



The State of Career Technical Education: An Analysis of State Secondary CTE Funding Models



RESEARCH REPORT



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Introduction

Providing high-quality Career Technical Education (CTE) requires robust, sustained funding designed to be responsive to both the rapidly evolving needs of industry and the diverse needs of learners.

With generous support from the Walton Family Foundation, Advance CTE embarked on an analysis of states' secondary CTE funding models. In 2014, RTI International, with the support of Advance CTE, conducted [research](#) on behalf of the U.S. Department of Education, which established how states allocated categorical funds¹ for CTE during the academic year 2011-12 and the amounts of those allocations.² By returning to this topic 10 years later, Advance CTE seeks to understand how CTE is funded today and position the field to adopt and implement more equitable funding models. This research report provides an introduction to the distinct features, advantages and limitations of secondary CTE funding models across all states and the District of Columbia. The report shares information based on a research scan conducted in 2022, a national survey of State CTE Directors in 2022, and in-depth interviews with state and local CTE leaders in 2023 ([learn more about the methodology](#)). Advance CTE offers recommendations and suggestions for how state leaders can work together to support high-quality CTE by positioning the field to revise and implement more equitable funding models.



KEY TAKEAWAYS

Advance CTE identified three key takeaways from the scan, survey and interview data:

- 1 State secondary CTE funding models are varied and complex.
- 2 States have increased their funding of secondary CTE over the past 10 years.
- 3 States are making changes to secondary CTE models to be more responsive to stakeholder needs, including learners.



TAKEAWAY

1

State secondary CTE funding models are varied and complex.

CTE Funding Basics

States rely on a mix of federal, state and local policies, which are often shifting and evolving, to provide funding sources for secondary CTE.³ The federal government provides funds to states for secondary CTE under the Carl D. Perkins Career and Technical Education Act, as amended by the Strengthening Career and Technical Education for the 21st Century Act (Perkins V).⁴ In FY 2022, Perkins V allocated \$1.38 billion to states, the majority (85 percent) of which flows directly to Local Education Agencies (LEAs) and postsecondary institutions to offer CTE programs.⁵ CTE programs can be costly to run because instruction typically occurs in settings that accommodate fewer learners than traditional classrooms. This situation results in needs for specialized equipment, materials and additional staffing.⁶ For many states, federal funding alone cannot meet the costs of providing secondary CTE or the demand by learners.

States allocate secondary CTE funding to districts in various ways, often driven by differing education funding calculations, historical practices, governance and state-level priorities. Many states, but not all, provide state funding for CTE through funding formulas, budget line allocations and competitive grants. Additionally, LEAs invest local funds to support CTE programs. LEAs may be able to apply for grants through CTE departments, state education agencies, departments of labor or workforce investment

boards. LEAs also receive gifts from philanthropic and workforce partners to support CTE programs. These funds can be flexible to meet CTE program needs but may not be sustainable sources of funding streams.

Federal Funding for CTE

Perkins V is the primary federal investment in secondary and postsecondary CTE. A state's share of funding is determined by a statutory formula based on the age distribution of the state's population and its per-capita income. The remaining 15 percent of allocations are used to support state leadership and administration activities.⁷ States have flexibility in determining how funds are allocated between secondary and postsecondary CTE, with an average of 62 percent of funding going to secondary programs and 38 percent supporting postsecondary programs for FY 2022.⁸

States are required to develop a state plan that includes information on the development and implementation of CTE programs before they receive federal Perkins V funding. Perkins V contains provisions that compel states to meet maintenance of effort (MOE) requirements, which means states must continue to provide funding for CTE programs at least at the level of support from the previous year.⁹ Additionally, federal funds must supplement, not supplant, state and local funds. States cannot take increases in federal dollars and use those funds to pay for things previously supported with state and local funding.¹⁰

