

April 3, 2025

To: Catherine Benham, Vermont Legislative Joint Fiscal Office  
Julia Richter, Vermont Legislative Joint Fiscal Office

From: Tammy Kolbe, University of Vermont  
Bruce Baker, Miami University

Re: Updated cost estimates and recommended weights for a student-based funding formula in Vermont

This memorandum provides per student cost estimates derived from updated analyses that use the education cost function models originally developed for the Study of Pupil Weights in Vermont’s Education Funding Formula (2019; “Pupil Weighting Study”).<sup>1</sup> Additionally, it shows how updated cost estimates can be used to inform a new student-based (foundation) funding formula.

The remainder of this memorandum is organized as follows. First, we **summarize** the key takeaways from this memorandum. Then we describe our **updated analyses**, including the **base funding amount** and **recommended weights**. We also present two additional sets of analyses that generate **more refined weights for English Learners** and **students receiving special education** that account for differences in student need. We conclude by identifying **additional topics for consideration** in developing a new student-based funding formula for Vermont.

## Summary

Exhibit 1 presents findings from our updated analyses, including a base funding amount per student and corresponding student weights that can be used in a Vermont student-based funding formula.

### Exhibit 1. Base Funding Amount and Student Weights for a Vermont Student-based Funding Formula (FY2025)

Base funding amount per student		\$15,033
		<b>Student Weights</b>
<b>Student needs</b>	Students experiencing economic disadvantage	1.02
	English Learners	1.39
<b>School enrollment</b>	<100 students	0.21
<b>Population density</b>	<55 persons per square mile	0.13

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<sup>1</sup> Kolbe, T., Baker, B.D., Atchison, D., & Levin, J. (2019). *Study of pupil weights in Vermont’s education funding formula*. Report submitted by the University of Vermont to the Vermont Agency of Education.  
<https://education.vermont.gov/sites/aoe/files/documents/Executive-Summary-508.pdf>

The **base funding amount per student is \$15,033 in FY2025 dollars**. This amount is equal to the total spending required for a student with no additional needs and who attends a school with no additional costs to meet the state’s academic performance standards.

The **updated analyses identified the following cost factors that will require cost adjustments** in a future formula and their weights:

- a. Students experiencing economic disadvantage (1.02)
- b. English Learners (1.39)
- c. Students who attend schools with fewer than 100 students (0.21)
- d. Students who attend schools that are in sparsely populated areas with fewer than 55 persons per square mile (0.13)

Additionally, we **suggest a set of refined weights for English Learners and students who receive special education** that reflect differences in student need. All weights are additive.

We also identified four topics that require additional consideration when developing a student-based funding formula: 1) student transportation, 2) tuitioned students, 3) students who pursue career and technical education, and 4) adjusting the base spending amount for changes in education costs over time.

## Approach Used to Update Cost Estimates

The education cost function is a widely used school finance method that calculates the amount of per-student spending needed to achieve desired outcomes.<sup>2</sup> It uses statistical models to analyze the relationship between district and school spending and student performance, while accounting for student need cost factors and aspects of district and school context that account for differences in educational costs that are outside school district control.<sup>3</sup>

The 2019 Pupil Weighting Study developed an education cost function that used data from Vermont districts and schools for the 2008/09 through 2017/18 school years<sup>4</sup> to model the relationship between public school district and school spending and students’ academic outcomes in math and

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<sup>2</sup> The education cost function has been widely used by states to develop estimates for how much it costs to educate students to attain state performance standards, including most recently, Colorado, Delaware, New Hampshire, New York, and Oregon. That said, education cost function is one of several approaches that has been used to model education costs in state school funding studies.

<sup>3</sup> For additional information on using the education cost function to generate evidence for state education funding formula, see: Baker, B.D. (2025). *Framework for evaluating & reforming education finance systems*. Annenberg EdWorking Papers. <https://edworkingpapers.com/ai25-1127>

<sup>4</sup> Data were pooled for school years 2008/09 through 2017/18, and observations weighted by district and school enrollment. See Table 4.2 in the [2019 Pupil Weighting Study](#) for an overview of the measures and data sources used in the analysis and the report authors’ response to questions from the Task Force on Pupil Weighting (dated October 28, 2021) for additional information on how the initial models were updated to use data students’ Free- and Reduced-price Lunch eligibility.

English language arts, controlling for other student and school characteristics.<sup>5</sup> The models estimated:

- a) The cost of educating a student with no additional needs to meet state academic standards in math and English language arts.
- b) The additional spending required for students with different needs and who attend small or remote schools to meet state academic standards.

We used this information to develop new tax-capacity weights for Vermont's existing funding formula and Act 127 (2022) updated the weights in statute.

