



# State Funding Formulas

## A National Review

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### Overview

States are responsible for providing an adequate education for all students. Providing an adequate education to all students necessarily means that educational resource levels should differ across districts, schools, and students according to the needs of students and other contextual characteristics influencing the cost of providing educational services. Students come to school with dissimilar learning needs and socioeconomic backgrounds that require different types and levels of educational supports for them to achieve standards or outcomes deemed adequate. Similarly, schools in different contexts may also require different levels of resources because of scale of operations or the price they must pay for key resources. Dissimilar resource requirements that vary based on student needs and context translate to differences in the cost of education among districts and schools.

Presently, all states operate school funding formula and supplemental grants-in-aid programs that attempt to address differences in educational costs across school districts. However, there is considerable variation across states in the policies used to adjust for cost differences.

In this policy brief, we present a framework for understanding differences in educational costs across school districts. We then describe the range of cost factors states adjust for in their education funding policies and present a typology of the different approaches states use to allocate additional aid to school districts to offset these differences in costs. To illustrate the different approaches used by states, we describe existing policies in place in New England states that neighbor New Hampshire.

### Framework for Understanding Differences in Educational Costs

The cost of educating students to common standards varies across school districts. Cost is the level of spending required to achieve any given set of outcome goals. Typically, outcome goals are operationalized as achieving common targets on state assessments or graduation rates. Cost factors are

things that affect the level of spending required to achieve stated goals *and* are outside the local district administrators' control.<sup>1</sup>

Table 1 describes the four primary categories of cost factors that affect districts and schools: (1) student need, (2) scale and sparsity, (3) grade range, and (4) price level of inputs.

Two types of student need factors—individual student factors and collective population characteristics—impact education costs. Individual students with specific educational needs (e.g., students with disabilities [SWDs], English language learners [ELLs], and economically disadvantaged students) may need specialized programs, services, or interventions to achieve common outcomes. These efforts require additional resources to implement, which come at a higher cost to a school district.

There are other collective characteristics of the student population, such as the local concentration of student economic disadvantage, that may require schoolwide intervention to achieve common outcomes. For example, an economically disadvantaged student may not have a specific educational need to be remediated, but a school population of economically disadvantaged students may require smaller classes, early childhood programs, and other services in order to have an equal opportunity to achieve common goals. These schoolwide interventions also increase the cost to school districts with high concentrations of student need.

School district structure, organization, and location—particularly the size of a district or school and the population density of the community in which it is located—may also affect costs.<sup>2</sup> For example, research shows that districts with fewer than 100 students operate at almost double the per-pupil cost as districts with 2,000 pupils, and districts with 100 to 300 students are about 50% more costly (Baker, 2005). Such cost differences are largely attributable to differences in underlying staffing ratios. Similarly, population sparsity can result in higher transportation costs because students must travel further average distances to school.

Educational resources also differ across grade ranges. For example, younger students in early elementary school may require smaller class sizes, which increases cost. High schools, however, often provide specialized courses and extracurricular activities (such as athletics or marching band) that also require additional resources.

Lastly, school districts within the same state also may be required to pay different prices for specific goods and services. Teacher and other employee wages are the most commonly addressed input price factor in schooling; that is, the prevailing wage to recruit and retain a similarly qualified teacher may differ across districts within a state (Chambers, 1995; Taylor, 2015).

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<sup>1</sup> School districts may make many other choices that result in spending differences but are not cost differences. These include the choice to provide more programs and services or smaller classes than might be absolutely necessary to merely achieve the outcome targets in question. These choices may result in achieving higher outcomes or different outcomes (as with arts and athletic programs). These spending differences are not necessarily inefficiencies but, rather, spending choices based on local preferences. They are not, however, considered cost factors for the purposes of developing state education funding policy.

<sup>2</sup> Such characteristics constitute cost factors in circumstances where they are unalterable. For example, economies of scale is a major cost factor for very small schools and districts that are remotely located when they are unable to consolidate to achieve scale (Andrews, Duncombe, & Yinger, 2002).

**Table 1. Cost Factors Considered in School Funding Formulas**

Student Need	Scale and Sparsity	Grade Range	Price Level of Inputs
<p><b>Individual Student Characteristics</b></p> <ul style="list-style-type: none"> <li>Economic disadvantage</li> <li>Disability status</li> <li>ELLs</li> <li>Gifted and talented</li> </ul> <p><b>Collective Population Characteristics</b></p> <ul style="list-style-type: none"> <li>Concentrations of students living in poverty or ELL students</li> </ul>	<ul style="list-style-type: none"> <li>District or school enrollment</li> <li>Population sparsity or extent of rurality</li> </ul>	<ul style="list-style-type: none"> <li>Differences in academic and nonacademic programming for students in different grades</li> </ul>	<ul style="list-style-type: none"> <li>Geographic differences in resources, including personnel wages and nonpersonnel resources</li> </ul>

## Adjusting for Differences in Costs Using State School Finance Policy

Most states implement K–12 education funding policies that in some way address the differences in the cost of educating students. A key goal for these policies has been to develop programs that provide additional resources to school districts to offset higher costs, particularly those located in communities that are less able to raise the revenues needed to pay for the cost of education (Baker, 2018).