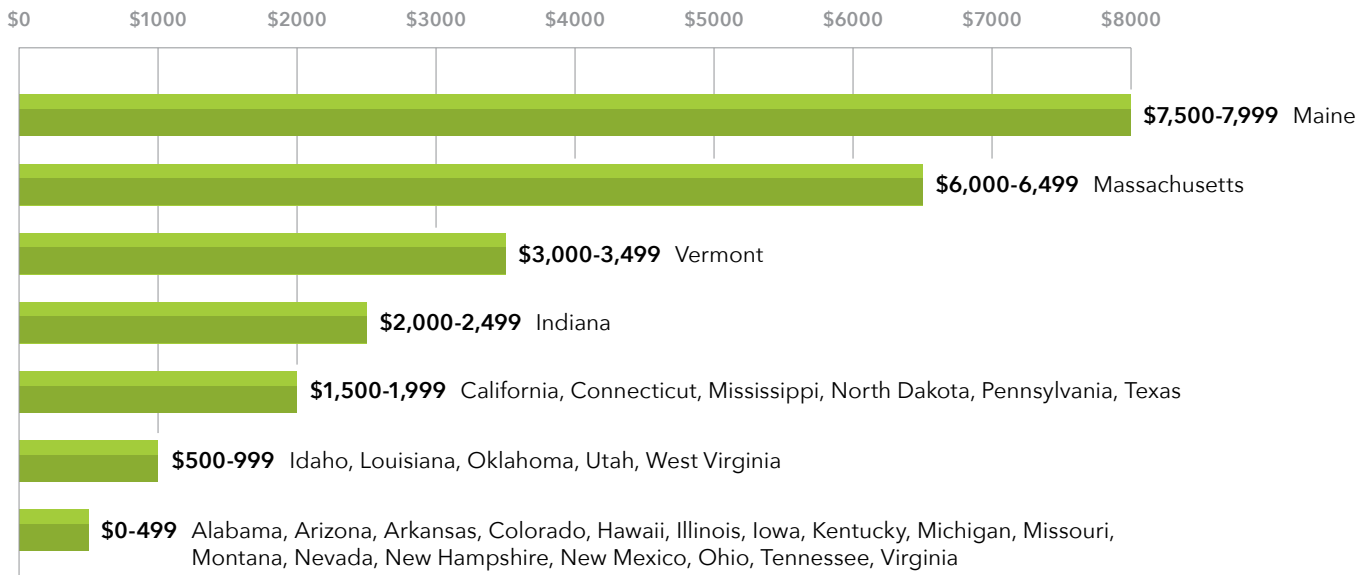
State Secondary CTE Funding Models

Many states are investing more funds in CTE than they receive in federal allocations. Twenty-three states had larger state investments than Perkins V allocations based on state appropriations identified in 32 states for FY 2022 in the national survey of State CTE Directors. The additional state investments ranged from \$70,796 to \$2,976,155,647. States made investments that were approximately 5 times larger on average than their federal allocation with Massachusetts and Texas investing 17 and 25 times, respectively, more than their federal allocation.

Perkins V funds are not allocated on a per-pupil basis. However, for the sake of comparison, while the Office of Career, Technical, and Adult Education at the U.S. Department of Education was determining FY 2024 budget justifications, it calculated that the federal annual cost per secondary learner was \$77 in FY 2022.¹¹ Meanwhile, state funding per full-time equivalent (FTE)¹² learner in FY 2022 ranged from an estimated \$31 to \$7,705 with an average of \$1,152 per FTE (see **Figure 1**).¹³

Figure 1 Estimated State CTE Funds per FTE (FY 2022)

FIGURE NOTE: States were excluded if they had no categorical funding or if the amount of state funding allocated to secondary CTE was unclear.



States allocate secondary CTE funding to LEAs in various ways, often driven by differing education funding calculations, historical practices, governance and state-level priorities. To categorize state funding models for fiscal year (FY) 2022, Advance CTE used the

definitions of foundational and categorical funding and the respective approaches found in [State Strategies for Financing Career and Technical Education](#),¹⁴ additionally, a new definition of hybrid funding was included. States fund CTE in the following ways.

State Funding Models



FOUNDATIONAL

Foundational funding finances programs out of general state aid formulas. Local administrators must decide how funds should be distributed across educational priorities (which may or may not include CTE).¹⁵



CATEGORICAL

Categorical funding is dedicated funding for CTE programs that is distributed to LEAs to support CTE. These approaches – which may include cost-based, student-based and/or unit-based formulas – typically target state funding for the use of CTE programming.¹⁶



HYBRID

Hybrid funding is a new funding model formulated by Advance CTE that reflects states that implement components of multiple categorical funding approaches or an optional categorical funding approach with a foundational funding model.

CATEGORICAL Funding Approaches



Cost-based approach

LEAs are compensated for CTE services based on their actual reported costs from the prior academic year. States may cap or limit the rate at which eligible expenses are reimbursed.¹⁷



Student-based approach

States distribute funds relative to the number of CTE learners enrolled based on the FTE or average daily membership calculation in an LEA. States typically use one of three approaches: (1) proportional allocations, in which LEAs or programs receive a funding allocation based on the number of learners enrolled; (2) weighted student funding, which provides additional funding for CTE learners in state basic aid formulas; and (3) differential weighting, which allocates funding for CTE learners based on the type of program in which they participate or on state instructional priorities.¹⁸



Unit-based approach

States distribute funds based on a set of educational units (and their related costs) used to deliver CTE. Units may include pupils, instructors, equipment or materials.¹⁹

States may implement components of categorical funding formulas. Thus, Advance CTE created a new definition for this project to reflect components of multiple categorical funding approaches: hybrid. The models and approaches will be described in the following sections along with advantages and limitations of each type.

States may also direct funding specifically for area technical centers (ATCs) to deliver CTE programming. This funding is often in addition to one of the previously stated models, which fund secondary CTE programs more broadly across a state. More information about ATCs, including how many exist and where they are located, can be found in Advance CTE’s website: [A 50-State Analysis of Area Technical Centers](#).²⁰

Figure 2 and **Table 1** showcase the models states use to fund CTE at the secondary level for FY 2022. Seven states use only foundational funding. Other states typically use categorical funding for CTE: cost based (eight states), student based (23 states) and unit based (seven states). Six states consider their funding model to be a hybrid model. Select states are highlighted in the following sections on funding models.

On average in FY 2022, states allocating funding to cost-based models spend more on a per-learner basis (\$1,830) than states using unit-based (\$1,784), student-based (\$793) or hybrid (\$646) models.²¹ See the [website](#) for a state-by-state exploration of the different models states use to provide funding for secondary CTE.

Advance CTE considers the funding models to be foundational, categorical and hybrid for this project. There are three approaches states use to distribute categorical funding: cost-based, student-based and unit-based.

