

The Allocation Process for Perkins Vocational and Technical Education Grants

I. Program Overview

The Carl D. Perkins Vocational and Applied Technology Act of 1998 provides funds to help states “develop more fully the academic, vocational, and technical skills of secondary students and postsecondary students who elect to enroll in vocational and technical education programs.”¹

First enacted in 1963, the Perkins Act has been amended many times but its original purpose remains unchanged.² The Perkins Act supports formal educational programs offering courses to prepare individuals for employment in current or emerging occupations.

The Department of Education's Office of Vocational and Adult Education (OVAE) administers the Perkins Act and ensures equal access to those programs, services, and activities that Perkins grants support. The Department of Education's National Center for Education Statistics (NCES) applies the allocation formula in the law to determine the distribution of Perkins grants to the states.

In fiscal year 2002 (FY 02), the total appropriation for Perkins was \$1.3 billion dollars. States received \$1.2 billion in basic grants, which support secondary and postsecondary vocational and technical education programs, and \$113 million for Tech-Prep grants, which fund local networks to expose high school students to postsecondary technical education, business applications of technology, and a range of technical occupational choices. All Perkins-supported programs focus on developing problem-solving skills, higher-order reasoning, applied knowledge that contributes to academic learning, and occupational-specific skills.

II. Outline of Perkins Grants

A. Grants to States

For the purposes of Perkins legislation, the term “state” includes the District of Columbia, the Commonwealth of Puerto Rico, and the U.S. Virgin Islands.³

- **State Basic Grants** (Title I, Part A) provide states with matching funds to develop, improve, and expand access to vocational and technical education.⁴ Such funding typically pays for vocational staff; the integration of academic, vocational, and technical instruction; materials for learning laboratories and curriculum development or modification; remedial classes;

¹ The Carl D. Perkins Vocational and Applied Technology Act of 1998, P.L. 105-332, Section 2.

² The Perkins Act of 1963 is P.L. 88-210, 77 Stat. 403. Federal support of vocational education did not begin in 1963; the Smith-Hughes Act of 1917 provided the first federal matching funds to the states to support vocational education.

³ Sec. 111(d).

⁴ States must provide matching funds from nonfederal sources on a one-to-one (or dollar-for-dollar) basis according to Section 112(b).

occupationally relevant equipment; staff development; career counseling and guidance activities; and supplemental services for special populations.

- States must apply for these grants by submitting a 5-year plan (every 5 years) that explains how they will distribute the funds within the state and ensure that the use of the funds meets the intent of Congress.⁵
 - Basic Grants are allocated to states based on the size of segments of their population (specifically, the number of youth aged 15-19, young adults aged 20-24, and the number of adults aged 25-65) and on the state’s per-capita income. In general, states with lower per-capita incomes are eligible to receive more funding per student than states with higher per-capita incomes.
- **Tech-Prep Education Grants** (Title II) allow states to make subgrants to local networks or consortia (of secondary schools, postsecondary educational institutions, and businesses) that run Tech-Prep programs.
 - Tech-Prep programs prepare students for careers in a technical field, “such as engineering technology, applied science, a mechanical, industrial, or practical art or trade, agriculture, health occupations, business, or applied economics.”⁶ Tech-Prep programs require 2 years of secondary education with a minimum of 2 years of postsecondary education. They are meant to help students complete an associate’s or bachelor’s degree or a postsecondary certificate in a specific career field.

B. Set-asides

- **Outlying Areas** share funding, reserved by the secretary of education, equal to 0.2 percent of the total appropriation for vocational and technical education.⁷ Of this amount: (1) Guam receives \$500,000, (2) American Samoa and the Commonwealth of the Northern Mariana Islands each receive \$190,000, and (3) Pacific Resources for Education and Learning receives the remainder to make grants for vocational and technical education in Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.⁸
- **Native American Programs** receive funding, reserved by the secretary of education, equal to 1.25 percent of the total appropriation for vocational and technical education.⁹ These funds provide grants to Indian, tribal, and native Alaskan schools, as well as stipends to their students.
- **Native Hawaiian Programs** receive funding, reserved by the secretary of education, equal to 0.25 percent of the total appropriation for vocational and technical education.¹⁰
- **Incentive Grants** are reserved by the secretary of education and are equal to 0.54 percent of the total appropriation for vocational and technical education.¹¹ Incentive grants are rewarded to states that exceed expected levels of performance under the Perkins Act.