Changes in Vermont's education system since the 2017/18 school year, however, may affect today's costs of maintaining the state's average levels of student outcomes and how those costs vary from one setting to the next. For instance, new state education policies and programs, increased spending for employee wages and benefits, and higher levels of student need that require additional resources for students to attain state standards all may affect the per student cost.

To account for possible changes over time in education costs, we updated the analyses that utilized the education cost function to incorporate data from the 2018/19 to the 2023/24 school years. The updated analyses:

- a) generated a new estimate for the per student cost to attain state performance standards, and
- b) identified cost adjustments for differences in student need and school context.

We then inflated the cost estimates to fiscal year 2025 dollars (FY2025) using the U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI) to reflect spending levels for the 2024/25 school year.<sup>6</sup>

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<sup>5</sup> Data limitations prevented us from including towns or unified school districts that tuition all students to public or independent schools in the education cost function. Student outcome data were unavailable for those places. Students from sending towns who attend Vermont public schools were included in the analyses, but the analyses assume that the amount spent to educate those students is the actual spending by the school who educates the student and not the tuition amount paid for by the sending town. For additional information, see "Clarification about applying equalized pupil weights to towns and unified school districts that tuition students in one or more grades," dated April 21, 2024.

<sup>6</sup> Education cost function cost estimates for the 2023/24 school year were inflated to reflect real FY2025 dollars using the U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI). Source: <https://www.bls.gov/eci/tables.htm>. We use the ECI for civilian workers in Elementary and Secondary Schools. Most of the costs of providing a specific quality of educational programs and services is a function of the wages and benefits of teachers, administrators and other school staff. Maintaining a constant quality of those programs and services over time requires maintaining competitive compensation (relative to other professions requiring similar education/experience), as measured by an employment cost index. Employment costs tend to grow at different rates over time than the costs of consumer goods, which represent a much smaller share of schooling costs.

## Updated Cost Estimates

Exhibit 2 presents estimates from the updated analyses for a) the base cost per student, and b) required adjustments to the base cost amount.

The **base cost per student** for the 2024/25 school year is \$15,033. (Exhibit 2) This cost estimate represents the base spending amount for a student in grades kindergarten through 12 with no additional needs, and who does not attend a small or geographically remote school.<sup>7</sup>

We also identified **cost adjustments** that should be included in a future funding formula. These adjustments account for differences in education costs that require **additional state spending**, over-and-above the cost per student, to achieve desired outcomes *and* are outside the control of local school districts.

The updated analyses identified **two student-need cost adjustments**:

- a. Students experiencing economic disadvantage (\$15,334)
- b. English Learners (\$20,896)

A student-based funding formula **will also need to include cost adjustments for students receiving special education**. Below, we recommend several options for how special education weights could be incorporated in a future formula.

The updated models also identified **two school context-related cost factors**:

- 1) Schools with <100 students (\$3,157)
- 2) Schools located in sparsely populated areas (\$1,954)

The updated analyses found that **four school-context cost adjustments included in Vermont's current formula are no longer needed** because the cost of educating students in these contexts was no different than the base cost per student:

- 1) Small schools with 101 to <250 students (\$0)
- 2) Schools located in sparsely populated areas with 55 to <100 persons per square mile (\$0)
- 3) Students in middle level grades (6-8; \$0)
- 4) Students in secondary grades (9-12; \$0)

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<sup>7</sup> Because the base amount is for a student with no additional needs in a district with no additional costs, the base does not include a) poverty-related funding supplements paid for using federal aid; b) special education spending (including spending that is funded by federal and state categorical programs); and c) supports for English learner students paid for using federal aid. It also does not include transportation related spending that is paid for using the state's categorical grant program, and prior to Act 127, funding from the state's small school grant program; spending for capital and debt service payments; and tuition payments to other districts. The base amount represents the costs associated with providing a basic education program inclusive of all staffing wages and benefits, materials supplies and equipment and operating expenses associated with school and district overhead.

## Exhibit 2. Base Cost Per Student, Cost Adjustments, and Student Weights for Vermont (FY2025)

	Cost Adjustments Identified in 2019 Pupil Weighting Study	FY2025 Dollars/ <sup>1</sup>	Student Weights
<b>Base cost per student</b> <sup>2</sup>		\$15,033	
<b>Cost adjustments</b>			
<b>Student Needs</b>	Students experiencing economic disadvantage/ <sup>3</sup>	\$15,334	1.02
	English Learners/ <sup>4</sup>	\$20,896	1.39
<b>School Enrollment</b> <sup>5</sup>	<100 students	\$3,157	0.21
	101-250 students*	\$0	No weight
<b>Population Density</b>	<36 persons per square mile/ <sup>6</sup>		
	36 to <55	\$1,954	0.13
	55 to <100*	\$0	No weight
<b>Grade Range</b>	% Middle grades enrollment (grades 6-8) *	\$0	No weight
	% Secondary grades enrollment (grades 9-12) *	\$0	No weight

\*Notes a cost adjustment that is weighted in Vermont's current education funding formula, but for which a weight is no longer needed based on the updated analyses.

