within states. Factors impacting transportation include the number of students per square mile, age of transportation vehicles, location of schools, and presence of dangerous road crossings.<sup>97</sup>

Four states provide no additional funding for transportation. Of states providing transportation funds, some provide formula funding, while a majority of the rest (24) allow for some method of reimbursement; only three states allow for full-cost reimbursement. Transportation could be included in the regular program allotment if actual costs of transportation are included when setting the regular program allotment.

## Promising Practice

Nine states provide transportation funding through their formulas. Kansas provides funding based on pupils living 2.5 miles or more from the school through a formula that accounts for cost per pupil, density of district, and total square miles.

## Technology

The role of technology in education has expanded greatly over the past 20 years with the assistance of federal and state funding. However, technology’s promise as a learning aid and to increase operational efficiency remains unfulfilled, in large part because of inadequate funding. Technology requires purchases and maintenance of infrastructure, hardware, and software. Teachers also must be trained on how to best integrate technology into instruction.<sup>98</sup>

The common denominator of these barriers is resources.<sup>99</sup> State policymakers must be cognizant of the lack of technology capital in underserved communities. Racial and income gaps remain, with 75% of Whites age 3 and over using the internet, compared to 64% of Black and 61% of Latinx populations. Eighty-five percent of families with annual household incomes of \$100,000 and higher used the internet, compared to 64% with incomes between \$30,000 and \$39,999.<sup>100</sup> The kinds and quality of devices and the extent of broadband access also differ across households and communities. As a result of these factors, teachers in high-poverty schools are much more likely to say that the “lack of resources or access to digital technologies among students” is a

challenge in their classrooms (56% vs. 21% in low-poverty schools). Only 3% of teachers in high-poverty schools agreed that “students have the digital tools they need to effectively complete assignments while at home,” as compared to 52% of teachers in more affluent schools.<sup>101</sup> Most public k–12 schools do not have sufficient broadband to allow most of their students to engage in digital learning activities at the same time. Slow connection rates are concentrated in non-White and low-income households and communities.<sup>102</sup>

Teachers in high-poverty schools are much more likely to say that the “lack of resources or access to digital technologies among students” is a challenge in their classrooms.

Rural schools also face many technology barriers. A preliminary report from the U.S. Department of Education on rural schools showed that these districts frequently lack quality broadband access, impacting instruction and the capacity to apply for grants and administer programs.<sup>103</sup>

### Promising Practices

Ensuring students have access to good technology both within school and after school remains a key obstacle for many policymakers. States often provide one-time grants to address technology needs, but that assumes technology needs do not accumulate over time. Idaho, for example, appropriated \$3.64 million in 2015 to pay for broadband.<sup>104</sup> While one-time grants address specific needs, funds are also needed to support ongoing technology demands. The Maine Learning Technology Initiative<sup>105</sup> was the first statewide 1:1 initiative for all students and teachers in grades 7–12. The initiative provides devices (both tablet and laptop computers) selected by the districts, plus 4 years of technical support. It also provides participating schools with software and other learning tools, internet connectivity, and training for educators and school leaders. By providing a comprehensive approach with an annual student- and teacher-based technology allotment, schools can be better equipped to support and expand the use of technology.

### Equalized Local Enrichment and Innovation

Several states allow school districts to access additional funds for “enrichment” and “innovation” beyond the regular program allotment. Those funds typically lie outside the equalized systems, thereby creating less efficiency, because revenue is outside the system, and less equity, because wealthier districts have much greater access. In addition, the line is typically blurred between what is part of the regular program and what is considered enrichment, such as electives and extracurricular activities. Accordingly, states should ensure that if such funds are made available, all communities have equitable access to those funds.

## Comprehensive State Examples

Although states are enacting an increasing number of more equitable policies, only a few states are engaging in more comprehensive, equitable school finance systems. Using results from the *is school funding fair? National report card* over the past 3 years,<sup>106</sup> three states experiencing greater success are examined briefly here. It is worth noting that, since they implemented these finance systems, all three states have climbed to the top five, nationally, on one or more subject area assessments of the National Assessment of Educational Progress, and have reduced student achievement gaps.

### Minnesota

Minnesota has both traditional and progressive elements of funding in its school finance system. It allocates funding through a foundation program. The state has a separate sparsity allocation for secondary schools and elementary schools. Districts with fewer than 960 students are eligible for small-size funds of up to \$544 per student, and the state formulas provide for declining enrollment funds. In addition, the state provides equity revenue to help raise low-referendum levels based on two separate regions in the state. Districts receive an additional weight of (0.60) for each student on the free lunch program and (0.50) for students on the reduced-price lunch program.

The state also requires districts to develop a plan to use the funds, maintain separate accounts for the revenue, and report on its expenditures, which are important accountability features.

EL funding, however, is not weighted but is instead based on categorical funds. The formula provides districts with \$700 multiplied by the greater of either 20 or the number of eligible EL students. The state also allows for an EL concentration factor, and funding was recently extended from 6 to 7 years.

Minnesota uses a census-based model for special education to account for cost factors, such as overall district average daily membership served, poverty concentration, district size, and the average costs of educating students with different primary disabilities. Districts receive initial funding equal to up to 62% of prior expenditures derived from the old formula, and funding is based on three categories.