⁵ Sec. 122. Also, the law specifies rules governing the states’ distribution of these funds. See Sections 112 and 113, and Title I, Part B and C.

⁶ Sec. 202.

⁷ Sec. 115.

⁸ Pacific Resources for Education and Learning is the new name for the Pacific Regional Education Laboratory (PREL). PREL cannot use more than 5 percent of the funds it receives for administrative costs [Section 115(c)].

⁹ Sec. 116(b).

¹⁰ Sec. 116(h).

¹¹ Sec. 111(a)(1)(C).

III. Requirements for Perkins Funds

A. State Basic Grants and Tech-Prep Education Grants

- There are no eligibility requirements for Basic Grants. States that successfully apply for these grants receive funding in proportion to (a) the size of their population age 15-65 and (b) their average per-capita income over the past 3 years.

B. Set-asides

- Set-asides are legislatively mandated allocations for particular programs that are guaranteed or set-aside at the start of the allocation process. There are no eligibility requirements for these grants.

IV. Allotment and Allocation Amounts

A state's share of Perkins funding is its *allotment*, which is determined by a grant formula. The amount of grant money that a state actually receives is its *allocation*.

To determine the distribution of Perkins funds (or each state's allocation), it is necessary to calculate each state's allotment for each grant. State allotments establish the relative proportions of each state's share of Perkins funding (i.e., the total appropriation for a given grant minus set-asides). States rarely receive funding equal to their full allotment, however, because the Perkins Act stipulates several funding floors (i.e., minimum funding amounts that a state can receive) and funding caps (i.e., maximum funding amounts that a state can receive). A state's final allocation is its share of Perkins funding after these required floors and caps are calculated.

A. Basic Grant Formula

A multistep process, beginning with the calculation of each state's allotment, determines each state's Basic Grant allocation. Each state's allotment depends on

- the size of its population in particular age groups,
- the state's per-capita income over the past 3 years
- the U.S. per-capita income over the past 3 years, and
- the total appropriations for Basic Grants.

Once state allotments have been calculated, they must be compared with the legal floors and caps on the distribution of Perkins funding and adjusted as required. If any state's allotment must be adjusted, then the entire schedule of allotments must be recalculated and adjusted to reestablish a proportional distribution of the Basic Grant funds remaining available after floored and capped states' allotments have been set. Each state's final adjusted allotment is its final allocation.

The following provides a step-by-step explanation of this process.

1. Calculating the Allotment Ratio

A prerequisite for calculating each state’s allotment is its *allotment ratio*, which is based on individual per capita income. This ratio serves as a weighting factor to ensure that states with low individual per capita income receive a larger allotment than they otherwise would have received.

$$\text{A state’s allotment ratio} = 1 - 0.5 * \left(\frac{\text{3-year average of state per capita income}}{\text{3-year average of U.S. per capita income}^{12}} \right)$$

To ensure that no state’s allotment ratio is disproportionately above or below the national average (which is always 0.5), Perkins legislation sets a floor of 0.4 and cap of 0.6 on allotment ratios. In other words, if a state’s allotment ratio according to the formula is greater than 0.6, then it is reset at 0.6. Likewise, if a state’s allotment ratio according to the formula is less than 0.4, then it is reset at 0.4. Puerto Rico and the Virgin Islands are assigned by law allotment ratios of 0.6.¹³

2. Calculating Allotments

In addition to considering a state’s relative wealth, the Basic Grant formula includes a measure of need and adjusts allotments to focus funds on the youngest segment of the nation’s working-age population (i.e., ages 15-65).