<sup>1</sup> Cost estimates were adjusted to reflect real FY2025 dollars using the U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI). Source: <https://www.bls.gov/eci/tables.htm>

<sup>2</sup> The base cost per student is the amount of education spending required for a student with no additional needs to attain state grade level performance standards in mathematics and English Language Arts. includes all general education operating expenses. Because the base amount is for a student with no additional needs in a district with no additional costs, this amount does not include a) poverty-related funding supplements paid for using federal aid; b) special education spending (including spending that is funded by federal and state categorical programs); and c) supports for English learner students paid for using federal aid. It also does not include transportation related spending that is paid for using the state's categorical grant program; prior to Act 127, funding from the state's small school grant program; spending for capital and debt service payments; and tuition payments to other districts. The base amount represents the costs associated with providing a basic education program inclusive of all staffing wages and benefits, materials & supplies, and equipment and operating expenses associated with school and district overhead.

<sup>3</sup> In this table, the additional spending for a student experiencing economic disadvantage represents the amount of state dollars needed for a student to attain state academic performance standards. The total spending needed for a student experiencing economic disadvantage to meet the state's academic standards is \$18,383. The difference between total and state spending (\$3,049) is paid for using federal dollars.

<sup>4</sup> This represents the total additional spending needed for English Learners to attain state academic performance standards, regardless of whether the additional cost is paid for using federal or state dollars. We did not adjust total spending for an English Learner for federal Title III funding since just five Vermont districts received federal Title III funding for the 2023/24 school year (Winooski, Burlington, South Burlington, Essex Westford, Colchester, and Champlain Valley) and the average per student amount of federal funding in these districts is about \$234 per student.

<sup>5</sup> School enrollment is measured as a school's Average Daily Membership (ADM).

<sup>6</sup> The updated analyses did not show a difference in cost between a Vermont school located in a community with fewer than 36 persons per square mile and a school in a community with fewer than 55 persons per square mile; the cost adjustment (\$1,906) is the same for schools in both sparsely populated locations.

## Using Updated Cost Estimates in a Student-based Funding Formula

A future formula should include **both** a) a **base spending amount** and b) **cost adjustments** to the base spending amount. In this section we show how the cost estimates from the updated analyses can be used to inform decisions about the base and cost adjustments.

### Base Spending Amount

Student-based funding formula guarantee districts a base spending amount (foundation) per student. There are **two options** for how student-based funding formula establish a base spending amount: 1) a **single base**, and 2) a **variable base**.

- **Option 1 – Single base:** Most state formula use a single base, or a common foundation amount per student, for each student in the state.

The updated analyses suggests that a **single base spending amount of \$15,033 per student for FY2025** (which corresponds to the 2024/25 school year) **represents adequate spending for a student** with no additional needs to achieve state performance standards.

- **Option 2 – Variable base:** Alternatively, some state formula use a variable base that provides districts with different foundation amounts based on district characteristics.<sup>8</sup>

In Vermont, a student-based funding formula could use a **simple variable base spending amount** that accounts for differences in school size and whether a school is in a sparsely populated area.

For instance:

- Small schools with less than 100 students, \$18,190 (\$15,033 plus \$3,157).
- Schools located in sparsely populated areas with fewer than 55 persons per square mile, \$16,987 (\$15,033, plus \$1,954).
- Small schools in sparsely populated areas, \$20,144 (\$15,033, plus \$5,111)

However, there are several important considerations for using a simple variable base spending amount that accounts for school size and population density.

- a) The cost adjustments for school size and population assume that small schools and schools operating in sparsely populated areas exist because of geographic constraints that prevent a school from operating at scale. The cost adjustments do not reflect local preferences for small schools in places where school consolidation is practicable.

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<sup>8</sup> For additional information how states use a variable base, see: Koehler, L. & O’Keefe, B. (2023). *Splitting the bill - #10 in the Series: How does the base amount work in student-based funding formula?* Bellwether. [https://bellwether.org/wp-content/uploads/2024/04/SplittingtheBill\\_10\\_Bellwether\\_October2023-1.pdf](https://bellwether.org/wp-content/uploads/2024/04/SplittingtheBill_10_Bellwether_October2023-1.pdf)

- b) Adopting a variable base spending amount requires additional adjustments to student-need weights, since the magnitudes of the weights are relative to a base spending amount. This would increase the formula's complexity.
- **Option 3 – Single base, plus categorical grants for school size and sparsity**

An **alternative to a variable base could be to establish a categorical grant program that provides a fixed per student grant** to small schools with fewer than 100 students (\$3,157), schools in sparsely populated areas with fewer than 55 persons per square mile (\$1,954), or that are both small and sparse (\$5,111). Grants could be conditioned on schools meeting criteria for geographic constraints that prevent them from operating at scale. Pupil weights would not be applied to the additional aid a school receives through a grant program.