The state recently created funding for a voluntary pre-k program for 4-year-olds, though it only allocates an additional weight of (0.60) for each participant. The program has quality indicators assigned. Funding is limited to appropriations, and high-poverty schools receive priority participation.

Minnesota provides equity revenue to help raise low-referendum levels based on two separate regions in the state and requires districts to develop a plan to use the funds, maintain separate accounts for the revenue, and report on its expenditures.

Two more unique funding components are:

1. **Achievement and integration revenue**, which allocates funds to pursue racial and economic integration, increase student achievement, and reduce academic disparities in Minnesota’s public schools based on a 3-year plan.
2. **American Indian education aid**, which provides funds to operate an American Indian education program as outlined in a district plan that is consistent with program outcomes.

## New Jersey

New Jersey has enacted significant reforms in response to several lawsuits over the past 2 decades. The state has one of the highest regular program allotments in the nation. The formula provides funding to make up for higher costs incurred from educating middle and high school students, as well as for vocational schools. The state applies a geographic cost adjustment for cost-of-living differences, and to attain greater equity, the state’s equalization formula considers property wealth and aggregate income to determine the state’s share.

The state’s weighted formula approach for high-need students is one of the strongest in the nation. It ties research on quality and costs with funding allocations, and these formulas are tied to an adequacy budget.<sup>107</sup> Funding for at-risk students is based on free and reduced-priced lunch program participation and is allocated according to a sliding scale of an additional weight of (0.47) for districts with less than 20% at-risk students up to (0.57) for districts exceeding 60%. Formula EL funding is set at an additional weight of (0.50); however, if the student also is considered at-risk, the weight decreases to (0.125) and is added on top of the full at-risk weight.<sup>108</sup>

New Jersey uses a statewide census-based funding model to fund special education, but funds for speech-only services are allocated separately. The state also allocates “extraordinary aid” to pay a portion of higher costs for students with severe disabling conditions. In addition, the state provides categorical funding per pupil for security, and the amount increases as the percentage of students who are at risk increases, up to 40%.

One of the centerpieces of the state’s funding system is its high-quality full-day pre-k program. As previously noted, the program serves all students in the highest poverty districts. (Note: The New Jersey School Reform Act requires that all at-risk 3- and 4-year-old students are served, but the state has not yet fully funded the law.) New Jersey also provides resources to ensure appropriate certification and training for all preschool teachers. Studies have found that this program reduces the achievement gap before kindergarten and contributes to longer term school success for participating students.<sup>109</sup> Analysts have found that the new school funding reforms that began in New Jersey in 1998 have contributed to steep increases in overall achievement and reductions in the achievement gap.<sup>110</sup>

The state applies a geographic cost adjustment for cost of living differences, and to attain greater equity, the state’s equalization formula considers property wealth and aggregate income to determine the state’s share.

## Massachusetts

Massachusetts improved the design of its current school finance system following a legal challenge to the constitutionality of the system in 1993, *McDuffy v. Secretary of the Executive Office of Education*. The centerpiece of its design is a cost-based formula approach premised on a foundation budget, which is supported by a combination of local property taxes and state aid.

The foundation budget is intended to reflect the total cost of providing an adequate education for all students. To determine a school district's foundation budget, each student is first assigned to 1 of 10 categories.<sup>111</sup> The total head counts are used to calculate a district's total foundation enrollment, with students attending half-day programs typically counted as 0.5. Once a district's foundation enrollment is determined, the figure is multiplied off 11 functional areas to arrive at the foundation budget. These areas are based upon a "model school budget," which was developed by an economist and a group of superintendents.<sup>112</sup>

Several costs for the model school budget areas, unlike most other states, are meant to reflect actual costs (or percentages of actual costs). For example, budgetary costs for classroom and specialist teachers are based on assumed class sizes of 22 for elementary, 25 for junior high/middle school, and 17 for high school at an inflationary-adjusted salary of \$67,885 per teacher for fiscal year 2018 (FY18). The per-pupil amounts are \$3,048 for elementary, \$2,682 for junior high/middle school, and \$3,944 for high school. Administration costs are calculated based on 81.7% of the FY04 state average expenditure per pupil for administration, adjusted by inflation, for a FY18 average of \$498 per pupil. Teachers account for 46% of the foundation budget, with maintenance (11%), benefits (10%), and other teaching services (9%) following behind. Administration accounts for 5%.<sup>113</sup>

Each student generates a specific cost in each functional area, and those rates vary depending on the types of students. For example, costs are typically higher for high school students, EL students, and vocational programs.

In addition, costs are added above the foundation base for special-education students and students from low-income families. Massachusetts uses a census-based approach to funding the education of students with disabilities. It assumes in-district enrollments at 3.75% of the foundation enrollment (not including pre-k) and 4.75% of vocational enrollment. The formulas also assume out-of-district enrollments at 1% of the total foundation enrollment (excluding pre-k and vocational students). Although this practice of assuming enrollments is reportedly intended to prevent overidentification of students with disabilities, it could also lead to undercounts. And unlike other features in the system, special education does not seem to reflect actual costs of the programs or variations in services.