Although each state’s school funding formula is structured differently, nationally, all state policies

- recognize a core set of *cost factors* that contribute to differences in educational costs across districts and
- use one or more *mechanisms* to distribute supplemental aid to offset the additional costs introduced by these factors.

Together, the cost factors and mechanisms incorporated in school funding formulas comprise the building blocks of state efforts to redistribute educational resources among school districts.

### Mechanisms by Which Additional Funding Is Allocated

For each cost factor considered, state school finance formulas apply different mechanisms to adjust for differences in cost. The most frequently used mechanisms are (a) single student weights or stipends, (b) multiple student weights, (c) resource-based allocations, (d) cost reimbursement, (e) capitated, and (f) categorical grant programs.

- Single student weights or flat per-pupil amount.** Some states use a single weight per student to provide additional funding to school districts. For example, the number of students in a district who are free and reduced-price lunch (FRPL)-eligible might be assigned a weight of 0.50, or 50% more than the established per-pupil funding amount. Alternatively, rather than tie the additional funding to some percentage of the base, states may simply provide a district with a flat per-pupil amount; for example, an additional dollar amount per enrolled FRPL student.

- **Multiple student weights.** States may adjust funding using multiple weights or dollar amounts that are tied to different levels of need. For example, states may use multiple weights corresponding to the amount of time a student has been classified as ELL (e.g., Ohio) or differences in students' English proficiency (e.g., Maine) (Augenblick, Palaich & Associates, 2018). Multiple weights are also used to adjust for differences in costs associated with educating SWDs who have different needs (e.g., by disability category or more general categories of mild or moderate disability).
- **Resource-based allocations.** Under this model, states allocate tangible resources (e.g., teacher time, paraprofessionals, and teacher aides) based on the number of students with certain characteristics (e.g., at-risk, ELL). The amount of additional state revenues a district receives is based on the additional costs (determined by the state) of purchasing these resources. For example, Tennessee's state funding formula provides districts with supplemental funding equal to the cost of one full-time equivalent (FTE) teaching position for every 20 ELL students and an FTE interpreter position for every 200 ELL students (Augenblick, Palaich & Associates, 2018).
- **Cost reimbursement.** Rather than provide a fixed dollar amount, the state reimburses districts for the additional costs associated with providing educational services and supports to certain students. This approach differs from the other mechanisms in that it ties state aid directly to district expenditures rather than some predetermined amount. Vermont's existing approach to providing school districts with supplemental state aid to educate SWDs operates as a reimbursement system, in which the state reimburses school districts for up to 60% of allowable costs. Illinois reimburses districts for the additional costs of educating ELL students that are over-and-above a district's average per-pupil expenditure for a student of comparable age and who does not receive special education or related services (Augenblick, Palaich & Associates, 2018).
- **Categorical grant programs.** States also operate categorical grant programs that provide additional state aid to school districts for specific purposes from separate (stand-alone) appropriations. For example, most states provide supplemental funding for special education and related services through a categorical grant program that operates separately from the state's general education funding formula. States also use categorical grant programs to direct additional funding to school districts for educational programs for at-risk, gifted and talented, and ELL students. Districts qualify for additional funding by a formula that ties state aid to student need or through a competitive process that awards funding based on demonstrated need or merit.
- **Capitated.** Capitated (also called census-based) funding mechanisms allocate state funds to local education agencies based on the number of students within a school district. Typically, the funding takes the form of a flat grant paid to a district per student identified in its Average Daily Membership (ADM) headcount (not the number of students who meet a specific eligibility criteria). This approach is most often used to allocate funding for SWDs and gifted and talented students. In these instances, per capita funding is allocated according to a district or school's total head count, not just program-eligible students.

Tables 2 through 4 provide an overview of how states pair cost factors with different funding mechanisms in their school funding policies.

## Cost Factors Considered in State Funding Formulas

### *Student Need*

State funding policies incorporate adjustments for differences in the cost of educating students with higher levels of need, in particular:

- **SWDs.** All states provide local school districts with some form of supplemental funding to help pay for special education and related services for SWDs (Table 2). Funding is typically tied to either the overall share of SWDs in a district or the count of students who have been identified for special education using one of 13 federally defined disability categories (e.g., specific learning disability, autism spectrum disorder, visual impairment) (Kolbe, 2019).