Figure 2 Number of States per Secondary CTE Funding Model and Approach (FY 2022)

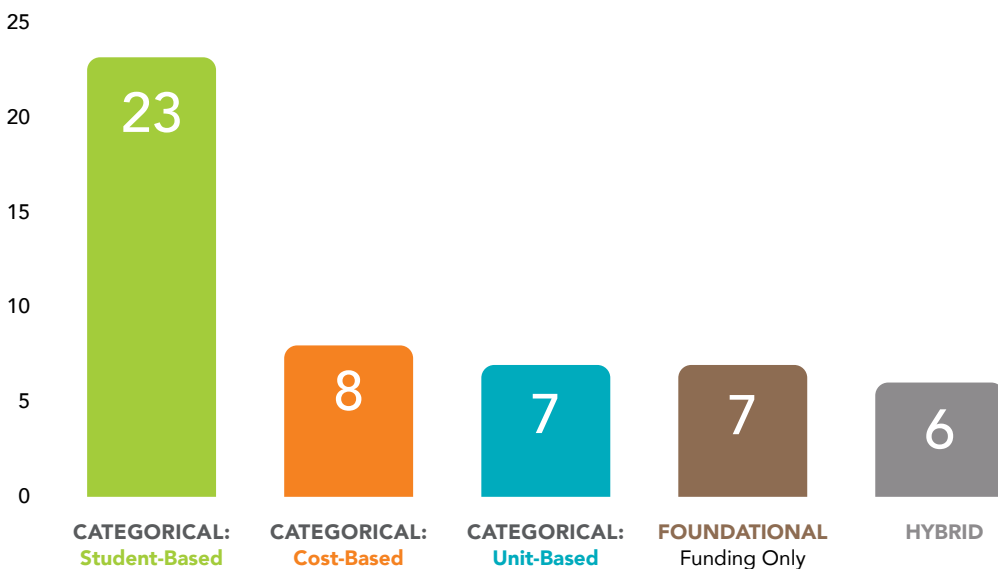


FIGURE NOTE: States were excluded if they had no categorical funding or if the amount of state funding allocated to secondary CTE was unclear.

Table 1 Number of States per Secondary CTE Funding Model and Approach (FY 2022)

FUNDING MODEL / APPROACH (FY 2022)		STATES
FOUNDATIONAL Funding Model	LEA programs are financed out of general state aid formulas. Local administrators must decide how funds should be distributed across educational priorities (which may or may not include CTE). ²²	Alaska, District of Columbia, Maryland, Nebraska, Oregon, South Dakota, Wisconsin
CATEGORICAL Funding Model		
Cost-Based Approach	LEAs are compensated for CTE services based on their actual reported costs from the prior academic year. ²³	Colorado, Maine, New Hampshire, New Jersey, North Dakota, Oklahoma, Rhode Island, Virginia
Student-Based Approach	States distribute funds relative to the number of CTE learners enrolled based on the FTE or average daily membership calculation in an LEA. ²⁴	Arizona, Arkansas, Connecticut, Florida, Georgia, Hawai'i, Indiana, Iowa, Kansas, Kentucky, Michigan, Montana, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, West Virginia, Wyoming
Unit-Based Approach	States distribute funds based on a set of educational units (and their related costs) used to deliver CTE. Units may include pupils, instructors, equipment or materials. ²⁵	Alabama, Delaware, Idaho, Massachusetts, Mississippi, Missouri, Washington
HYBRID Funding Model	Funds are allocated using a combination of components of multiple categorical funding approaches or are an optional categorical funding approach with a foundational funding model.	California, Illinois, Louisiana, Minnesota, Nevada, Utah





Foundational Funding Model

States invest in secondary education by distributing funding to LEAs through a foundational formula.

This foundational funding model, otherwise known as basic state aid funding, base funding, general state funding or state aid, often covers the basic costs of education (e.g., salaries, materials, resources).²⁶ LEAs often receive funding that is based on attendance or average daily membership and adjusted for learner characteristics, district size and geographic conditions. Because allocations to LEAs are independent of learner participation in CTE, local administrators must decide how funds should be distributed across instructional priorities (which may or may not include CTE).

Just six states (Alaska, Maryland, Nebraska, Oregon, South Dakota and Wisconsin) and the District of Columbia give LEAs discretion on if and how to fund CTE. Several foundational funding model states do use non-categorical allocations to help support CTE in ways that are not broadly applied to all LEAs. For example, states may use one-time or ongoing competitive grant programs and incentive funding to support secondary CTE and related programs.

ALASKA

Alaska does not determine funding based on learner enrollment in CTE but rather through a factor applied to the state foundational funding formula for all learners.²⁷ Although the statutory language does designate spending for vocational programs, the factor applied is “independent of student participation in CTE,” and LEA leadership “decide[s] how funds should be distributed across instructional priorities.”

OREGON

Oregon does have state funds that are used to incentive CTE completion in secondary schools for full three-credit CTE programs.²⁸ Allocations are based on learner participation, earning of an industry-recognized credential, and support of under-represented learner groups. For example, CTE programs receive funds based on a point system in which learners who earn three credits receive a point, learners who earn industry-recognized credentials receive a point, and learners who are under-represented in CTE who earn three credits receive an additional point. Oregon also has a CTE Revitalization Grant Program used to jumpstart partnerships and new infrastructure for CTE programs in secondary schools.²⁹

SOUTH DAKOTA

In addition to their foundational formula, South Dakota supports secondary CTE through a competitive grant program, disbursing funds from the state’s Workforce Education Fund to fund new and existing secondary CTE programs. Private, nonprofit entities may receive up to \$250,000 per year to provide specialized career and technical services and education.³⁰ The secretary of education may also distribute funds to multi-district career and technical academies to help defray instructional costs.³¹



States and local recipients that use the foundational approach have several distinct advantages and limitations.

Advantages	Limitations
Less complicated for states to manage	Because CTE programs must compete for education dollars, may result in differing levels of CTE program access and/ quality for learners
Flexibility to meet local needs and priorities	Lack of continuity of funds year after year may put Perkins V MOE requirements at risk



Categorical Funding Model

Due to the higher costs of CTE programs, states often use additional aid, otherwise known as categorical funding, to support and improve CTE.³² Even though this funding is dedicated to CTE, LEAs still have flexibility to decide how the funds are spent. For example, CTE dollars could be redirected to other educational programming, although sometimes state parameters limit these decisions. Categorical funding varies widely across the United States, but states use three main approaches (i.e., cost-based, student-based and/or unit-based formulas) to distribute categorical funds to LEAs.