For students from low-income families, the additional cost is based on a student's enrollment in one of the following state-administered programs: Supplemental Nutrition Assistance Program, Transitional Assistance for Families with Dependent Children, Department of Children and Families' foster care program, or Medicaid up to 133% of the federal poverty level. The multiple factor approach allows the state formula to capture a more accurate picture of economically disadvantaged students, although this funding, too, could miss students whose parents may not apply for state programs and benefits—such as immigrant students.

The state also applies a wage adjustment factor to the salary-related function areas noted above, which is intended to address potential higher wage differences across the state. This factor is computed based on the latest average wage data maintained by the state's Department of Employment for 1 of 23 labor market areas around the state. The state previously reduced a district's budget in areas that fell below the average but now ensures that no districts lose funding. Essentially, average wage data is derived by multiplying the number of students at each grade level, taking into account the labor market area.<sup>114</sup>

Several studies have found that this approach increased student achievement when it was first installed.<sup>115</sup> Since adopting the law, Massachusetts is one of the nation's highest achieving states.

These three state school finance systems reflect the hard work of policymakers and advocates in trying to ensure equitable educational opportunities for all schoolchildren. Each has committed to high-quality educational standards and goals, the equitable distribution of resources, and reasonably stable revenues. Each state is focusing resources on student need, and results show higher achievement for all student groups. Although none of them is perfect and work remains to be done, they are good examples of well-designed school finance systems.



## Conclusion

As previously noted, creating a strong, equitable school system is a daunting task. However, it is attainable if the focus can be on student need and meaningful educational opportunities.

But while the primary purpose of this report is to help educate state policymakers and advocates on the essential building blocks for state school finance systems, key decision makers should also understand the complete picture. Establishing a strong foundation and developing the building blocks are critical first steps to creating a high-quality, equitable school finance system. The remaining steps include estimating costs using research-based methods; fully implementing the plan and equitably distributing the funds; monitoring expenditures, opportunities, and outcomes; and periodically reviewing the system with a broad group of diverse stakeholders to ensure the goals of education and equity are met.

Additionally, the school finance system is only part, though a critically important part, of creating great schools for every child. As the Intercultural Development Research Association lays out in its research-based Quality Schools Action Framework, there are other important levers of change, change strategies, school system indicators, and outcome indicators that must be considered concurrently to ensure every child has the best opportunity to succeed in school and in life.<sup>116</sup> This comprehensive, student-need approach is necessary to deliver the goods and promise of public education.

## Endnotes

1. Picus, L., Goertz, M., & Odden, A. (2015). "Intergovernmental Aid Formulas and Case Studies" in Ladd, H. F., & Goertz, M. E. (Eds.). *Handbook of Research in Education Finance and Policy* (p. 281). New York, NY: Routledge.
2. Jackson, C. K., Johnson, R. C., & Persico, C. (2016). The effects of school spending on educational and economic outcomes: Evidence from school finance reforms. *Quarterly Journal of Economics*, 131(1), 157–218; Lafortune, J., Rothstein, J., & Schanzenbach, D. W. (2016). *School finance reform and the distribution of student achievement* (No. w22011). Cambridge, MA: National Bureau of Economic Research.
3. Levin, H. M., & Belfield, C. R. (2007). "Educational Interventions to Raise High School Graduation Rates" in Belfield, C. R., & Levin, H. M. (Eds.). *The Price We Pay: Economic and Social Consequences of Inadequate Education* (177–199). Washington, DC: Brookings Institution Press.
4. Levin, H. M., & Belfield, C. R. (2007). "Educational Interventions to Raise High School Graduation Rates" in Belfield, C. R., & Levin, H. M. (Eds.). *The Price We Pay: Economic and Social Consequences of Inadequate Education* (177–199). Washington, DC: Brookings Institution Press.
5. Rebell, M. A. (2002). "Educational Adequacy, Democracy, and the Courts" in Ready, T., Edley, E., Jr., & Snow, C. E. (Eds.). *Achieving High Educational Standards for All: Conference Summary*. Washington, DC: National Academies Press.
6. Center for Public Education. (2008). *Money matters: A primer on K–12 school funding*. Alexandria, VA: Author. [www.centerforpubliceducation.org/Main-Menu/Policies/Money-matters-At-a-glance/Money-matters-A-primer-on-K12-school-funding.html](http://www.centerforpubliceducation.org/Main-Menu/Policies/Money-matters-At-a-glance/Money-matters-A-primer-on-K12-school-funding.html).
7. Cárdenas, J. A. (1997). *Texas school finance reform: An IDRA perspective*. San Antonio, TX: Intercultural Development Research Association.
8. See, e.g., Baker, B., & Green, P. (2008). "Conceptions of Equity and Adequacy in School Finance" in Ladd, H. F. & Goertz, M. E. (Eds.), *Handbook of Research in Education Finance and Policy* (pp. 203–221). New York, NY: Routledge.
9. Rivera, M. (2017). *What about the schools? Factors contributing to expanded state investment in school facilities*. San Antonio, TX: Intercultural Development Research Association.
10. Cornman, S. (2016). *Revenues and Expenditures for Public Elementary and Secondary Education: School Year 2012–13 (fiscal year 2013) (NCES 2015-301)*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.
11. School-based or district-based foundations, as well as private foundations, also contribute to funding public education, and they could exacerbate inequities. See, e.g., Nelson, A. A., & Gazley, B. (2014). The rise of school-supporting nonprofits. *Education Finance and Policy*, 9(4), 541–566. However, because those funds are not often operated or regulated through the states, they are not discussed in this report.
12. Rivera, M. (2017). *What about the schools? Factors contributing to expanded state investment in school facilities*. San Antonio, TX: Intercultural Development Research Association.
13. Regressive taxes are those that tend to place a heavier burden on low-income and middle-income earners who pay a larger share of their income toward the tax. Sales and excise taxes tend to be far more regressive than most other state taxes and local property taxes. Davis, C., Davis, K., Gardner, M., Heimovitz, H., Johnson, S., McIntire, R. S., Phillips, R., Sapozhnikova, A., & Wiehe, M. (2015). *Who pays? A distributional analysis of the tax systems in all 50 states* (5th ed.). Washington, DC: The Institute on Taxation & Economic Policy.
14. Culp, P. W., Laurenzi, A., Tuell, C. C., & Berry, A. (2015). *State trust lands in the west: Fiduciary duty in a changing landscape* (Updated). Cambridge, MA: Lincoln Institute of Land Policy.
15. Baker, B., & Green, P. (2008). "Conceptions of Equity and Adequacy in School Finance" in Ladd, H. F. & Goertz, M. E. (Eds.), *Handbook of Research in Education Finance and Policy* (pp. 203–221). New York, NY: Routledge.
16. Griffith, M. (2012). *Understanding state school funding: The first step toward quality reforms*. Denver, CO: Education Commission of the States.