About two thirds of states also operate high-risk pools, in which the state pays a significant portion of the cost of the services and supports provided to students with particularly severe disabilities (Griffith, 2008). Students with more severe disabilities require intensive or unique supports that can exceed normal standards of cost for SWDs. For the most expensive students with disabilities (i.e., the top 5%), spending has been documented to be as much as 5.5 to 8.7 times greater than the average spending for a general education student and 8.8 to 13.6 times larger for students in the top 1% of per-pupil special education student expenditures (Chambers, Shkolnik, & Perez, 2003). Qualifying for reimbursement or a supplemental grant from a state's high-risk pool is typically tied to a specific spending threshold, over which the state pays most of the special education costs for a particular student. Some states also establish different thresholds for placing an SWD outside a school district, which also is typically quite expensive.

- **Economically disadvantaged or at-risk students.** Nearly all state school finance formulas (47) consider differences in student disadvantage and the resulting increase in educational costs that come with investments in compensatory programs and student support services for students living in poverty or who have been identified at risk for academic failure.<sup>3</sup>

However, states use different indicators to identify economically disadvantaged students. The most commonly used indicator for the extent of student need in a school district is the share of students who receive or who are eligible to receive nutrition benefits through federal and state school lunch programs (e.g., FRPL) or other state aid programs for needy children and families. The extent of need in a school district is typically tied to either a count of students who meet specified criteria or the percentage of a district's or school's population who are identified as economically disadvantaged.

A smaller number of states use average levels of student achievement in a school district to identify districts that require additional resources. For example, in Georgia, the state provides additional funding for remedial students; that is, those who are identified as not reaching or maintaining adequate academic achievement relative to grade level, and school districts in Florida may apply for funding from the Supplemental Academic Instruction Categorical Fund by submitting a plan that identifies students to be served and the scope of academic instruction that will be provided.

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<sup>3</sup> As of AY 2018, three states (Alaska, Delaware, and South Dakota) did not provide additional state funding for at-risk students.

When considering differences in costs among school districts, some states also distinguish among districts according to the concentration, or density, of economically disadvantaged or at-risk students. For example, California’s formula includes a “concentration grant” that allocates an additional 50% of the base grant amount to districts with more than 55% of students meeting the state’s definition of “at-risk” student.<sup>4</sup> Alternatively, other states use a sliding scale to allocate state aid, in which districts with greater concentrations of students living in poverty receive more aid per student than those with lower concentrations (e.g., Nebraska, New Jersey).

- **ELLs.** Similarly, all but two states provide additional funding to educate students who are unable to communicate fluently or learn effectively in English.<sup>5</sup> ELL students have different language, academic, and social-emotional needs that require specialized instruction and support services for them to meet common academic standards.

Most states provide supplemental funding for either the number or share of ELL students served by a school district. Maine, however, applies a sliding scale that corresponds with the concentration of ELL students in a district, with larger concentrations of ELL students resulting in increasingly larger weighting factors. By contrast, Hawaii assigns different weights according to students’ level of English language proficiency; that is, larger weights for students who are less proficient in English and smaller weights for students with greater proficiency. Massachusetts’s formula places additional weight on ELL students, but the weight varies according to grade level.

- **Gifted and talented students.** Thirty-five states implement policies that provide school districts with additional funding for programs targeted at gifted and talented students.<sup>6</sup> The majority of states allocate funding on a per capita (student count) basis. However, across states, there is no commonly accepted approach to identifying the number or share of gifted and talented students in a school district.

By contrast, a few states assume that the share of gifted and talented students is the same for all school districts—for example, Arkansas and North Carolina assume that 4% of a school district’s membership qualifies as gifted and talented and provides funding on this basis. Alternatively, some states embed funding for gifted and talented students in their special education funding programs (e.g., Kentucky, Georgia, Tennessee). In Oregon, school districts may apply to the state for additional funding to pay for educational programs and services for gifted and talented students.

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<sup>4</sup> California’s definition of an at-risk student includes the unduplicated count of FRPL-eligible students, ELL students, or foster youth.

<sup>5</sup> As of AY 2018, Mississippi and Montana were the only two states that did not provide school districts with additional funding to offset the cost of providing supplemental educational supports to ELL students.

<sup>6</sup> Two other states (Illinois and Maryland) have programs in statute that operate on a “funds available” basis, and 13 states do not provide supplemental funding to local school districts for gifted and talented programs.