COST-BASED FUNDING APPROACH

Cost-based funding is one of the three most common state secondary CTE funding approaches that fall under the categorical model. With this approach, states distribute funds by reimbursing LEAs based on CTE expenditures from the prior year. Costs may be capped, meaning a state may reimburse an LEA up to only a certain percentage of the expense.³³ CTE programs may be reimbursed for salaries, transportation, equipment, contracted services and curriculum. Additionally, content areas or courses may be reimbursed at different percentage rates. Eight states – Colorado, Maine, New Hampshire, New Jersey, North Dakota, Oklahoma, Rhode Island and Virginia – use a cost-based approach. Learn more about this approach in [North Dakota](#) in the case study accompanying this report. The following are three other examples of how states employ cost-based funding.

COLORADO

Colorado provides additional funding to defray the cost if a district's CTE program costs per participating FTE learner exceed 70 percent of the per-pupil funding otherwise available to that district. The state covers 80 percent of the first \$1,250 of those excess costs and 50 percent of any excess costs above \$1,250.³⁴ CTE program costs include instructional personnel, services provided by another education agency or institution, necessary books and supplies, and equipment approved or purchased by the State Board for Community Colleges and Occupational Education.

RHODE ISLAND

Rhode Island supports CTE by reimbursing costs to help meet initial investment requirements needed to transform existing, or create new, comprehensive CTE programs and career pathways in critical and emerging industries. It also reimburses costs to help offset the higher-than-average costs associated with the facilities, equipment maintenance and repair, and supplies necessary for maintaining the quality of highly specialized programs that are a priority for the state. The Rhode Island Department of Education (RIDE) must review school district reimbursement requests from RIDE-approved career preparation programs.³⁵

CTE programs may be reimbursed for salaries, transportation, equipment, contracted services and curriculum. Additionally, content areas or courses may be reimbursed at different percentage rates.

VIRGINIA

Virginia funds CTE by reimbursing districts to support the operation, improvement and expansion of CTE. Allocations are based on FTE enrollments and can be used to support principals and assistant principals of technical education centers, instructor contracts, approved equipment and approved industry-recognized credentials.³⁶

States and local recipients that use the cost-based approach have several distinct advantages and limitations.

Advantages

More budget consistency and certainty for LEAs due to set guidelines on what they will receive from the state for reimbursement of expenses

Dedicated capacity for full or partial reimbursement of expensive inputs such as equipment and building infrastructure, allowing programs to be responsive to changing industry needs

Ability for states to set different reimbursement rates for content areas, which may be helpful for higher-cost CTE programs

Limitations

Lagged funding – LEAs need to have cash flow up front for expenditures if the state reimbursement schedule does not align with LEA investment timelines

Variance in reimbursement policies and cost caps can result in inconsistent program availability and access for learners (i.e., LEAs may receive reimbursement for content areas rather than CTE support needs)

State funding may not cover all of prior year's expenditures, which may limit an LEA's interest in investing in CTE changes



STUDENT-BASED FUNDING APPROACH

Student-based funding is one of the three most common state secondary CTE funding approaches that fall under the categorical model. With this approach, states distribute funds to LEAs through funding formulas that use state-determined criteria to account for learner enrollment and learner characteristics in CTE programs.³⁷ Approaches to student-based funding vary, with proportional allocations, weighted student funding and differential weighting being the three most common.

Twenty-three states – Arizona, Arkansas, Connecticut, Florida, Georgia, Hawai'i, Indiana, Iowa, Kansas, Kentucky, Michigan, Montana, New Mexico, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Vermont, West Virginia and Wyoming – use a student-based approach. Learn more about this approach in [Texas](#) in the case study accompanying this report. The following are some examples of how states employ student-based funding.

INDIANA

Indiana provides CTE funding in the form of grants to schools with approved CTE programs. The allocation amount is based on the number of CTE program credit hours, enrollment and a value level attributed by the Department of Workforce Development, as well as enrollment in apprenticeship or work-based learning, introductory CTE programs or college and career courses.³⁸

MONTANA

Montana uses a grant program model to allocate state CTE funds. Program allocations are made to districts based on CTE enrollment, student-based organizations, extended days and district expenditures.³⁹

Proportional Allocations

LEAs receive funds that are proportional to their share of the state's CTE secondary population. Funds may be distributed proportionally based on enrollment by FTE, which is determined by the state and is typically based on number of courses, contact hours, credits or instructional hours.⁴⁰ States may consider enrollment in calculations as enrollment from the prior year, count days or average daily membership (i.e., counts the FTE of learners actively enrolled in a school as it changes over time).

Weighted Student Funding

Some states add supplemental weights (i.e., multipliers) to state foundational funding formulas to account for learners enrolled in CTE.⁴¹ States may add weights to programs based on credit hours, approved program status, learner enrollment, or enrollment in programs that lead to high-demand careers.

Differential Weighting

Differential weights may also be added to foundational funding by assigning unique weights to specific CTE programs.⁴² This approach helps distinguish high- and low-cost programs because some programs (e.g., equipment-intensive programs, such as automated manufacturing) are more expensive to run than other programs (e.g., business education programs). States may also review labor market data to classify programs based on state demand or workforce projections and provide differential weights based on goals for meeting those needs.