17. RAND Corporation. (2012). *Teachers matter: Understanding teachers' impact on student achievement*. Santa Monica, CA: Author.
18. Digest of Education Statistics. (2017). Table 236.60. Washington, DC: U.S. Department of Education, National Center for Education Statistics. [https://nces.ed.gov/programs/digest/d17/tables/dt17\\_236.60.asp](https://nces.ed.gov/programs/digest/d17/tables/dt17_236.60.asp) (accessed 05/16/18).
19. Sutchter, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.
20. Sutchter, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute.
21. Ronfeldt, M., Loeb, S., & Wyckoff, J. (2013). How teacher turnover harms student achievement. *American Educational Research Journal*, 50(1), 4–36.
22. Carroll, T. G. (2007). *The high cost of teacher turnover* (Policy brief). Arlington, VA: National Commission on Teaching and America's Future.
23. Black, D. (2017). Averting educational crisis: Funding cuts, teacher shortages, and the dwindling commitment to public education. *Washington University Law Review*, 94(2). [http://openscholarship.wustl.edu/law\\_lawreview/vol94/iss2/7](http://openscholarship.wustl.edu/law_lawreview/vol94/iss2/7).
24. Strauss, V. (2017, May 14). In Arizona, teachers can now be hired with absolutely no training in how to teach. *The Washington Post*. [https://www.washingtonpost.com/news/answer-sheet/wp/2017/05/14/in-arizona-teachers-can-now-be-hired-with-absolutely-no-training-in-how-to-teach/?utm\\_term=.7a8a81d2dc30](https://www.washingtonpost.com/news/answer-sheet/wp/2017/05/14/in-arizona-teachers-can-now-be-hired-with-absolutely-no-training-in-how-to-teach/?utm_term=.7a8a81d2dc30); Strauss, V. (2016, August 15). In Utah, schools can now hire teachers with no training whatsoever. *The Washington Post*. [https://www.washingtonpost.com/news/answer-sheet/wp/2016/08/15/in-utah-schools-can-now-hire-teachers-with-no-training-whatsoever/?utm\\_term=.d53e1c5d3be4](https://www.washingtonpost.com/news/answer-sheet/wp/2016/08/15/in-utah-schools-can-now-hire-teachers-with-no-training-whatsoever/?utm_term=.d53e1c5d3be4); NM Code R. § 6.60.3.7 (10-31-07).
25. Allegretto, S., Corcoran, S., & Mishel, L. (2004). *How does teacher pay compare? Methodological challenges and answers*. Washington, DC: Economic Policy Institute.
26. Darling-Hammond, L. (2010). *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*. New York, NY: Teacher's College Press.
27. Glass, G. V., & Smith, M. (1979). Meta-analysis of class size and achievement. *Educational Evaluation and Policy Analysis*, 1(1), 2–16; Mosteller, F. (1995). The Tennessee study of class size in the early school grades. *The Future of Children*, 5(2), 113–127; See also: Nye, B., Hedges, L. V., & Konstantopoulos, S. (1999). The long-term effects of small classes: A five-year follow-up of the Tennessee class-size experiment. *Evaluation and Policy Analysis*, 21(2), 127–142; Kim, J. S. (2006/2007). "The relative influence of research on class-size policy" in Loveless T., Hess, F. M. *Brookings Papers on Education Policy 2006/2007* (pp. 273–295). Washington, DC: Brookings Institute Press.
28. Sutchter, L., Darling-Hammond, L., & Carver-Thomas, D. (2016). *A coming crisis in teaching? Teacher supply, demand, and shortages in the U.S.* Palo Alto, CA: Learning Policy Institute; Carter, M., & Carter, C. M. (2000). How principals can attract teachers to the middle grades. *Schools in the Middle*, 9(8), 22–25; Mont, D., & Rees, D. I. (1996). The influence of classroom characteristics on high school teacher turnover. *Economic Inquiry*, 34(1), 152–167; Grissmer, D. W., & Kirby, S. N. (1992). *Patterns of attrition among Indiana teachers: 1965–1987: An executive summary*. Santa Monica, CA: RAND.
29. Verstegen, A. (2014). *How do states pay for schools? An update of a 50-state survey of finance policies and programs*. Association for Education Finance and Policy Annual Conference. San Antonio, TX: Association for Education Finance and Policy.
30. Massachusetts Department of Elementary & Secondary Education. (2017). School finance, Chapter 70 Program. [www.doe.mass.edu/finance/chapter70/](http://www.doe.mass.edu/finance/chapter70/).
31. Baker, B., Farrie, D., Johnson, M., Luhm, T., & Sciarra, D. G. (2017). *Is school funding fair? A national report card*. Philadelphia, PA: Education Law Center.
32. Baker, B., & Green, P. (2008). "Conceptions of Equity and Adequacy in School Finance" in Ladd, H. F. & Goertz, M. E. (Eds.), *Handbook of Research in Education Finance and Policy* (pp. 203–221). New York, NY: Routledge.