**Table 2. Student Need Adjustments, 50-State Summary**

Cost Adjustment	Total Number of States Applying Adjustment	Formula Adjustments					Categorical Grant
		Single Weight/ Dollar Amount	Multiple Weights	Resource-Based Allocation	Cost Reimbursement	Capitated	
Students With Disabilities	50	11 (AK, LA, MD, MO, NV, NH, NY, NC, ND, OR, WA)	16 (AZ, CO, FL, GA, IN, IA, KY, ME, MN, NM, OH, OK, PA, SC, SD, TX)	8 (DE, HI, IL, MS, TN, VT, VA, WV)	6 (MI, NE, RI, VT, WI, WY)	5 (AL, CA, ID, MA, NJ)	2 (MT, UT)  2 (State funding for high-cost students only: AR, CT)
Economically Disadvantaged/ At-Risk Students	47	30 (AL, AZ, CA, CT, HI, IN, IA, KY, LA, ME, MO, MI, MN, MS, MO, NH, NM, NV, NY, ND, OH, OK, OR, RI, SC, TX, VT, WA, WV, WY)	9 (AR, CO, IL, KS, MA, NE, NJ, PA, VA)	4 (GA, ID, NC, TN)			4 (FL, MT, UT, WI)
English Language Learners	48	25 (AK, AZ, AR, CA, FL, GA, IS, KS, KY, LA, MD, MO, NE, NH, NJ, NM, OK, OR, PA, RI, SC, SD, TX, VT, WY)	10 (CO, HI, IN, ME, MA, MI, MN, NY, ND, OH)	5 (DE, NC, TN, VA, WA)	2 (IL, WI)		6 (AL, CT, ID, NV, UT, WV)
Gifted and Talented Students	35	10 (AK, GA, IA, LA, MN, NV, OK, SC, TX, WY)	2 (KY, NM)	5 (DE, MS, OH, TN, VA)	3 (CT, ND, PA)	4 (AZ, HI, NC, WA)	11 (AR, CO, FL, ID, IN, ME, MT, NE, OR, UT, WI)

Sources: Augenblick, Palaich & Associates (2018); EdBuild (n.d.); Education Commission of the States (2019).

### *Scale and Sparsity*

State policies identify districts and schools qualifying for supplemental aid based on size, geographic location, or some combination of both size and geography (Table 3). Many states also provide supplemental funding to offset differences among school districts in the cost of transportation.

- **Geographic location or population density.** For the 2018 academic year, 13 state school finance formulas included cost adjustments for either the geographic location or the population density of the community in which a district or school is located.

State policies differ in how they measure population density and the threshold used to determine which districts are located in sparsely populated areas. For example, Michigan defines a sparsely populated school district as having fewer than 4.5 students per square mile, whereas Wisconsin identifies districts with fewer than 10 students per square mile and New York identifies districts with fewer than 25 pupils per square mile. By contrast, North Dakota defines sparsity as fewer than 100 students in a 275-square-mile area (i.e., equivalent to 0.36 students per square mile).

In addition to population density, some state policies also incorporate criteria based on a school district's physical geography and the distance between neighboring districts and schools. When considering physical geography, states recognize that some school districts operate in remote or geographically isolated areas. In Maine, additional consideration is given to districts in remote areas of the state and "island schools." Michigan qualifies supplemental aid to small and remote schools in the Upper Peninsula on being at least 30 miles from any other public school or being located "on islands that are not accessible by bridge." Arkansas's definition of a geographically necessary school identifies those where no more than 50% of the bus route is on "hard-surfaced roads" or where "geographic barriers" impede travel to other programs.

Some states further condition aid on the driving distance between districts or schools. In Arkansas, for example, a district must not only have low enrollment and be located in a geographically sparse area but also be at least 12 miles from the nearest out-of-district high school. To qualify for additional aid in Colorado, a small school must be at least 20 miles from the nearest district school with the same grade levels. Similarly, in Nebraska, small elementary schools must be at least 7 miles away from the nearest elementary school or the only elementary school in their district.

- **District or school size.** Twenty-six states recognize that small districts and schools are less able to take advantage of economies of scale in operations and must spend more to provide equivalent educational opportunities to students. Of states that incorporate an adjustment for district or school size in their formula, 13 conditioned this funding on some measure of geographic isolation (i.e., districts and schools that are small and in a geographically isolated or sparsely populated area).

States use different thresholds to determine at what point a district or school becomes sufficiently small to qualify for additional assistance. Most states use student enrollment as an indicator for size but apply different cut-points for receiving aid. For example, Arizona and Arkansas classify districts with less than 600 students as sufficiently small, whereas Colorado and Michigan identify districts enrolling less than 200 and 250 students (respectively). North Dakota uses different enrollment thresholds for K–12 and K–8 school districts (less than 900 and 200 students, respectively), and,



similarly, Utah uses different thresholds for elementary and secondary schools (less than 160 and 600 students, respectively). New Mexico uses different enrollment criteria for schools and districts; small schools are those with less than 400 students, and small districts are those with less than 4,000 students.

Other states set enrollment thresholds by the number of students in a grade or average class size in a school. Oregon, for example, identifies small elementary schools as having no more than 28 students per grade (and not located more than 8 miles from the nearest other elementary school). At the secondary level, Oregon districts must have less than 8,500 students and a school with fewer than 350 students if the school has four grades and less than 267 students if the school serves only three grades. Similarly, Maine identifies small elementary schools (PK–8) as those with less than 15 students per grade (and no more than 8 miles to the nearest other PK–8 school), and at the secondary level fewer than 29 students per grade or 200 total students (and no more than 10 miles from the nearest high school).