Examples of States Applying Weights

Many states fund secondary CTE programs through applying a weight to their secondary education formula, which are influenced by a variety of factors.⁴³ The following are a few examples of weights used by states.

- **FLORIDA** applies a multiple of 1.012 to the base per-pupil amount for learners enrolled in CTE. Additional FTE values can be generated for learners who complete industry-recognized credentials.
- **GEORGIA** assumes a teacher-to-student ratio of 1:20 for career, technical and agricultural education laboratory programs and generates a weight of 1.183.
- In **OHIO**, learners generate additional average daily membership for the percentage of time they are enrolled in any of five CTE program categories. Weights range from 0.157 to 0.623 depending on the program.
- **KANSAS** school districts receive an additional weight determined by multiplying the district CTE FTE enrollment in approved programs by 0.5.
- **SOUTH CAROLINA** funds CTE through weighting its foundational formula by 1.20 and 1.29 for learners enrolled in pre-career and technology and career and technology programs, respectively.

Approaches to student-based funding vary, with proportional allocations, weighted student funding and differential weighting being the three most common.

States and local recipients that use the student-based approach have several distinct advantages and limitations.

Advantages	Limitations
Transparency in funding – clear that the funds are aligned to learner enrollment in CTE	State formulas and calculations can be complicated
Transparency in funding – clear that funds are aligned to CTE program offerings (i.e., how much or what is offered)	Allocations are often based on lagged enrollment data
Incentive to increase enrollment and improve outcomes in programs leading to in-demand careers	Formulas may not fully take into account learner needs across CTE programs, leading to differences in enrollment
Incentive for educational institutions to move learners into advanced CTE courses	



UNIT-BASED FUNDING APPROACH

Unit-based funding is one of the three most common state secondary CTE funding approaches that fall under the categorical model. With this approach, states distribute funds based on a set of educational inputs (and their related costs), known as units, used to deliver CTE in LEAs.⁴⁴ Units may include pupils, instructors, equipment, materials, transportation or administrators. States may also distribute funding based on foundation program units (i.e., accounts for cost factors including teacher salaries and classroom materials), pupil units (i.e., one pupil unit is equivalent to a certain number of learners receiving instruction) or student-teacher ratios. Unit-based formulas may provide different rates of reimbursement for CTE programs and learners. Seven states – Alabama, Delaware, Idaho, Massachusetts, Mississippi, Missouri and Washington – use a unit-based approach. Learn more about this approach in [Massachusetts](#) in the case study accompanying this report. The following are three other examples of how states employ unit-based funding.

DELAWARE

Delaware funds secondary education based on pupil units.⁴⁵ One CTE pupil unit is equivalent to 30 learners receiving 180 minutes of instruction in approved CTE courses per day for five days a week (or 27,000 instructional minutes). CTE pupil units are weighted at one, two or three times the regular pupil units, depending on funding rates established by the state for different types of CTE programs. CTE funds are intended to cover the cost of staffing, textbooks, furniture and classroom equipment.

IDAHO

The amount of direct funding provided for each career technical school in Idaho is based on three factors that determine unit values: the number of learners enrolled in a capstone course in the previous year; the number of learners who completed the technical skills assessment

for each program offered; and the total credit hours reported by the school for intermediate, capstone and work-based learning courses. Districts in Idaho also receive added-cost funds to cover instructor and program expenses beyond those normally encountered at the secondary level.⁴⁶ Allocations are calculated based on CTE teacher FTE and are used to support all CTE programs in the district.

MISSISSIPPI

Mississippi supports CTE through an additional allotment to school districts for teachers employed in a CTE program. The allotment is a value of one-half of the adequate education program salary schedule, based on the type of certificate and number of years of teaching experience held by each approved vocational teacher plus 100 percent of the applicable employer’s rate for Social Security and State Retirement.⁴⁷

States and local recipients that use the unit-based approach have several distinct advantages and limitations.

Advantages

Flexible design that allows funding to be aligned to learner and program area needs; addresses learner-based incentives

Recognition of the higher cost of delivering not only CTE generally but also different CTE programs

Limitations

State formulas and calculation may be overly complex

Formulas must be regularly assessed to ensure that they reflect the true cost of program units



Hybrid Funding Model

Hybrid funding is a new funding model formulated by Advance CTE that reflects states that implement components of multiple categorical funding approaches or combine an optional categorical funding approach with their foundational funding model. For example, a state may offer optional reimbursements for LEAs, provide funding as competitive grants with different funding formulas, or use two categorical funding approaches. Advance CTE created this new definition of a hybrid model to accommodate six states (California, Illinois, Louisiana, Minnesota, Nevada and Utah). Following is how these states describe their hybrid model.

CALIFORNIA

California provides funding for CTE through various grant programs, which each have their own distribution formula. The grant programs are the Career Technical Education Incentive Grant, Kindergarten through Grade Twelve Component of the Strong Workforce Program, California Golden State Pathways Program and the California Partnership Academies.

The Career Technical Education Incentive Grant is a competitive grant program that encourages, maintains and strengthens the delivery of high-quality CTE programs.⁴⁸ The California Golden State Pathways Program is a competitive grant program that incentivizes the collaborative development of new career pathways that support the needs of the applicants' under-represented pupils and respond to priority areas including technology, health care, education and climate-related fields.⁴⁹

The K-12 component of the Strong Workforce Program is provided to create, support or expand high-quality CTE at the K-12 level that is aligned with the workforce development efforts occurring through the Strong Workforce Program.⁵⁰ Funds are allocated to recipient consortia based on unemployment rate, average daily attendance in grades 7-12 and projected job openings. The California Partnership Academies model is a three-year program (grades 10-12) structured as a school within a school.⁵¹ Academies incorporate integrated academic education and CTE, business partnerships, mentoring and internships. Allocations are made on a per-learner basis, depending on the implementation level of the academy and the number of qualifying learners.