33. Baker, B., & Green, P. (2008). "Conceptions of Equity and Adequacy in School Finance" in Ladd, H. F. & Goertz, M. E. (Eds.), *Handbook of Research in Education Finance and Policy* (pp. 203–221). New York, NY: Routledge.
34. Tex. Educ. Code § 42.102.
35. Silverstein, J., Brown, A., & Fermanich, M. (2015). *Review of Alaska's school funding program*. Denver, CO: Augenblick, Palaich, and Associates.
36. National Center for Education Statistics. (2013). Rural education in America. <https://nces.ed.gov/surveys/ruraled/districts.asp>.
37. Verstegen, A. (2014). *How do states pay for schools? An update of a 50-state survey of finance policies and programs*. Association for Education Finance and Policy Annual Conference. San Antonio, TX: Association for Education Finance and Policy.
38. Verstegen, A. (2014). *How do states pay for schools? An update of a 50-state survey of finance policies and programs*. Association for Education Finance and Policy Annual Conference. San Antonio, TX: Association for Education Finance and Policy.
39. Leachman, M., Albares, N., Masterson, K., & Wallace, M. (2016). *Most states have cut school funding, and some continue cutting*. Washington, DC: Center on Budget and Policy Priorities.
40. Baker, B., & Green, P. (2008). "Conceptions of Equity and Adequacy in School Finance" in Ladd, H. F. & Goertz, M. E. (Eds.), *Handbook of Research in Education Finance and Policy* (pp. 203–221). New York, NY: Routledge.
41. Baker, B. D. (2011). *Understanding costs and inflation* (fast response policy brief series). Boulder, CO: National Education Policy Center.
42. Colo. Const. art. IX.
43. Massachusetts Department of Elementary & Secondary Education. (2017). *Defining Adequate School Funding Level in Massachusetts*.
44. Griffith, M. (2012). *Understanding state school funding: The first step toward quality reforms*. Denver, CO: Education Commission of the States.
45. See, e.g., Carnoy, M., & García, E. (2017). *Five key trends in U.S. student performance*. Washington, DC: Economic Policy Institute.
46. Parker, E., & Griffith, M. (2016). *Policy analysis: The importance of at-risk funding*. Denver, CO: Education Commission of the States.
47. Verstegen, A. (2014). *How do states pay for schools? An update of a 50-state survey of finance policies and programs*. Association for Education Finance and Policy Annual Conference. San Antonio, TX: Association for Education Finance and Policy.
48. Krueger, A. B. (2003). Economic considerations and class size. *Economic Journal*, 113(485), 34–63.
49. Wechsler, M., Melnick, H., Maier, A., & Bishop, J. (2016). *The building blocks of high-quality early childhood education programs* (policy brief). Palo Alto, CA: Learning Policy Institute.
50. Hanover Research. (2014). *Review of teacher incentive programs*. Washington, DC: Author. <https://www.ccesa.net/wp-content/uploads/2014/12/Review-of-Teacher-Incentive-Programs-1.pdf>.
51. Alexander, K. L., Entwisle, D. R., & Olson, L. S. (2007). Lasting consequences of the summer learning gap. *American Sociological Review*, 72(2), 167–180; Augustine, C. H., McCombs, J. S., Pane, J. F., Schwartz, H. L., Schweig, J., McEachin, A., & Siler-Evans, K. (2016). *Learning From Summer*. Santa Monica, CA: RAND Corporation.
52. Farbman, D. (2015). *The case for improving and expanding time in school: A review of key research and practice*. Boston, MA: National Center on Time & Learning. [www.timeandlearning.org/sites/default/files/resources/casemorelearningtime.pdf](http://www.timeandlearning.org/sites/default/files/resources/casemorelearningtime.pdf); See also: Dobbie, W., & Fryer, R. G. (2011). *Getting beneath the veil of effective schools: Evidence from New York City*. (Working paper). Cambridge, MA: National Bureau of Economic Research; Hoxby, C. M., Muraka, S., & Kang, J. (2009). *How New York City's charter schools affect achievement*. Cambridge, MA: New York City Charter Schools Evaluation Project.