For the purpose of distributing Perkins funds, the working-age population is further divided into three groups. The formula for calculating state allotments specifies that 50 percent of a state’s Basic Grant allocation be based on the product of its allotment ratio and its proportion of youth aged 15-19; 20 percent to the product of its allotment ratio and its proportion of young adults aged 20-24; and 15 percent to the product of its allotment ratio and its proportion of adults aged 25-65. The remaining 15 percent of Perkins Basic funding is distributed based on the product of a state’s allotment ratio and its proportion of the total working-age population.¹⁴

These four parts of the formula used to calculate a state’s allotment can be expressed as follows (n.b., in each state an equation for W, X, Y, and Z will be solved):

1. Calculating a state’s share of Basic funding for youth aged 15-19, or W, where¹⁵

$$\frac{(\text{state population aged 15-19 for previous FY})(\text{state allotment ratio})}{\sum (\text{state population aged 15-19 for previous FY})(\text{state allotment ratio})} = \frac{W}{0.5 * (\text{Appropriations})^{16}}$$

¹² The *3-year average of U.S. individual per capita income* is calculated by averaging the appropriate 3 years’ U.S. personal per capita income (published by the Bureau of Economic Analysis (BEA) annually) and dividing by three. The appropriate 3 years used to calculate this number are the 3 years preceding the previous fiscal year. Thus, for FY02 allocations, BEA data for 1998, 1999, and 2000 were used to calculate the 3-year U.S. average income per capita.

Two-year old data are used because the Perkins Law requires the Department of Education to calculate allotment ratios the year before they are used. This is done to comply with the law’s mandate that the ratios be “promulgated...between October 1 and December 31 of the fiscal year preceding the fiscal year [in which they will be used]” [Sec. 111(c)(2)].

¹³ Sec. 111(c)(1).

¹⁴ Population data from the Bureau of the Census that are used to determine each of these age groups are from the year before the previous fiscal year (e.g., for FY 02 allocations 2000 population data are used). The reason for this is that under the previous Perkins Act, the Department of Education relied on data a year behind current population data and the department’s attorneys ruled that it should maintain that practice under the 1998 Act.

¹⁵ The expression “ $\sum_{\text{for all states}} (\text{state population 15-19, inclusive, for previous FY})(\text{state allotment ratio})$ ” reads as *the sum total of the products of (the state population between the ages of 15 and 19, inclusive, for the previous fiscal year) and (the state allotment ratio) for all states.*

for all states

2. Calculating a state's share of Basic funding for young adults aged 20-24, or X, where

$$\frac{(\text{state population aged 20-24 for previous FY})(\text{state allotment ratio})}{\sum_{\text{for all states}} (\text{state population aged 20-24 for previous FY})(\text{state allotment ratio})} = \frac{X}{0.2 * (\text{Appropriations}^{16})}$$

3. Calculating a state's share of Basic funding for adults aged 25-65, or Y, where

$$\frac{(\text{state population aged 25-65 for previous FY})(\text{state allotment ratio})}{\sum_{\text{for all states}} (\text{state population aged 25-65 for previous FY})(\text{state allotment ratio})} = \frac{Y}{0.15 * (\text{Appropriations}^{16})}$$

4. Calculating a state's share of Basic funding based on total working-age population, or Z, where

$$\frac{(W + X + Y)}{\sum_{\text{for all states}} (W + X + Y)} = \frac{Z}{0.15 * (\text{Appropriations}^{16})}$$

A state's allotment is the sum of W, X, Y, and Z.¹⁷

3. Figuring Floors and Caps

The Perkins Act requires that:

- No state can receive less than its FY 1998 allocation¹⁸
- No state can receive less than 0.5 percent of the total Basic appropriations¹⁹
- No state that is eligible to receive 0.5 percent of the total Basic appropriations can receive more than:
 - (a) 150 percent of its previous year's allocation,²⁰ or
 - (b) 150 percent of the previous fiscal year's national average per-pupil payment⁽²¹⁾ * state working-age population in the previous fiscal year.²²

After each state's initial allotment has been calculated, it is necessary to check whether any state's allotment must be floored and whether that floor must be capped. The *allocation* for a "floored" state or "floored and capped" state is its final allotment after it has been floored and, if necessary, capped.

¹⁶ "Appropriations" here means the Perkins funding for this specific grant after set-asides have been deducted.

¹⁷ Sec. 111(a)(2).

¹⁸ Sec. 111(a)(4).

¹⁹ Sec. 111(a)(3)(A).

²⁰ Sec. 111(a)(3)(C)(i)(I). The one exception to this rule (known as part I of "Special Rule C") is if a state's FY 1998 allocation is more than this amount, then the state receives its FY 1998 allocation.