ILLINOIS

Illinois provides categorical funding to CTE through competitive and formula grants. Education for Employment Systems (EFEs) regional delivery systems receive formula grants. EFEs provide leadership for the state's CTE programs under Perkins V requirements for program development and accountability. Competitive grants for state leadership initiatives are awarded through a request for proposals process.⁵²

LOUISIANA

Public schools are eligible for state funds for CTE offerings from three sources:

- 1) Minimum foundation program (MFP) Career Development Funds (CDF), which are 6 percent of the MFP State and Local Base Cost Per Pupil (\$241) for learners in grades 9-12 enrolled in approved courses. Funds may be used for teacher training or certification; equipment and facilities, including industry-recognized credentials; Nepris or other necessary technology licenses/equipment; and learner transportation. Louisiana uses a student-based formula for CDF funds.
- 2) MFP CTE funding, which provides a weight of 6 percent for each CTE course per learner per fall and spring semesters. These funds must be spent on personnel, professional services, instructional materials, equipment and supplies for the unique courses that generate such funds. Louisiana uses a unit-based formula for CTE funding.

3) MFP Supplemental Course Allocation, also known as Course Choice. In FY 2021–22, Louisiana provided \$59 per learner to approved Course Choice providers based on the previous year’s February 1 count. Funds may be used for tuition, courses that render learners eligible for the Taylor Opportunity Program for Students, remediation to support learners’ on-time graduation, services for learners with disabilities and courses that allow learners to earn a Jump Start Career Diploma.⁵³

MINNESOTA

Minnesota uses foundational funding along with an optional cost-based model with CTE revenue for districts. This funding is only for some of the costs associated with CTE programs and is only partial reimbursement for eligible expenses that the district has actually already spent (e.g., 35 percent of eligible costs). Districts can choose to not submit anything or submit for one or more programs.⁵⁴

Nevada

Nevada uses a hybrid model to fund secondary CTE. Seventy percent of the biennially appropriated state funds are allocated to districts on a per-pupil basis, and the remaining 30 percent are distributed through competitive grants to develop or expand CTE programs aligned with high-skill, high-wage careers. This funding model, introduced during the 2011–13 legislative session, seeks to ensure that new, more expensive CTE programs that may be difficult to stand up and expand through per-pupil funding alone have the funds necessary to be sustained. The model also includes elements to support Career Technical Student Organizations (CTSOs) and leadership and training activities, neither of which have been funded regularly in recent years.⁵⁵

The success of CTE programs in Nevada, demonstrated by high concentrator graduation rates, has encouraged legislative investments. At the same time, the state’s economy has increasingly become more technology, health care and manufacturing oriented, further

increasing the demand for CTE programs. To meet demand, Nevada has focused on geographic equity. Although Nevada has a large, concentrated population in Clark County, the home of Las Vegas, it also has numerous rural communities. The 70 percent of funds allocated on a per-pupil basis do not have to be spent that way. In fact, districts may pool funds to help build and support regional programs. The 30 percent of state funds that are distributed via competitive grants are evaluated to ensure that districts across the state are awarded grants. This funding stream may also be used to create and expand middle grades CTE programs.

Nevada’s Office of Career Readiness, Adult Learning and Education Options is making strides to understand how state funds are being used to further the state’s CTE goals. A new grants management system is planned, which will allow for metatags to track competitive grants’ spending on Career Clusters® and specific expense categories.

UTAH

Utah uses a base-plus formula for state CTE add-on funds. The base consists of funds for CTE administration depending on the type of dedicated support at each LEA and funds for each grade 9–12 school based on CTE offerings. Remaining funds are

allocated based on participation and membership in CTE activities including CTSOs, summer agriculture programs, skill certification, middle school college and career awareness and work-based learning.⁵⁶

Allocations to Area Technical Centers (ATCs)

ATCs are CTE-focused institutions that serve learners from across multiple geographies, such as school districts, educational service areas, and workforce development areas or regions. These public institutions provide CTE services to learners from surrounding high schools or districts who receive some or all of their academic instruction at home schools. Eight states – Arkansas, Connecticut, Kentucky, Maine, New Hampshire, New Jersey, New York and Vermont – allocate specific funding for ATCs. This funding is often in addition to one of the previously described models, which fund secondary CTE programs more broadly across a state.

Typically, states dedicate categorical funding to ATCs, which is distributed using student-based, cost-based or unit-based formulas. Arkansas, Connecticut, Kentucky, New York and Vermont distribute funding using a student-based approach. Maine, New Hampshire and New Jersey distribute funding to ATCs using a cost-based approach. The approaches may differ for ATCs versus other secondary LEAs in the state. The following are two examples of how states allocate funding to ATCs. More information about ATCs can be found in Advance CTE’s website: [A 50-State Analysis of Area Technical Centers](#).⁵⁷

KENTUCKY

Kentucky appropriates funds for CTE to state-operated ATCs, as well as locally operated technical centers and comprehensive high schools. Funds are distributed as supplementary funds to all locally operated schools. The state’s formula for locally operated programs provides a multiplier of 1.5 to the base FTE value for high-cost CTE programs. Additional state funding supports the operation of Kentucky’s 50 ATCs, as well as secondary learners who pursue CTE coursework within the Kentucky Community and Technical College System.⁵⁸

VERMONT

Vermont uses a student-based formula that includes learner participation in CTE as measured in FTEs. The funding comes in the form of tuition payments from sending districts. For each FTE learner, the regional CTE center receives 87 percent of the base education amount from the Education Fund. This amount is subtracted from the amount due to the sending district. Additionally, regional CTE centers are appropriated a

ATCs are CTE-focused institutions that serve learners from across multiple geographies, such as school districts, educational service areas, and workforce development areas or regions.

supplemental assistance grant per FTE learner equal to 35 percent of the base education amount that year. Vermont uses a six-semester FTE rolling average to determine costs for sending districts. If enrollment grows by 20 percent or more from the previous year, regional CTE centers may receive extra supplemental assistance.⁵⁹



TAKEAWAY **2**

States have increased their funding of secondary CTE over the past 10 years.