Only a handful of states identify small districts and schools using staff-based criteria. For example, Idaho provides additional instructional resources to districts with fewer than 40 support units (inclusive of teachers and support staff) and an additional increment to those with fewer than 20 support units.<sup>7</sup> New York defines a small school as one that has less than eight FTE teachers.

Most states (43) also provide some sort of additional support for student transportation. Transportation aid usually operates as a categorical grant program, separate from adjustments for school size or population density and in addition to base funding provided by the state. The criteria for receiving aid differs considerably across states. Some states reimburse districts for a share of allowable transportation costs. For example, Wyoming reimburses local school districts for 100% of transportation costs, while in Missouri districts are reimbursed for a little less than 30% of costs. Other states condition funding on miles driven, the average distance between students' homes and schools, or provide a flat grant amount for each student the district transports to school.

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<sup>7</sup> Support units are the foundation of how schools in Idaho are funded and are often thought of and referred to as classroom units. A school district generates support units based on the number of students it has in average daily attendance in various categories such as kindergarten, elementary, and secondary. The student counts are then divided by a series of divisors to calculate the number of support units of funding.

**Table 3. Cost Adjustments for Scale, Sparsity, and Transportation, 50-State Summary**

Cost Adjustment	Total Number of States Applying Adjustment	Adjustments to Base Amount				Discretionary Grant Program or Appropriation
		Single Weight	Multiple Weights	Resource-Based Allocation	Flat Grant per Pupil	
Geographic isolation or population density	13	4 (AR, FL, ND, NE)	4 (AK, AZ, NY, SD)	2 (ID, WV)	1 (FL)	2 (MI, TX)
District or school enrollment	26	4 (IA, OK, PA, WV)	8 (AK, AR, AZ, KS, LA, ND, NM, TX)	5 (NC, SD, UT, WA, WY)	4 (MN, MO, OR, WI)	5 (CA, GA, ID, MI, VT)
Adjustment for enrollment is applied only to districts/schools that are also geographically isolated	13	AR, AZ, CA, FL, ME, MI, MN, NC, OR, PA, UT, WI, WV				
Operates Transportation Grant/Aid Program	43	AK, AL, AR, AZ, CA, CO, DE, FL, GA, HI, ID, IA, IL, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, NC, ND, NE, NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, TN, TX, UT, VT, WA, WI, WY				

*Notes:* Discretionary grant program or appropriation refers to states that do not have an explicit formula for allocating money for geographically isolated or small schools or districts but have a pot of money set aside for the given purpose. Each year, the state then decides how to allocate the money set aside for the given purpose. In most states, supplemental aid for student transportation operates as a separate categorial program, each relying on an array of transportation-specific distribution strategies (e.g., percentage reimbursement for costs, per-student or per-route flat grants).

*Sources:* The summary of state policies is based on information reported by (a) EdBuild’s *FundEd: State policy analysis* (retrieved from <http://funded.edbuild.org/state>) and (b) *A quick glance at school finance: 50-state survey of school finance policies* (retrieved from <https://schoolfinancesdav.wordpress.com>). In addition, individual states’ statute and other documents were reviewed when further information or clarification was needed.

**Grade Range**

Thirty states’ funding formulas adjust for differences in educational costs across grade levels (Table 4). Cost differences across grade levels can be tied to smaller class sizes in early elementary grades and increased course offerings and supplemental academic and nonacademic programming in the middle and secondary grades. For example, of the states that adjust for differences in costs associated with educating students in different grade levels, most consider cost differences across multiple grade spans; however, the grade range criteria used in the formula vary across states (e.g., K–3, 4–8, 7–8, and 9–12) (Table 5).

**Table 4. Grade Range Adjustments, 50-State Summary**

Cost Adjustment	Total Number of States Applying Adjustment	Adjustments to Base Amount				Different Base Amount
		Single Weight	Multiple Weights	Resource-Based Allocation	Flat Grant Per Pupil	
Grade Range	30	5 (ME, MN, OH, TX, VT)	7 (AZ, FL, GA, HI, NJ, NM, OK)	11 (AL, AR, DE, ID, IL, NC, NV, UT, VA, WA, WY)	2 (LA, MI)	5 (CA, MA, MT, SC, TN)

Source: EdBuild. (n.d.). *FundEd: Grade level funding policies in each state*. Retrieved from <http://funded.edbuild.org/reports/issue/grade>.

**Table 5. Grade Levels Considered in Grade Range Adjustments, 50-State Summary**

Grade Level	Number of States
Kindergarten (Separately)	6
Elementary (K–3; K–2; Grades 1–3; or Grades 1–2)	21
Intermediate (Grades 4–6 or Grades 4–5)	10
Middle-Level (Grades 4–8; Grades 7–8; Grades 6–8; Grades 7–9)	9
Comprehensive Elementary/Middle (Grades K–8)	1
Secondary (Grades 9–12)	9
Comprehensive Middle/Secondary Levels (Grades 4–12; Grades 6–12; Grades 7–12)	9

Source: EdBuild. (n.d.). *FundEd: Grade level funding policies in each state*. Retrieved from <http://funded.edbuild.org/reports/issue/grade>.