²¹ The national average per-pupil payment is computed by dividing the total appropriations for the *current* fiscal year by the number of persons age 15-65 in the *previous* fiscal year. The reason the department uses this formulation is no longer within the reaches of institutional memory. This procedure has become a matter of precedence and has been upheld as appropriate both by the Department of Education and by Congress.

²² Sec. 111(a)(3)(C)(i)(II), and see footnote 20.

States that are unaffected by floors and caps share the Basic Grant funding that remains after the allotments for floored or capped states have been deducted from the original funding amount. The share of the remaining Basic Grant funding that each of these unaffected states receives equals the following ratio: their initial allotment divided by the sum of the initial allotments for all states unaffected by floors and caps (see equation below).

After recalculating the allotments of states initially unaffected by floors and caps, it is necessary to check whether any of these states' (recalculated) allotments needs to be floored and, if necessary, capped. If any of these allotments must be floored or capped, then another recalculation of allotments for the states unaffected by floors and caps is necessary. When no state's allotment must be floored or capped, the allocation process is complete, and the allocation for states unaffected by floors and caps equals their final recalculated allotment.

In Perkins legislation this series of steps to accommodate floors and caps (while maintaining the same proportional distribution established among states by the initial allotments) is called a *ratable reduction*.²³ The following algorithm expresses this series of steps:

- (1) If a state's allotment is floored, but need not be capped, then its allocation equals its floor.
- (2) If a state's allotment is floored and capped, then its allocation equals its cap.
- (3) If a state is unaffected by a floor or cap, then its allotment equals A, where

$$\frac{\text{initial state allotment}}{\sum \text{initial state allotment for all states unaffected by floors and caps}} = \frac{A}{(\text{appropriations}^{16} - \sum \text{state allotment for all states floored/capped})}$$

- (4) If A for any state needs to be floored and capped, repeat (1) through (3).
- (5) For all states without a set allocation, set their allocation equal to A.

For an illustration of the entire allocation process, see the Appendix.

B. Tech-Prep Grant Formula

The formula for calculating each state's Tech-Prep grant is the same as that used for Basic Grants.²⁴

C. Set-asides

There is no formula for calculating the distribution of set-asides. They are specific amounts allocated based on the Perkins law, or in the case of incentive grants, based on criteria determined by the Department of Education's Budget Office.

V. Allocation Process

²³ Sec. 111(a)(4)(B).

²⁴ Sec. 203(a). Note that all of Section 111 applies to the allocation of Tech-Prep grants even though Section 203 specifies only Sec. 111(a)(2). The reason for this is that 111(a)(2) contains the language "Subject to paragraphs (3) and (4)," which Department attorneys believe makes Tech-Prep grants subject to hold-harmless provisions and the maximums of "Special Rule C."

Once Congress has appropriated Perkins funds for the current fiscal year, the Department of Education’s Budget Office determines the amount to be reserved for set-asides (refer to Part II.B. on p.3 of this document) and the amount to be distributed for grants. The NCES then determines the specific allocation amounts for individual state and territory grant.

NCES uses a spreadsheet to calculate both Basic Grant and Tech-Prep Grant allocations.

A. Assembling Perkins Data Sets

NCES receives the data needed to calculate Perkins allocations from Bureau of the Census and the Bureau of Economic Analysis (BEA).

STATE-LEVEL DATA

Data Element	Data Source	Date Available From Source
Per-capita income for appropriate years ²⁵	Bureau of Economic Analysis (BEA) Department of Commerce Rudolf DePass (202) 523-0955	Annually in September
Population estimates ²⁶ for current and previous fiscal years.	Bureau of the Census Department of Commerce John F. Long (301) 457-2422 www.census.gov/population/estimates/state/stats	Annually in May ²⁷
1998 Allocations	Department of Education Budget Office Christine Miller (202) 401-0317	Any time

B. Data Processing for Basic Grants

1. Enter the state-level data into a spreadsheet for each state. Calculate the 3-year average per-capita income for each state and the nation.
2. Enter the current fiscal year’s appropriation into the spreadsheet, calculate set-aside amounts, and subtract this amount from the appropriation to determine *the current fiscal year’s total allocation*.
3. Calculate each state’s allotment ratio by applying the formula explained in part IV.A.1 on p.3 of this document.
4. Calculate the grant amount available for each of the three age groups and for the sum of a state’s working-age population.
5. Calculate each state’s initial allotment according to the formula explained in part IV.A.2 on p.4.