Advance CTE compared the funding levels provided in the U.S. Department of Education report in 2014 with funding provided by states toward secondary CTE in FY 2022.⁶⁰ Advance CTE found that 27 states have increased their funding of secondary CTE since FY 2012. The increases in funding ranged from \$76,300 to \$2,888,959,549 with a state average of \$182 million. These investments reflect the growing focus and attention on CTE by policymakers across the country.⁶¹

Changes to State Secondary CTE Funding Models Over the Past 10 Years

In the past 10 years, at least 15 states, including California, Idaho, Illinois, Iowa, Louisiana, Michigan, Minnesota, Missouri, Nevada, New Mexico, Ohio, Tennessee, Texas, Utah and Washington, have changed their secondary CTE categorical funding model in some way. Some states changed from one funding model type to another funding model type (e.g., Iowa, Missouri, New Mexico, Tennessee and Washington) or have a hybrid model (e.g., California, Illinois, Louisiana, Minnesota, Nevada and Utah). Other states changed or added some criteria within the same funding model (e.g., Idaho, Michigan, Ohio and Texas). Those shifts occurred for some of the following reasons.

IDAHO

Idaho uses a unit-based approach but added workforce readiness incentive funding in 2018 to recognize teachers who have done a great job getting their learners prepared for the workforce. The funding

is based on learners who complete a specialized sequence of courses. These funds flow to the school and can be reinvested into programs.⁶²

KENTUCKY

House Bill 1 (2022), known as the 2022-2024 Kentucky Executive Branch Budget, provided historic investments for secondary CTE. An additional \$58 million was appropriated in both years of the biennium for locally operated CTE programs, providing financial support for comprehensive high school programs for the first time ever. An additional \$6 million over the biennium was also appropriated to support increased operational funds for the state-operated ATCs and necessary rank and step increases for ATC employees.⁶³

MICHIGAN

Michigan uses a categorical funding model with student-based proportional and differential weighting allocation formulas. The state Legislature appropriated categorical funds under Section 61 in the State School Aid Act for secondary CTE programs. Section 61a(1)



funds provide partial reimbursement to school districts and area centers for the extra costs associated with the operation of state-approved CTE programs. Section 61a(1) funds were first used in 2016–17 school year based on 2015–16 enrollment data. Section 61a(1) is based on multiple formula elements (e.g., Classification of Instructional Program code rank, three-year average statewide expenditures and learner enrollment).⁶⁴

NEVADA

During the 2011–13 legislative session, the state’s funding formula was changed as funding increases were being considered. Previously, funds were primarily disbursed on a per-pupil basis. However, there was concern that per-pupil funding alone would not support the development and scale of expensive CTE programs.⁶⁵

NEW MEXICO

New Mexico was previously one of the seven states that did not have a categorical CTE funding model. New Mexico established state funding for a seven-year pilot to fund high-quality CTE and monitor student outcomes.⁶⁶

OHIO

Although the structure of Ohio’s CTE funding model has not changed, the state shifted from using varying rates for categories of programs to weights. This shift has increased funding for certain programs and CTE delivery models. As a result, the state is considering how to ensure equitable funding across delivery models.⁶⁷

Trends in Political Affiliation of Governors

CTE has typically received bipartisan support at the federal and state levels. In FY 2022, 27 states had Republican governors, and 23 states had Democratic governors. States were pretty evenly split by affiliation across the models (see **Table 2**). States using a student-based model leaned Republican (14) versus Democrat (nine), and states using a hybrid model leaned Democrat (five) versus Republican (one). At least 36 governors discussed funding and recent increased investments in K-12 funding in their 2022 state of the state addresses.⁶⁸ Forty states carried out policy actions addressing significant changes in CTE funding, such as increasing allocations, creating a scholarship or grant program, or investing in a pilot program in FY 2022.⁶⁹

Table 2 Funding Model by Political Affiliation of Governors in FY 2022

FY 2022 FUNDING MODEL	DEMOCRATIC	REPUBLICAN
FOUNDATIONAL Funding Only	Oregon, Wisconsin	Alaska, Maryland, Nebraska, South Dakota
CATEGORICAL Funding Model: Cost-Based Approach	Colorado, Maine, New Jersey, Rhode Island, Virginia	New Hampshire, North Dakota, Oklahoma
CATEGORICAL Funding Model: Student-Based Approach	Connecticut, Hawai’i, Kansas, Kentucky, Michigan, New Mexico, New York, North Carolina, Pennsylvania	Arizona, Arkansas, Florida, Georgia, Indiana, Iowa, Montana, Ohio, South Carolina, Tennessee, Texas, Vermont, West Virginia, Wyoming
CATEGORICAL Funding Model: Unit-Based Approach	Delaware, Washington	Alabama, Idaho, Massachusetts, Mississippi, Missouri
HYBRID Model	California, Illinois, Louisiana, Minnesota, Nevada	Utah



TAKEAWAY

3

States are making changes to secondary CTE models to be more responsive to stakeholder needs, including learners.