### *Cost Adjustments that Should Be Included in Formula*

Student-based funding formula typically include adjustments for multiple cost factors, either by multiplying the base spending amount by a pupil weight or by providing a fixed dollar pupil grant amount on top of the base spending amount.

The updated analyses suggest that a future Vermont foundation formula **should include adjustments for the following student need factors:**

1. Students experiencing economic disadvantage
2. Students who are English Learners
3. Students who receive special education services.

Cost adjustments for **small school size** and **whether a school is in a sparsely populated area** are also appropriate.

The updated analyses suggest that **grade range should not be included as cost adjustment** in a future formula.

### *Student weights derived from updated analyses*

Student weights are the preferred approach to adjusting for cost differences because only the base spending amount (in dollars) needs to be updated in statute and regulation, since weights are proportional multipliers on the base. Exhibit 2 presents student weights that correspond to a \$15,033 base spending amount.

Specifically, a Vermont student-based funding formula should include a weight for **students experiencing economic disadvantage** equal to **1.02**. This weight generates the **additional state funding** needed for a student experiencing economic disadvantage to meet state academic standards.

On average, an **English Learner** costs **1.39** times more than the base spending amount. However, as noted below, a student-based funding formula **could include a refined set of weights that**



**correspond to different levels of English Learner’s language proficiency**, rather than a single overall cost adjustment.

Options for including **weights for students receiving special education services are described below**.

Students in **schools with fewer than 100 students** cost **0.21 times** more than the base and students in **schools in sparsely populated areas** with less than 55 persons per square mile cost **0.13** times more than the base.

## Refined Pupil Weights for English Learners

The weight for an English Learner presented in Exhibit 2 (1.39) represents the average additional cost of providing a student with English language acquisition services and supports. However, cost information from the 2024 report on the *Additional Cost of Educating Vermont’s English Learner Students* **shows that there is a wide variation in costs according to a student’s English language proficiency**. This cost information **can be used to develop a refined set of weights that adjust for differences in the cost of providing English language services to students with varying levels of language proficiency**.

English Learner students with the lowest level of English proficiency require the most resources and as a result are the costliest to serve, whereas students the highest levels of English proficiency need fewer supports and services and are the least costly – ranging from an additional cost of \$31,657 for students with the lowest levels of English proficiency (Level 1) to \$1,795 for students with the highest levels of English proficiency (Levels 5/6).

Vermont is also home to English Learners who are New Americans (Newcomer) and students with limited or interrupted formal education (SLIFE). English Learner students who are Newcomer/SLIFE may require additional services, above-and-beyond what is provided to a typical English Learner student to successfully access and participate in public education. The additional cost per student who is Newcomer/SLIFE is \$6,329.

Given the variability in additional cost among English Learners, **it may be more efficient and equitable for a future student-based funding formula to use multiple weights that are tied to English proficiency levels and Newcomer/SLIFE status**, than to use a single weight for all English Learners. Exhibit 3 presents a refined set of English Learner weights that correspond to the WIDA Language Proficiency Levels and Newcomer/SLIFE status that assume a base spending amount of \$15,033 (FY2025).



### Exhibit 3. Refined English Learner Weights Derived from 2024 Report on *Additional Cost of Educating Vermont's English Learner Students* (FY2025)

Student Grade Level	WIDA Language Proficiency Levels/ <sup>1</sup>				Newcomer/ SLIFE
	Level 1	Levels 2/3	Level 4	Levels 5/6	
Average Cost by Proficiency Level	\$31,657	\$21,195	\$18,073	\$1,795	\$6,329
Pupil weight	2.11	1.41	1.20	0.12	0.42

Note: The cost estimates presented in the report on *Additional Cost of Educating Vermont's English Learner Students* (Kolbe, 2024) were adjusted for real FY2025 dollars using the U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI).

<sup>1</sup> Vermont participates in the WIDA consortium of state departments of education. WIDA designs and implements proficiency standards and assessments for use with English language Learners in grades K-12, including the WIDA ACCESS 2.0. The ACCESS 2.0 is a standardized measure of academic language proficiency that provides each English Learner student with a proficiency score that describes the student's performance in terms of the six WIDA English Language Proficiency Levels: Level 1 – *Entering*; Level 2 – *Emerging*; Level 3 – *Developing*; Level 4 – *Expanding*; Level 5 – *Bridging*; and Level 6 – *Reaching*. Students who are identified as Newcomer/SLIFE receive that designation for a fixed period.

### Refined pupil weights for special education

A key design consideration is how Vermont's student-based funding formula will adjust for the additional cost of providing special education services to students with disabilities. Districts are required by federal and state laws and regulations to provide special education services according to a student's Individualized Educational Program (IEP), at no cost to students or their parents/guardians.