**Resource Prices**

Eleven states adjust for differences in the price school districts must pay to hire similarly qualified teachers (Taylor, 2015). States use one of three approaches to adjust for cost: (a) Comparable Wage Index (CWI), which measures regional differences in the cost of hiring teachers by comparing regional differences in the cost of hiring of nonteachers in comparable fields (e.g., Florida, Massachusetts, and New York); (b) Comparable Living Index (CLI), which describes the differences among communities in the cost of a purchasing a similar “basket” of consumer goods and services (e.g., Colorado); and (c) Hedonic Wage Index, which adjusts costs based on factors that impact teachers’ employment choices (within

education) and attempt to provide districts with comparable resources to recruit and retain teachers of similar quality (e.g., Maine and Maryland) (Baker, 2008; Taylor, 2015).<sup>8</sup>

## Example States

All states incorporate multiple cost factors and funding mechanisms in their overarching school funding policies. Together, these factors and mechanisms work to provide different types and amounts of supplemental aid to school districts to offset differences in education costs.

To illustrate, we describe the current policies in place in five New England states proximate to New Hampshire, including Connecticut, Maine, Massachusetts, Rhode Island, and Vermont (also see Table 6). The descriptions of the policies in place in these states are not intended to serve as policy archetypes but, rather, as examples of the range of cost factors and mechanisms incorporated in state education funding policies within the region.

### Connecticut

Connecticut operates a foundation formula for allocating state aid to school districts, with a base per-pupil funding amount of \$11,525 (FY 17; Augenblick, Palaich & Associates, 2018).

Connecticut is one of four states that does not operate a special education funding system; instead, the state's formula assumes that the state share of special education funding is incorporated in the base funding amount that is allocated through the state's main education equalization aid grant (the Education Cost Sharing [ECS] grant) (Connecticut School Finance Project, 2016). Districts are eligible to receive supplemental assistance for high-cost SWDs from the state's Excess Cost grant program, which reimburses districts for the cost of educating specific students that exceed 4.5 times the average per-pupil education costs in a school district. Expenditures for gifted and talented students are included in the state's reimbursement program for high-cost students (Connecticut General Statutes, Title 10, Chapter 164, Section 10-76f).

Connecticut school districts receive an additional 30% of the ECS base funding amount for each student who is eligible for FRPL. The formula also includes a concentrated poverty weight, which applies to a district with 75% or more of its students identified as FRPL-eligible. The concentration weight increases the poverty weight by 5% (i.e., 1.35) for the count of students above the 75% level (Augenblick, Palaich & Associates, 2018).

The state provides supplemental funding for the additional cost of approved programs for ELLs through a separate categorical grant program. Districts operating an approved program may apply to the State Board of Education (annually) to receive (within available appropriations) a grant equal to the product obtained by multiplying \$1,916,130 (the stipulated appropriation amount) by the district's share

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<sup>8</sup> See Taylor (2015) for additional information on state-level strategies for adjusting for regional differences in the cost of teacher wages.

(percentage) of the statewide population of ELLs (Connecticut General Statutes, Title 10, Chapter 164, Section 10-17g).

Connecticut's ECS grant does not include adjustments for differences in costs attributable to student grade level, district or school size, or resource prices.

## Maine

Maine operates a hybrid funding formula that first determines the cost of education in a school district using the value of a stipulated package of resources (e.g., teachers, administrative personnel, classroom materials) and then dividing this total cost by a district's enrollment. This base amount is further adjusted for regional differences in resource prices, resulting in a district-specific per-student adjusted base cost amount. For FY 2018, the base funding amount for a student ranged from \$5,134 to \$7,353, depending on the district (Maine Department of Education, 2017).

Pupil weights are applied to districts' adjusted base funding amounts to account for differences in student needs. Multiple weights are used to adjust for differences in the share of SWDs in a school district (Education Commission of the States, 2019),<sup>9</sup> and a single weight (1.15) is used to inflate the base funding amount for each student in a school district that is eligible for FRPL.

Maine's formula includes multiple weights to adjust for the cost of educating ELLs. The multiplier depends on the number of students in a district who are limited English proficient (LEP)—that is, for school districts with fewer than 15 ELL students the multiplier is 1.7; for districts with between 16 and 250 ELL students the multiplier is 1.50; and for districts where there are more than 250 ELL students the multiplier is 1.525 (Maine Department of Education, 2016).

Maine provides a higher level of funding for students in Grades K–2 by applying a multiplier of 1.1 to a district's adjusted base funding amount for students enrolled in these grades (Maine Department of Education, 2016).

The formula uses multiple weights to adjust for differences in education costs in remote, small schools. A school is eligible for additional funding when it meets specific size and distance criteria—for example, PK–8 schools with fewer than 15 students per grade and more than eight miles from the nearest other PK–8 school; secondary schools with fewer than 29 students per grade, fewer than 200 students, and more than 10 miles from the nearest high school (Maine Department of Education, 2016).