²⁵ See footnote 12 for an explanation of the appropriate years.

²⁶ Based on decennial census data, current population survey (CPS) of the Bureau of the Census, and other data including income tax filings.

²⁷ The Department of Education’s general counsel has ruled that May population data cannot be used until BEA releases updated per-capita income data in September. Prior to September of any given year, any allocation run must use the previous year’s May population estimates. The general counsel has also ruled that May data are the only population numbers that can ever be used in an allocation run even when other updated data are provided later in the year. This ensures that all states are treated equitably.

6. Calculate the sum of allotments for states whose initial allotment is below their 1998 allocation (i.e., below their hold-harmless amount), and calculate the sum of allotments for states whose initial allotment is above their 1998 allocation.
7. Subtract from *the current fiscal year's total allocation* the sum of allotments for states whose initial allotment is below their hold-harmless amount. The remainder is the amount available to distribute among states unaffected by hold-harmless requirements.
8. Set the allotment for each state that is below its hold-harmless amount at its hold-harmless amount. Set the allotment for each of the remaining states at the product of its initial allotment multiplied by the following ratio: the amount available to distribute divided by the sum of allotments for states whose initial allotment is above their hold-harmless amount.
9. Using these new state allotments, repeat steps 6, 7, and 8 as many times as necessary until the schedule of allotments produced by two successive runs (i.e., repetitions of steps 6, 7, and 8) are identical.
10. Calculate for each state the maximum amount it can receive if it is eligible to receive 0.5 percent of the total Basic appropriation (i.e., calculate its "cap," which is the lesser of the following two amounts: (a) 150 percent of that state's previous year's allocation, or (b) 150 percent of the previous fiscal year's national average per-pupil payment multiplied by that state's working-age population in the previous fiscal year).
11. Calculate 0.5 percent of the total Basic appropriation, which is the *minimum* amount each state can receive.²⁸
12. Compare each state's allotment with the minimum. If a state's allotment is less than the minimum, then set its allocation at the lower of the following two amounts: (a) the minimum, (b) its maximum (as calculated in step 10). If a state's allotment is greater than the minimum but equal to its hold-harmless amount (as set in step 8), then set its allocation at its hold-harmless amount. If a state's allotment is greater than the minimum and not below its hold-harmless amount, then recalculate its allotment according to *ratable reduction* (explained in part IV.A.3).
13. Check once again to determine if any state's allotment is below its minimum. If a state's allotment is below its minimum and below its maximum, set its allocation at its minimum amount. If a state's allotment is less than its minimum and above its maximum, set its allocation at its maximum. If a state's allotment is less than its hold-harmless amount, set its allocation at its hold-harmless amount. If a state's allotment is (a) above its minimum and its hold-harmless amount and (b) has not yet been set (at either a minimum or maximum), then recalculate that state's allotment according to *ratable reduction* (explained in part IV.A.3 on p.5 of this document).
14. Check to determine if any state's allotment is below its minimum or its hold-harmless amount.
15. Repeat step 13 until no state's allotment is below its minimum or its hold-harmless amount and the results of step 13 are identical for two successive runs.
16. For each state without a set allocation, set its allocation at its final allotment amount.

C. Data processing for Tech-Prep

Follow the same steps used to calculate Basic Grant allocations.

D. Report results

²⁸ This minimum is second of the two "floors" discussed in part IV.A.3; the other is a state's FY 1998 allocation or its hold-harmless amount. Although the text discusses both floors at the same time, for simplicity's sake, NCES's spreadsheet has been set up to check for these floors one at a time. The term "floor" is used in the text whereas "minimum" is used in the spreadsheet because the creator of the spreadsheet selected labels for convenience not precision.

Prepare a spreadsheet that lists all final allocation amounts for each state by grant. Forward results of the allocation process to the Department of Education's Budget Office (contact persons: Chelsea Hart (202) 401-0317).