**Pupil weights are the most common approach used by states that have student-based funding formula to adjust for the differences in special education costs.** (Exhibit 4) Weights are applied to a count of students who receiving special education services, and the amount of additional state aid is determined by multiplying the weighted count by the base spending amount.

Cost adjustments for students receiving special education services can include a **single weight** that is applied to an overall count of students receiving special education, **or multiple weights** that are tied to different counts of students according to disability classification, need, or some other aspect of the special education services that they receive.

Nine states use a single weight to calculate a district's funding amount, with weights ranging between 0.75 per student receiving special education (Missouri) to 1.5 per student (Louisiana and Maine). Single weights operate like a flat grant amount per student, and do not account for differences in the cost of educating students with varying disabilities or needs. This can result in inefficient and inequitable state funding amounts.

### Exhibit 3. States Incorporating Single or Multiple Weights for Students Receiving Special Education in their Student-based Funding Formula

	States	Number
Single Weight	AL, AK, LA, MD, ME, MO, ND, NY, OR	9
Multiple Weights	AZ, DC, FL, GA, IA, KY, NM, NV, OH, OK, PA, SC, TX, WA	14

Note: State policy scan reflects updates to state formula in place through FY2022. Also see: Kolbe, T. (2021). *State funding for special education: Aligning policy with priorities*. Journal of Special Education Leadership. <https://tammykolbe.academia.edu/research>

Fourteen states incorporate multiple special education weights in their formula. In these states, multipliers are assigned according to student characteristics, including disability category (either the 13 federal disability categories or disability category groupings), level of services provided to a student, setting where a student receives services or the percentage of time a student spends in a general education classroom, and cost of services. (Exhibit 4).

### Exhibit 4. Criteria Used by States to Assign Multiple Special Education Weights in State Funding Formula

Criteria	States
Disability category	
IDEA disability categories	AZ, OK, SC
Disability category groupings	KY, OH
Level of services provided to a student	DC, FL, GA, IA, NM
Setting	TX, WA
Cost	PA
Other	NV

Note: State policy scan reflects updates to state formula in place through FY2022. Also see: Kolbe, T. (2021). *State funding for special education: Aligning policy with priorities*. Journal of Special Education Leadership. <https://tammykolbe.academia.edu/research>

Like other cost adjustments included in student-based funding formula, **special education weights should be tied to the additional cost of providing services to students receiving special education services.** However, a key consideration in developing cost-based special education weights is the **substantial variation in spending necessary to provide special education services to students.**

Two existing studies provide estimates that differentiate costs according to student disability type: 1) the U.S. Department of Education's Special Education Expenditure Project (SEEP; 1999/2000);<sup>9</sup>

<sup>9</sup> Chambers, J., Shkolnik, J., & Perez, M. (2003). *Total expenditures for students with disabilities, 1999-2000: Spending variation by disability*. Special Education Expenditure Project, American Institutes for Research. <https://www.air.org/sites/default/files/SEEP5-Total-Expenditures.pdf>

and 2) the Ohio Department of Education's Special Education Cost Study (2022).<sup>10</sup> The SEEP is the most comprehensive study of special education costs undertaken to date, and the Ohio Special Education Study is the most recent comprehensive state study of special education costs.

Columns 1 and 2 in Exhibit 5 summarize the cost estimates from both studies, according to a) federal disability classification categories, and b) disability categories that have been grouped according to low-, medium-, and high-cost. Cost estimates from the two studies are similar for lower-cost disability categories. However, the Ohio Special Education Cost Study's estimates for medium- and high-cost disability categories are somewhat higher, and may better reflect current student needs and service delivery models.<sup>11</sup>

We used the cost adjustments presented in Exhibit 5 to calculate special education weights for a Vermont student-based funding formula, by comparing the additional cost of providing special education services for each disability category (Columns 1 and 2) to a base spending amount of \$15,033 (FY2025). This produced two sets of possible weights for a Vermont formula – one set based on the cost estimates generated by the SEEP (Column 3) and a second set of weights based on the cost estimates generated by the Ohio Special Education Cost Study (Column 4).

**We recommend using the weights based on the cost estimates from the Ohio Special Education Cost Study (Column 4) since they a) are based on more recent district and school experiences and b) differentiate between students with minor and major other health impairments (OHI).**

There are several options for how the weights presented in Exhibit 5 could be incorporated into a new student-based funding formula.

- **Option 1 - Single weight**

A student-based funding formula could apply a common single weight for each student who receives special education. For instance, the updated analyses suggest that **single weight of 1.97 (based on Ohio Special Education Cost Study)**, assuming a base spending amount of \$15,033.<sup>12</sup>

The advantage of a single weight is that it is straightforward to administer and is not tied to a specific disability classification. As noted above, however, a single weight can result in inefficient and inequitable state funding amounts.