School districts are eligible to receive additional funding for state-approved gifted and talented programs from a separate categorical funding program. The amount districts receive is based on prior year spending for an approved program or an approved budget amount (whichever is less).

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<sup>9</sup> The state weights students with disabilities at 2.277, up to 15% of a school district's enrollment. SWD students in excess of 15% of students are weighted at 1.38. The state also provides additional funding for high-cost students with disabilities (Education Commission of the States, 2019).

## Massachusetts

Massachusetts also operates a hybrid funding system that incorporates both resource- and student-based elements. A “foundation budget” amount is calculated for each school district. This amount is derived by multiplying the number of pupils in enrollment categories by a set “cost rate.” Specifically, each pupil enrolled in a district is initially assigned to one of 10 discrete categories:

1. PK,
2. half-day kindergarten,
3. full-day kindergarten,
4. Grades 1–5,
5. Grades 6–8,
6. Grades 9–13,
7. LEP PK,
8. LEP half-day kindergarten,
9. LEP Grades 1–12, and
10. vocational education (Grades 9–12).

The state applies a resource-based cost rate to a district’s count of students in each category.<sup>10</sup>

Special education and low-income students are treated as “above the base”—and dollars are allocated to districts based on a census-based calculation. The formula assumes that special education students compose 3.75% of the foundation enrollment and that an additional 1% of district enrollment will require out-of-district placement to receive special education and related services appropriate to a student’s needs (Massachusetts Department of Education, 2017). For FY 2018, the state provided districts with \$25,632 for each assumed in-district SWD and \$26,696 for each assumed out-of-district special education placement.

Massachusetts’s formula also provides additional funding for a school district based on the concentration of economically disadvantaged students. Specifically, each district is assigned to a decile according to the share of students participating in one or more state-administered programs, including SNAP, Transitional Aid to Families with Dependent Children (TAFDC), foster care, and MassHealth (Medicaid; up to 133% of federal poverty level) (Massachusetts Department of Education, 2017). The additional dollar amount per economically disadvantaged student depends on the statewide decile to which a district is assigned. For FY 2018, school districts with the smallest share of economically disadvantaged students received \$3,817 per economically disadvantaged student, while those with the largest shares received \$4,181 (Massachusetts Department of Education, 2017). Massachusetts does not provide additional funding for gifted and talented students or for small districts or schools.

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<sup>10</sup> A wage adjustment is used to calculate district-specific cost rates that reflect differences in the price of labor across school districts.



## Rhode Island

Rhode Island uses a foundation funding formula to allocate state aid to districts. Like other states that use a foundation formula, the state assigns a base amount to the typical student who has no special needs and does not require additional education services. For FY 17, the base per-pupil amount was \$9,163.

The formula then accounts for differences in the cost of educating students across school districts by applying a weight to the base amount for low-income students (1.40) and ELLs (1.1). The state's formula does not adjust for differences in education costs across grade levels, and it does not provide supplemental funding for gifted and talented students or small districts or schools.

The foundation base per-pupil amount is intended to cover a portion of special education costs. As a result, the existing formula does not include additional adjustments for the share of SWDs in a school district. Apart from the funding formula, the state operates a separate categorical grant program for high-cost special education students (i.e., those whose costs exceed five times a school district's combined per-pupil core instruction amount). Districts may apply to the state for this additional funding from this program; however, the available funding typically falls short of need. For FY 19, the state appropriation was \$4.5 million, while the estimated cost to fully fund the program was \$12.5 million (Rhode Island House Fiscal Advisory Staff, 2018).

## Vermont

In Vermont, school budgets are developed by local school boards and approved by school district voters. School districts are expected to implement programs and services consistent with the state's Education Quality Standards (EQS), which are intended to ensure that all Vermont students are afforded educational opportunities that are substantially equal in quality and enable them to achieve or exceed standards approved by the State Board of Education. However, at present there is no connection—in statute, rules, or practice—between Vermont's EQS and its school funding system. In addition, EQS guidelines do not provide specific resource parameters or requirements; rather, the EQS describes what a quality school should look like and provides for Agency of Education (AOE) review and intervention, where necessary.

Vermont's education funding system includes three categorical grant programs that provide supplemental state aid to school districts and schools to offset specific types of educational costs: (1) special education, (2) transportation aid, and (3) small schools grants.

School districts are reimbursed (annually) for about 60% of their special education costs. However, starting in FY 2021, Vermont will migrate to a census-based funding model, in which state aid will be allocated to school districts on a per capita basis. This change was intended to break the link between student identification, service delivery, and state aid, and provide districts with new flexibility in how they develop systems of support for struggling students.