53. Oakes, J., Maier, A., & Daniel, J. (2017). *Community schools: An evidence-based strategy for equitable school improvement*. Palo Alto, CA: Learning Policy Institute.
54. Weston, M. (2013). *Adjusting weighted pupil funding for concentrated poverty in California schools*. Davis, CA: Center for Poverty Research. <https://poverty.ucdavis.edu/policy-brief/adjusting-weighted-pupil-funding-concentrated-poverty-california-schools>.
55. EdSource. (2016). A guide to California's local control funding formula. <https://edsources.org/2016/local-control-funding-formula-guide-icff/89272#>.
56. American Indian Aid, Minn. Stat. § 124D.81; Indian Education Act, 22-23A-1 - 22-23A-8 NMSA (2003).
57. Ayscue, J., Frankenberg, E., & Siegel-Hawley, G. (2017). *The complementary benefits of racial and socioeconomic diversity in schools*. Washington, DC: National Coalition on School Diversity.
58. National Center for Education Statistics. (2017). English language learners in public schools. [https://nces.ed.gov/programs/coe/indicator\\_cgf.asp](https://nces.ed.gov/programs/coe/indicator_cgf.asp).
59. Hinojosa, D. (2017). Improved Learning Opportunities for English Learner Students Resulting from Increasing the Bilingual/ESL Weight. IDRA Testimony on HB 197, Texas House Public Education Committee. Intercultural Development Research Association. [www.idra.org/wp-content/uploads/2017/07/IDRA-Testimony-on-HB197-Improved-Learning-Opportunities-for-ELs-Resulting-from-Increasing-the-Bilingual-ESL-Weight-072417.pdf](http://www.idra.org/wp-content/uploads/2017/07/IDRA-Testimony-on-HB197-Improved-Learning-Opportunities-for-ELs-Resulting-from-Increasing-the-Bilingual-ESL-Weight-072417.pdf).
60. See, e.g., Montecel, M. R., & Danini, J. (2002). Successful bilingual education programs: Development and the dissemination of criteria to identify promising and exemplary practices in bilingual education at the national level. *Bilingual Research Journal*, 26(1), 1–21; Faulkner-Bond, M., Waring, S., Forte, E., Crenshaw, R. L., Tindle, K., & Belknap, B. (2012). *Language instruction educational programs (LIEPs): A review of the foundational literature*. Washington, DC: U.S. Department of Education, Office of Planning, Evaluation and Policy Development.
61. Collier, V., & Thomas, W. (2012). *Dual language education can close achievement gap*. Washington, DC: Joint National Committee for Languages, National Council for Languages and International Studies. [www.thomasandcollier.com/assets/jncl-nclis-white-paper-on-dual-language-education.pdf](http://www.thomasandcollier.com/assets/jncl-nclis-white-paper-on-dual-language-education.pdf).
62. Hakuta, K., Butler, Y. G., & Witt, D. (2000). *How long does it take English learners to attain proficiency?* Los Angeles, CA: The University of California Linguistic Minority Research Institute.
63. Millard, M. (2015). *State funding mechanisms for English language learners*. Denver, CO: Education Commission of the States.
64. Millard, M. (2015). *State funding mechanisms for English language learners*. Denver, CO: Education Commission of the States.
65. Dhuey, E., & Lipscomb, S. (2011). Funding special education by capitation: Evidence from state finance reforms. *Education Finance and Policy*, 6(2), 168–201.
66. Verstegen, D. A. (2011). Public education finance systems in the United States and funding policies for populations with special educational needs. *Education Policy Analysis Archives*, 19(21).
67. Chambers, J. G. (1999). "The Patterns of Expenditures on Students With Disabilities: A Methodological and Empirical Analysis" in Parris, T. B., Chambers, J. G., & Guarino, C. M. (Eds.) *Funding Special Education* (pp. 89–123). Thousand Oaks, CA: Corwin Press.
68. Verstegen, D. A. (2011). Public education finance systems in the United States and funding policies for populations with special educational needs. *Education Policy Analysis Archives*, 19(21).
69. U.S. Department of Education, Office of Civil Rights. (2014). 2011–12 State and National Estimations. [https://ocrdata.ed.gov/StateNationalEstimations/Estimations\\_2011\\_12](https://ocrdata.ed.gov/StateNationalEstimations/Estimations_2011_12).
70. Reis, S. M. (Ed.). (2004). *Essential Readings in Gifted Education*. Thousand Oaks, CA: Corwin.
71. Woods, J. (2016). *State and federal policy: Gifted and talented youth*. Denver, CO: Education Commission of the States.