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<sup>10</sup> Danks, A., Fatima, S., Rettiger-Lincoln, E., et al. (2022). *Special education in Ohio: Best practices, costs, and policy implications*. American Institutes for Research. <https://education.ohio.gov/getattachment/Topics/Special-Education/Sections/Accountability-and-Funding/Special-Education-Cost-Study.pdf.aspx?lang=en-US>

<sup>11</sup> The SEEP estimates are based on a national survey of nearly 10,000 students who received special education services during the 1999/2000 school year. The Ohio Special Education Cost Study's estimates are based on Professional Judgement Panels (PJPs) conducted with educators during the 2021/22 school year.

<sup>12</sup> For context, Maine uses a single weight of 1.5 in its funding formula for student counts to the threshold of a special education percentage in a district of 15%, and a weight of 0.38 for the count of students above the threshold.

- **Option 2 - Multiple weights based on disability categories**

A student-based funding formula could assign student weights **based on primary disability classification**, using the 13 disability categories identified in the federal Individuals with Disabilities Education Act (IDEA). Exhibit 5, Columns 3 and 4 present weights that could be used for each disability category, assuming a base spending amount of \$15,033. For this option, **we recommend using the disability-specific weights derived from the Ohio Special Education Cost Study (Column 4)**. Administering a student-based funding formula that uses disability-specific weights is straightforward; AOE already collects information from each district on the counts of students by disability category.

Policies that tie funding to specific disability categories have been criticized for potentially incentivizing districts and schools to identify students with disabilities that potentially generate a school district more funding. It is important to note, however, that there is little empirical evidence that shows that disability-specific weights in state funding formula impact local decisions to identify students.<sup>13</sup>

- **Option 3 - Multiple weights based on disability categories grouped by cost**

A student-based funding formula also could assign special education weights according to disability cost-based tiers. Exhibit 5 presents three possible weights that are based on disability categories that have been grouped by cost. For this option, **we recommend using the disability category group weights derived from the Ohio Special Education Spending Study:**

1. **Low-cost disabilities (0.79)**, including students with a specific learning disability (SLD) and speech or language impairment
2. **Medium-cost disabilities (1.35)**, including students with an emotional disturbance (ED), intellectual disability (ID), and other health impairment (OHI)
3. **High-cost disabilities (2.49)**, including students with autism spectrum disorder (ASD), deaf-blindness (DB), hearing impairment (HI), multiple disabilities (MD), orthopedic impairment (OI), traumatic brain injury (TBI), and visual impairment (VI)

Assigning special education weights based on cost-based disability groupings may be more efficient and equitable than a single weight since the adjustments more closely align with differences in the cost of providing special education services to certain students. This approach also side-steps concerns about aligning funding with a specific disability classification. That said, this option still relies on disability category as the primary source of information about a student's need and cost.

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<sup>13</sup> See: Kolbe, T. & Dhuey, B. (2022). *Motivational effects and public funding for special education*. In Recent Advances in Education Finance & Policy. Information Age Press.

An **alternative to the three options presented above could be for the state to develop a student needs-based framework for assigning weights that does not rely on disability classification.** This would require additional work on the part of the state to develop different measures of student need and to develop cost estimates for students, according to this new framework.

**Exhibit 5: Special Education Costs and Corresponding Student Weights for a Vermont Student-based Funding Formula (FY2025)**

Weighting Categories	Cost Estimates FY2025 Dollars <sup>/1</sup>		Weights for Vermont Formula <sup>/2</sup>	
	SEEP (Column 1)	OH Special Education Study (Column 2)	SEEP (Column 3)	OH Special Education Cost Study (Column 4)
<b>Overall (Single weight; Option 1)</b>	\$22,415	\$29,656	1.49	1.97
<b>Low-cost disabilities (Option 2)</b>	\$11,611	\$11,872	0.77	0.79
Specific learning disability (SLD)	\$10,800	\$9,721	0.72	0.65
Speech or language impairment (SLI)	\$12,422	\$14,022	0.83	0.93
<b>Medium-cost disabilities (Option 2)</b>	\$14,725	\$20,327	0.98	1.35
Emotional disturbance (ED)	\$19,386	\$31,081	1.29	2.07
Intellectual disability (ID)	\$22,344	\$31,320	1.49	2.08
Other health impairment (OHI)	\$17,168		1.14	
OHI (minor) <sup>/2</sup>		\$18,908		1.26
OHI (major) <sup>/2</sup>		\$59,948		3.99
<b>High-cost disabilities (Option 2)</b>	\$25,945	\$37,502	1.73	2.49
Autism spectrum disorder (ASD)	\$29,847	\$39,810	1.99	2.65
Deaf-blindness (DB)	\$25,768	\$29,012	1.71	1.93
Hearing impairment (HI)	\$21,585	\$30,047	1.44	2.00
Multiple disabilities (MD)	\$31,571	\$23,797	2.10	1.58
Orthopedic impairment (OI)	\$21,354	\$22,295	1.42	1.48
Traumatic brain injury (TBI)	\$24,435	\$60,411	1.63	4.02
Visual impairment (VI)	\$27,057	\$34,696	1.80	2.31

<sup>/1</sup>The cost estimates for the SEEP and Ohio Special Education Spending Study were updated to reflect FY2025 dollars using data from the U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI). The cost estimates reflect the average additional spending to implement a child's Individualized Education Program (IEP), using both state and federal dollars.