Appendix

I. For each state, determine its allotment ratio:

$$\text{A state's allotment ratio} = 1 - 0.5 * \left(\frac{\text{3-year average of state individual income per capita}}{\text{3-year average of U.S. individual income per capita}} \right)$$

If the allotment ratio is > 0.6, then set the ratio at 0.6.

If the allotment ratio is < 0.4, then set the ratio at 0.4.

For Puerto Rico and the Virgin Islands, set the allotment ratio at 0.6.

II. For each state determine W, X, Y, and Z, the sum of which is its initial state allotment:

$$\frac{(\text{state's population 15-19, for previous FY})(\text{state allotment ratio})}{\sum_{\text{for all states}} (\text{state population 15-19, for previous FY})(\text{state allotment ratio})} = \frac{W}{0.5 * (\text{appropriations})}$$

$$\frac{(\text{state's population 20-24, for previous FY})(\text{state allotment ratio})}{\sum_{\text{for all states}} (\text{state population 20-24, for previous FY})(\text{state allotment ratio})} = \frac{X}{0.2 * (\text{appropriations})}$$

$$\frac{(\text{state's population 25-65, for previous FY})(\text{state allotment ratio})}{\sum (\text{state population 25-65, for previous FY})(\text{state allotment ratio}) \text{ for all states}} = \frac{Y}{0.15*(\text{appropriations})}$$

$$\frac{(W + X + Y)}{\sum (W + X + Y) \text{ for all states}} = \frac{Z}{0.15*(\text{appropriations})}$$

- III. If a state's initial state allotment (W + X + Y + Z) is less than the state's allocation in FY 1998, then set its allotment equal to the state's 1998 allocation.
- IV. If a state's initial state allotment (W + X + Y + Z) is less than (0.5 percent of total Appropriations), then set its allotment equal to (0.5 percent of total appropriations) and follow steps IV A through C.
 - A. If (0.5 percent of total appropriations) is greater than 150 percent of that state's previous year's allocation, then set its allotment equal to 150 percent of its previous year's allocation.
 - B. If (0.5 percent of total appropriations) is greater than (150 percent of the previous fiscal year's national average per-pupil payment * that state's working-age population in the previous fiscal year), then set its allotment equal to (150 percent of the

previous fiscal year's national average per-pupil payment * that state's working-age population in the previous fiscal year).²⁹

C. If both steps A and B apply to a state's allotment, then set the allotment at the lower of the two amounts calculated in these two steps.

V. Recalculate the initial state allotment (W + X + Y + Z) for every state unaffected by steps III and IV, setting these states' allotment equal to A.

$$\frac{\text{state's initial allotment}}{\sum \text{state's initial allotment for all states unaffected by steps III, and IV.}} = \frac{A}{(\text{total appropriations} - \sum \text{state's adjusted allotment for all states affected by steps III and IV.})}$$

VI. If the state allotment (A) for any state is less than the state's allocation in FY 1998, then set its allotment equal to the state's FY 1998 allocation.

VII. If the state allotment (A) for any state is less than (0.5 percent of total appropriations), then set its allotment equal to (0.5 percent of total appropriations) and follow steps VII A through C.

A. If (0.5 percent of total appropriations) is greater than 150 percent of that state's previous year's allocation, then set its allotment equal to 150 percent of its previous year's allocation.

²⁹ The national average per-pupil payment is computed by dividing the total appropriations for the *current* fiscal year by the number of persons age 15-65 in the *previous* fiscal year.

- B. If (0.5 percent of total appropriations) is greater than (150 percent of the previous fiscal year's national average per-pupil payment * that state's working-age population in the previous fiscal year), then set its allotment equal to (150 percent of the previous fiscal year's national average per-pupil payment * that state's working-age population in the previous fiscal year).
 - C. If both steps A and B apply to a state's allotment, then set the allotment at the lower of the two amounts calculated in these two steps.
- VIII. If no states' allotment was adjusted in steps VI or VII, then go to step IX, otherwise recalculate the state allotment (A) for every state unaffected by steps VI and VII, setting these states' allotment equal to A as defined by the formula in step V and repeating steps VI, VII, and VIII.
- IX. For every state whose allocation has not been set (in steps III, IV, VI, or VII), set its allocation equal to A.