72. Verstegen, A. (2014). *How do states pay for schools? An update of a 50-state survey of finance policies and programs*. Association for Education Finance and Policy Annual Conference. San Antonio, TX: Association for Education Finance and Policy.
73. National Center for Education Statistics. (2014). Career and technical education (CTE) statistics: Findings: Secondary/high school. [https://nces.ed.gov/surveys/ctes/tables/index.asp?LEVEL=SECONDARY\\_FIGURES](https://nces.ed.gov/surveys/ctes/tables/index.asp?LEVEL=SECONDARY_FIGURES).
74. Zinth, J. (2013). *The progress of education reform: Career/technical education, not your father's vocational education*. Denver, CO: Education Commission of the States.
75. Zinth, J. (2014). *CTE dual enrollment: A strategy for college completion and workforce investment*. Denver, CO: Education Commission of the States.
76. Klein, S. (2001). *Financing vocational education: A state policymaker's guide*. Berkeley, CA: MPR Associates, Inc.
77. Foster, L. R., Klein, S., & Elliott, B. (2014). *State strategies for financing career and technical education*. Washington, DC: U.S. Department of Education, Office of Career, Technical and Adult Education.
78. Foster, L. R., Klein, S., & Elliott, B. (2014). *State strategies for financing career and technical education*. Washington, DC: U.S. Department of Education, Office of Career, Technical and Adult Education.
79. Foster, L. R., Klein, S., & Elliott, B. (2014). *State strategies for financing career and technical education*. Washington, DC: U.S. Department of Education, Office of Career, Technical and Adult Education.
80. Tennessee State Board of Education. (2016). 2016–2017 BEP Blue Book, Tennessee Basic Education Program BEP 2.0. Nashville, TN: Author. [https://www.tn.gov/content/dam/tn/education/cpm/loc\\_fin/loc\\_fin\\_bep\\_blue\\_book.pdf](https://www.tn.gov/content/dam/tn/education/cpm/loc_fin/loc_fin_bep_blue_book.pdf).
81. Foster, L. R., Klein, S., & Elliott, B. (2014). *State strategies for financing career and technical education*. Washington, DC: U.S. Department of Education, Office of Career, Technical and Adult Education.
82. Barnett, W. S., Friedman-Krauss, A. H., Gomez, R. E., Horowitz, M., Weisenfeld, G. G., Brown, K. C., & Squires, J. H. (2016). *The state of preschool 2015: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers Graduate School of Education.
83. Barnett, W. S., Friedman-Krauss, A. H., Gomez, R. E., Horowitz, M., Weisenfeld, G. G., Brown, K. C., & Squires, J. H. (2016). *The state of preschool 2015: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers Graduate School of Education.
84. Barnett, W. S., Friedman-Krauss, A. H., Gomez, R. E., Horowitz, M., Weisenfeld, G. G., Brown, K. C., & Squires, J. H. (2016). *The state of preschool 2015: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers Graduate School of Education.
85. Diffey, L., Parker, E., & Atchison, B. (2017). *State pre-k funding 2016–17 fiscal year: Trends and opportunities*. Denver, CO: Education Commission of the States. <https://www.ecs.org/wp-content/uploads/State-Pre-K-Funding-2016-17-Fiscal-Year-Trends-and-opportunities-1.pdf>.
86. Darling-Hammond, L. (2010). *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*. New York, NY: Teacher's College Press.
87. See, e.g., Gormley, W. T., Jr., Philips, D., & Gayer, T. (2008). Preschool programs can boost school readiness. *Science*, 320(5884).
88. Barnett, W. S., Friedman-Krauss, A. H., Weisenfeld, G. G., Horowitz, M., Kasmin, R., & Squires, J. H. (2017). *The state of preschool 2016: State preschool yearbook*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers Graduate School of Education.
89. Rivera, M. (2017). *What about the schools? Factors contributing to expanded state investment in school facilities*. San Antonio, TX: Intercultural Development Research Association.
90. Alexander, D., & Lewis, L. (2014). *Condition of America's public school facilities: 2012–13* (NCES 2014-022). Washington, DC: U.S. Department of Education, National Center for Education Statistics. <http://nces.ed.gov/pubs2014/2014022.pdf>.
91. Filardo, M. (2016). *State of our schools: America's K–12 facilities 2016*. Washington, DC: 21st Century Fund.