<sup>/2</sup>Weights by disability category and disability cost-based groupings assume a base spending amount of \$15,033 per student and use cost estimates from the SEEP (Column 4) and Ohio Special Education Cost Study (Column 5).

<sup>/3</sup>The Ohio Study of Special Education Costs generated cost estimates for two categories of students with OHI: minor and major. OHI minor is included in the overall weight for medium-cost disabilities and OHI major is included in the overall weight for high-cost disabilities.

In addition to incorporating special education weights in their student-based funding formula, **many states also operate contingency funding mechanisms that reimburse districts for the extraordinary cost of educating high cost or high need students with disabilities.** (Exhibit 6) Vermont currently operates this type of high-cost student program.

Nationally, there are two general policy models for states' high-cost student funds – the state pays for a percentage of additional costs above a set spending threshold: 1) with a cap on the total reimbursement amount, or 2) without a cap on the reimbursement amount. Vermont's current high-cost student program falls in the latter category (i.e., no cap on the reimbursement amount), where the state reimburses a district 95% of what it spends on special education services for a student over \$60,000 and 60% of spending below the \$60,000 threshold.

States also differ in how districts qualify for reimbursement from their high-cost student funds. For instance, 10 states use a per student dollar spending threshold (including VT), where districts must spend over a specified amount to qualify and then are reimbursed for all or some of their spending above the threshold. (Exhibit 6) Alternatively, 12 other states apply a multiplier to the state's average per student spending amount or base spending amount. For most states, the multiplier is between 3 and 4 times an average per student or base spending amount. For example, in New Hampshire the threshold is based on 3.5 times the estimated state average expenditure per pupil for the school year preceding the year of distribution up to 10 times the estimated state average expenditure per pupil.

#### **Exhibit 6. State High-cost Student Programs**

	<b>States</b>
<b>States that operate high-cost student reimbursement program</b>	AL, AK, AR, CA, CT, KS, LA, ME, MA, MO, NH, NJ, NM, NY, ND, OH, OR, RI, SD, VT, WA, WV, WI
<b>Uses dollar/spending threshold</b>	AR, CA, KS, MA, NJ, OH, OR, VT, WV, WI
<b>Uses per pupil spending multiplier</b>	AL, AK, CT, LA, ME, MO, NH, NM, ND, NY, RI, WA

Note: State policy scan reflects updates to state formula in place through FY2022. Also see: Kolbe, T. (2021). *State funding for special education: Aligning policy with priorities*. Journal of Special Education Leadership. <https://tammykolbe.academia.edu/research>

## Additional Design Considerations

In addition to the cost adjustments described above, at least four other topics will require consideration in a future student-based funding formula: 1) state aid for student transportation; 2) tuitioned students; 3) funding for students who pursue career and technical education (CTE); and 4) adjusting the base spending amount for changes in education costs over time.

### *Transportation*

Transportation costs vary considerably across school districts within the state. Not all Vermont school districts provide transportation, and some do so for only certain grade levels (e.g., students in the elementary grades). Additionally, local geography and population density also contribute to differences in supervisory unions' and school districts' transportation costs.

Vermont currently operates a transportation grant program, designed to offset spending by supervisory unions and school districts for the cost of transporting students to and from school for regular classroom services. Grantees are eligible to have up to 50% of their allowable expenditures reimbursed by the state.<sup>14</sup>

A design consideration will be whether to continue the state's current transportation grant funding program or to adjust for transportation cost differences within the new student-based funding formula (e.g., using a weight or fixed grant amount per student). **Transportation spending paid for by the state's transportation grant program is not included in the base spending amount (\$15,033).**

### *Tuitioned Students*

A new student-based funding formula **will need to consider how to apply the base spending amount and weights (or fixed grant amounts) to students for whom a town or unified school district pays tuition** for them to attend another public school or approved independent school (i.e., tuitioned students).

Typically, Vermont towns and unified school districts where the electorate authorizes a school board to provide elementary or secondary education by paying tuition for a student to attend public school operated by another district or an approved independent school pay a uniform tuition rate that does not vary by an individual student's characteristics, except for a student with a disability.<sup>15</sup> Tuition rates also do not vary according to whether a student is from a sparsely populated community.