Vermont provides supplemental funding to “small” districts and schools. The small schools grant program is intended to offset the higher costs of operation because of limited economies of scale in small districts and schools. School districts operating schools with a two-year average combined enrollment of fewer than 100 students, or in instances where the average grade size is 20 or fewer students, are eligible for

an annual per capita grant from the state. The state also operates a transportation grant program. Grantees are eligible to have up to 50% of their allowable expenditures reimbursed by the state.

In Vermont, the formula used to calculate local tax rates adjusts for differences in education costs using pupil weights. Specifically, weights are used to calculate the number of equalized pupils in a school district. An equalized pupil can be thought of as an average pupil in terms of educational costs. Districts with lower than average costs (as specified by the weights) will have an equalized pupil count below their actual enrollment; whereas districts with higher than average costs will have an equalized pupil count that is larger than their actual enrollment.

Vermont's use of weights to equalize pupils differs from how weights are used in most other state funding formulas. In more than 30 other states, weights are used to adjust the amount of state aid a local school district receives as a part of a foundation formula. By contrast, in Vermont, the weights are used to calculate an equalized education spending amount, which is subsequently used to adjust (equalize) tax effort across school districts. As a result, the application of weights in Vermont's formula is not comparable to how weights are applied in other states.

Currently, Vermont recognizes four categories of students that are presumed to have higher or lower costs (current weighting in parentheses).

1. Economically disadvantaged students (1.25)
2. ELLs (1.20)
3. Secondary students (1.13)
4. Prekindergarten students (0.46)

In 2019, the Vermont's General Assembly and AOE commissioned a study to analyze its current policies that adjust for differences in costs across school districts (Kolbe, Baker, Atchison, & Levin, 2019). The report recommended that the magnitude of the existing weights be increased and new weights be added for small schools (<250 students) and schools operating in population-sparse areas.

**Table 6. Overview of Selected States' School Funding Formula**

	<b>Connecticut</b>	<b>Maine</b>	<b>Massachusetts</b>	<b>Rhode Island</b>	<b>Vermont</b>
<b>Funding Model</b>	Foundation	Hybrid System	Input-Based	Foundation	Local Control
<b>Cost Adjustments</b>					
<b>Students With Disabilities</b>	State funding for high-cost students (only)	Multiple student weights	Census-based allocation	Cost reimbursement	Cost reimbursement
<b>Economic Disadvantage/ At-Risk Students</b>	Single weight (1.30) and additional weight for districts with concentrated poverty (1.05)	Single weight (1.15)	Dollar amount that varies by economic disadvantage decile	Single weight (1.4)	Single weight (1.25)
<b>English Language Learners</b>	Categorical grant	Multiple student weights (Weight depends on ELL density)	Multiple student weights (Weight depends on ELL grade level)	Single weight (1.1)	Single weight (1.20)
<b>Gifted and Talented</b>	Included in the state's special education funding program	Categorical grant	None	None	None
<b>Grade Level</b>	None	Single weight (Students in Grades K–2, 1.1)	Different base funding amounts for students in: K, elementary, junior middle grades, and high school	None	Multiple weights (1.13; Students in Grades 7–12; 0.46 PK students)
<b>Size and Geography</b>	None	Multiple weights	None	None	Small schools categorical grant program
<b>Resource Prices</b>	None	Regional labor market adjustment	Wage adjustment factor	None	None

Sources: The summary of state policies is based on information reported by: (1) EdBuild's *FundEd: State policy analysis* (retrieved from <http://funded.edbuild.org/state>); and (2) *A quick glance at school finance: A 50 state survey of school finance policies* (retrieved from <https://schoolfinancesdav.wordpress.com>). In addition, individual states' statute and other documents were reviewed when further information or clarification was needed.

## Summary

All states operate school funding formulas and supplemental grants-in-aid programs in an attempt to address differences in education costs across school districts. Cost factors that are commonly recognized in state funding formulas include adjustments for (a) *student needs*, including economically disadvantaged and at-risk students, ELLs, SWDs, and gifted and talented students; (b) *district and school size and location*; (c) *grade range*; and (d) *resource prices*. State funding formulas use different mechanisms to adjust for cost differences, including weights, resource-based allocations, cost reimbursement, and categorical funding.

The policy frameworks used by other states points to several considerations for designing school finance reforms in New Hampshire.

- *What types of cost factors should New Hampshire's funding formula incorporate?* Currently, New Hampshire's funding formula adjusts for differences in education costs across school districts associated with the percentage of SWDs, extent of student economic disadvantage, and number of ELL students. This brief highlights a broad range of other cost factors that might also be considered. Although the empirical analysis completed for this study will identify specific factors and cost differentials, state policymakers will still need to decide both whether and how best to incorporate these factors into a revised funding formula.
- *What funding mechanisms should New Hampshire use to adjust for cost differences in its formula?* State policymakers have multiple tools at their disposal for making cost adjustments. The descriptions of other Northeastern states' policies show how states' overarching school funding policies may include multiple mechanisms, each corresponding to a different cost factor (e.g., SWDs). A necessary consideration is how best to align different mechanisms with policy goals for providing state aid.

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