92. Rivera, M. (2017). *What about the schools? Factors contributing to expanded state investment in school facilities*. San Antonio, TX: Intercultural Development Research Association.
93. Filardo, M. (2016). *State of our schools: America's K-12 facilities 2016*. Washington, DC: 21st Century Fund.
94. Rivera, M. (2017). *What about the schools? Factors contributing to expanded state investment in school facilities*. San Antonio, TX: Intercultural Development Research Association.
95. Rivera, M. (2017). *What about the schools? Factors contributing to expanded state investment in school facilities*. San Antonio, TX: Intercultural Development Research Association.
96. Filardo, M. (2016). *State of our schools: America's K-12 facilities 2016*. Washington, DC: 21st Century Fund.
97. See, e.g., Education Commission of the States. (2012). *Understanding state school funding*. Denver, CO: Author.
98. National Conference of State Legislatures. (2017). *Technology in the classroom*.
99. Jones, G. (2017, March 27). 5 biggest barriers to education technology. *Edudemic*. [www.edudemic.com/barriers-to-education-technology/](http://www.edudemic.com/barriers-to-education-technology/).
100. National Center for Education Statistics. (2016). Computer and internet use. <https://nces.ed.gov/fastfacts/display.asp?id=46>.
101. Purcell, K., Heaps, A., Buchanan, J., & Friedrich, L. (2013). *How teachers are using technology at home and in their classrooms*. Washington, DC: Pew Research Center's Internet & American Life Project. <http://www.pewinternet.org/2013/02/28/how-teachers-are-using-technology-at-home-and-in-their-classrooms/>.
102. Thigpen, K. (2014). *Creating anytime anywhere learning for all students: Key elements of a comprehensive digital infrastructure*. Washington, DC: Alliance for Excellent Education.
103. U.S. Department of Education. (2017). *Section 5005 report on rural education: Preliminary report*. Washington, DC: Author. <https://blog.ed.gov/files/2017/12/Preliminary-Report-on-Rural-Education.pdf>.
104. Sisneros, L., & Sponsler, B. A. (2016). *Broadband access and implications for efforts to address equity gaps in postsecondary attainment*. Denver, CO: Education Commission of the States; H.B. 168, 63rd Leg., Reg. Sess. (ID, 2015).
105. Maine Department of Education. (n.d.). Maine Learning Technology Initiative (MLTI). <https://www.maine.gov/doe/learning/ltr/mlti> (accessed 07/28/18).
106. Baker, B., Farrie, D., Johnson, M., Luhm, T., & Sciarra, D. G. (2017). *Is school funding fair? A national report card*. Newark, NJ: Education Law Center; Baker, B., Farrie, D., Luhm, T., & Sciarra, D. G. (2016). *Is school funding fair? A national report card*. Newark, NJ: Education Law Center; Baker, B., Farrie, D., & Sciarra, D. G. (2015). *Is school funding fair? A national report card*. Newark, NJ: Education Law Center.
107. Sciarra, D. G., & Farrie, D. (2014). *Linking standards to resources: New Jersey's School Funding Reform Act of 2008*. Newark, NJ: Education Law Center.
108. A. 500, 212th Leg., Reg. Sess: School Funding Reform Act. (NJ, 2008).
109. Barnett, W. S. (2008). *Preschool education and its lasting effects: Research and policy implications*. Boulder, CO, and Tempe, AZ: Education and the Public Interest Center & Education Policy Research Unit; Frede, E., Jung, K., Barnett, W. S., & Figueras, A. (2009). *The APPLES Blossom: Abbott Preschool Program Longitudinal Effects Study (APPLES): Preliminary results through 2nd grade, Interim Report June 2009*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers Graduate School of Education.
110. Darling-Hammond, L. (2010). *The Flat World and Education: How America's Commitment to Equity Will Determine Our Future*. New York, NY: Teacher's College Press.

111. These 10 categories are: (1) regular or special education pre-kindergarten, (2) regular or special education half-day kindergarten, (3) regular or special education full-day kindergarten, (4) regular or special education elementary (grades 1–5), (5) regular or special education junior high/middle (grades 6–8), (6) regular or special education senior high (grades 9–13), (7) limited English pre-k, (8) limited English half-day kindergarten, (9) limited English (grades 1–12), and (10) vocational education (grades 9–12). Students with disabilities taking life skills or similar programs beyond grade 12 curriculum are listed as being in “grade 13” and counted as high schoolers. There are exceptions for students attending regional vocational districts, among other specialized exceptions. Massachusetts Department of Elementary & Secondary Education. (2017). School finance, Chapter 70 Program. [www.doe.mass.edu/finance/chapter70/](http://www.doe.mass.edu/finance/chapter70/).
112. The 11 areas are: (1) Administration, (2) Instructional Leadership, (3) Classroom and Specialist Teachers, (4) Other Teach Services, (5) Professional Development, (6) Instructional Equipment & Technology, (7) Guidance and Psychological Services, (8) Pupil Services, (9) Operations and Maintenance, (10) Employee Benefits & Fixed Charges, and (11) Special Education Tuition. Massachusetts Department of Elementary & Secondary Education. (2017). School finance, Chapter 70 Program. [www.doe.mass.edu/finance/chapter70/](http://www.doe.mass.edu/finance/chapter70/).
113. Massachusetts Department of Elementary & Secondary Education. (2017). School finance, Chapter 70 Program. [www.doe.mass.edu/finance/chapter70/](http://www.doe.mass.edu/finance/chapter70/).
114. Massachusetts Department of Elementary & Secondary Education. (2017). School finance, Chapter 70 Program. [www.doe.mass.edu/finance/chapter70/](http://www.doe.mass.edu/finance/chapter70/).
115. Guryan, J. (2001). *Does money matter? Regression-discontinuity estimates from education finance reform in Massachusetts*. (Working paper No. 8269). Cambridge, MA: National Bureau of Economic Research; Nguyen-Hoang, P., & Yinger, J. (2014). Education finance reform, local behavior, and student performance in Massachusetts. *Journal of Education Finance* 39, 297–322.
116. Robledo Montecel, M., & Goodman, C. L. (2010). *Courage to connect: A quality schools action framework*. San Antonio, TX: Intercultural Development Research Association.





## About the Author

**David Hinojosa, J.D.**, is the Intercultural Development Research Association (IDRA)'s National Director of Policy, and he also directs IDRA EAC-South. In his policy role, he supports the integration and coordination of national and state policy reform efforts impacting the education of all students, with special emphasis on students of color and those from low-income families, English learners, and recently immigrated children. He drafted various analyses of congressional bills reauthorizing the Elementary and Secondary Education Act and created an equity-based framework to help measure the effectiveness of the federal accountability system. At the state level, he spearheads IDRA's critical work in education policy, including school finance, accountability, testing, private vouchers, teacher quality, and EL matters. As IDRA's Director of the IDRA EAC-South, Hinojosa spearheads its work in assisting states and school districts to protect students' civil rights and provide equal educational opportunities for all students.





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