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<sup>14</sup> For FY2019, total state aid for the transportation grant program was \$9,551,507, equivalent to about 45% of allowable transportation expenditure statewide.

<sup>15</sup> The Average Announced Tuition amounts published by the Vermont Agency of Education (2024-25) does not differentiate tuition by student characteristics, or whether a student resides in a sparsely populated area. We also know of no instance where an approved independent school differentiates tuition based on student characteristics, other than disability. Independent schools also do not differentiate tuition based on whether a student resides in a sparsely populated area.



In this context, there are two considerations for designing a future student-based funding formula:

**1. Whether towns will be allowed to pay tuition amounts that are different from the base spending amount.**

The base spending amount in a student-based funding formula is the cost associated with a student with no additional needs or who attends a district without additional costs to attain state performance standards.

A student-based formula presumes that this amount is *uniformly applied to all students in the state* to meet the state's constitutional obligations to ensure equal educational opportunities and fiscal equity among the state's towns and unified school districts. Given the state's obligations, a key consideration will be whether towns can pay tuition amounts that are different from the base spending amount, and if so, under what circumstances. If towns are allowed to pay a different tuition amount, a related consideration will be whether towns are limited in the amount they can spend per student above the base amount.

**2. How formula weights will be applied to tuitioned students.**

A future student-based funding formula will need to clarify whether and how student need and school context weights are applied to tuitioned students. The cost adjustments and weights presented in this memo only apply in certain circumstances. Specifically:

- Student need-based weights that adjust for the difference in the cost of educating students experiencing economic disadvantage, English Learners, and students receiving special education **can be equally applied to tuitioned students if the new formula sets the base spending amount equal to the approved tuition amount.**
- **School context weights can be equally applied to students who attend public schools** that are small (<100 students) or located in sparsely populated areas (<55 persons per square mile); school context weights cannot be applied to tuitioned students who attend non-public schools (in Vermont or elsewhere).
- **The student-need and school context weights can only be applied to the base spending amount identified above (\$15,033)** – i.e., they cannot be applied to a different base spending amount, Average Announced Tuition amount, or tuition amount charged by an approved independent school or other non-public school.

### *Career and Technical Education*

A key consideration for a future student-based funding formula will be how to account for differences in education costs for students who attend Career and Technical Education programs. The 2019 Pupil Weighting Study did not include career and technical education programs in its analyses. As a result, **the base spending amount and student weights do not apply to students who attend the state's Career and Technical Education programs.**

As a matter of practice, most states' student-based funding formula **do not include weights for students who attend CTE programs since these programs have different cost structures, and**

as a result would have a different base spending amount from what is assigned to a typical public-school program.

### *Adjusting the Base Spending Amount*

A key consideration for a future student-based funding formula will be how to adjust the base spending amount for changes in education costs over time. **The base spending amount in a student-based funding formula should be adjusted annually to reflect changes education costs** due to general inflation, and in particular employee compensation since most education spending is for personnel wages and benefits. It is important that the inflation factor used to adjust the base spending reflect the actual escalation in costs realized by districts and schools to that funding levels remain adequate for all students to meet state academic standards.

**States can develop and adopt state specific employment cost indices (e.g., Wyoming<sup>16</sup>) or use a regional or national employment cost index.** In our analyses, we used the U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI) to adjust the base spending amount to reflect real FY2025 dollars. The ECI is appropriate for adjusting education costs over time since BLS data on employment costs were used within the U.S. Department of Education's National Center for Education Statistics Education (NCES) Comparable Wage Index (CWI).<sup>17</sup> A similarly constructed employment cost inflator also serves as the basis for adjusting education costs in the School Finance Indicators Database.<sup>18</sup>

That said, other places in Title 16 of Vermont statute calls for using inflation adjustments based on the National Income and Product Accounts (NIPA). The NIPA are produced by the Bureau of Economic Analysis of the U.S. Department of Commerce and are tied to the value and composition of national output and the types of incomes generated by that output but are not explicitly tied to employment.

The choice to use the ECI, NIPA, or some other inflation adjustment to recalibrate the base spending amount in a Vermont student-based funding formula is consequential to the amount of funding available to school districts and total education spending statewide.

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<sup>16</sup> For example, see: Taylor, L., (2023). External Cost Adjustments for the Wyoming School Funding

Model: 2023 [https://wyoleg.gov/InterimCommittee/2023/04-2023092702-05\\_Externalcostadjustments2023FINAL.pdf](https://wyoleg.gov/InterimCommittee/2023/04-2023092702-05_Externalcostadjustments2023FINAL.pdf)

<sup>17</sup> Taylor, Lori L., and William J. Fowler Jr. "A Comparable Wage Approach to Geographic Cost Adjustment. Research and Development Report. NCES-2006-321." *National Center for Education Statistics* (2006).

<sup>18</sup> School Finance Indicators Database. <https://www.schoolfinancedata.org>