Equity Considerations for State Secondary CTE Funding

Across the country, CTE is recognized for its central role in building strong economies by enabling learners to access the education and training they need to be successful in meaningful careers. To meet emerging and long-standing challenges, CTE must continue to evolve and grow to live up to the promise it offers learners – no matter where they live, their race or ethnicity, what education path they have taken so far, their circumstances or how they self-identify. Advance CTE’s [vision for the future of CTE](#) calls on states to design equitable funding models that direct funding to where it is needed most.⁷⁰ Realizing this vision means evaluating how funding structures perpetuate gaps among communities with different levels of available resources.

For the purposes of this project, in its evaluation of states’ secondary CTE funding models and interviews with select state leaders, Advance CTE considered the following dimensions of equity:

- Access to high-quality CTE programs and experiences (e.g., career exploration, work-based learning);

- Completion of high-quality CTE programs and experiences (e.g., career exploration, work-based learning);
- Attainment of CTE and industry-recognized credentials while in high school;
- Access to college and career advisement;
- Teachers and instructors who are representative of their communities and;
- Provision of the necessary facilities, equipment and resources in CTE classrooms.

Largely, states consider their categorical funding models for secondary CTE equitable because they provide funding to approved CTE programs that are available to all learners. When surveyed in 2022, 65 percent of State CTE Directors reported state funds were used to support equitable access to secondary CTE programs of study, and 56 percent reported state funds supported equitable *completion* of secondary CTE programs of study. Additionally, 54 percent reported state funds supported equitable access to *equipment and resources in CTE classrooms*. Certain states have designed elements of their funding models to address CTE program quality, equitable funding across districts, and access to and completion of certain CTE courses or programs.

Dimensions of Equity in Funding Model Design

Certain states have designed elements of their funding models to address CTE program quality, access and completion of certain CTE courses or programs. Some states explicitly tie state funding to state-approved CTE programs that meet standards of quality (e.g., Kansas, Michigan, New Mexico, Texas). In doing so, states seek to make quality CTE programs available to all learners, no matter where they live.

New York funds CTE through aid to Boards of Cooperative Educational Services (BOCES), as well as through allocations to school districts that do not participate in BOCES. The latter value is computed by multiplying, for weighted pupils, a career education aid ratio by \$3,900.⁷¹ The career education aid ratio considers the combined wealth ratio (CWR) of a district, based on districts' property wealth per pupil and the income wealth of residents within districts.⁷² The CWR is calculated to determine how much a local community can contribute to education costs and is then used by the state to equalize funding across districts.⁷³

A number of states, including Delaware, Florida, Georgia, Idaho, Indiana, Ohio, Tennessee and Texas, incentivize learner enrollment and success in certain CTE courses or programs of study based on state labor market needs and/or educational goals. These states primarily use weights that vary based on type of program or level of course. For example, Georgia has determined differing FTE weights based on teacher-to-student ratios for general CTE instruction (1.0) and career, technical and agricultural education laboratory programs (1.183).⁷⁴ In Indiana, allocation amounts are based not only on the number of CTE credit hours generated by districts but also on enrollment in apprenticeship or work-based learning, among other considerations.⁷⁵ And finally, Tennessee's new funding formula directly allocates supplemental CTE funding based on the year and level of CTE programs in which learners are enrolled, from first-year enrollment in a level one CTE program to fourth-year enrollment in a level three CTE program.⁷⁶

Notably, at least three states, including Massachusetts, Tennessee and Texas, have made recent changes to their foundational education formulas or bonus structures, which affect equity in CTE. Massachusetts' Student Opportunity Act introduced incremental funding for English language learners and learners with low income to its formula for Chapter 70, the major program of state aid to public elementary and secondary schools.⁷⁷ Because CTE learners are a category that also receives incremental funding, CTE learners who may be English language learners and/or learners with low income therefore generate additional funding (learn more about [Massachusetts](#) in the state case study accompanying this report).

In addition to allocating supplemental CTE funding based on the year and level of CTE programs in which learners are enrolled, the Tennessee Investment in Student Achievement Formula incorporates weights for learners with low income, learners living in areas of concentrated poverty, learners in sparsely populated communities and small districts, and learners with unique learning needs.⁷⁸ This encourages retention and completion of learners in CTE programs of study.

In Texas, LEAs can earn outcomes bonuses for learners meeting the state's college, career or military readiness measures. This bonus is weighted for learners who are considered economically disadvantaged or who are enrolled in special populations (learn more about [Texas](#) in the state case study accompanying this report).⁷⁹ The additional funds directed to learners with certain markers allow LEAs to better meet learners' individual needs and goals, including success in CTE programs.

Additional research is needed to establish whether specific funding models result in more equitable outcomes for secondary CTE learners. Moreover, states make significant contributions to CTE programs through non-categorical allocations, including programmatic appropriations to support unique elements of CTE (e.g., reimbursement for attainment of industry-recognized credentials, [youth apprenticeships](#), development of work-based learning opportunities, funding to support CTSOs, work-based learning coordinators, teacher recruitment and capital improvements).⁸⁰ These investments certainly affect the experiences and outcomes of CTE learners as well.



Recommendations and Considerations

Many states have education funding calculations and practices that have been in existence for years. In the minds of employers and state policymakers, investing in secondary CTE can seem like a good bet. Nine in 10 employers believe that increased investment in CTE would have positive impacts not only on the economy and their industries but also on their business.⁸¹ Moreover, return-on-investment analyses in Massachusetts and Connecticut have found that CTE's impact on high school graduation rates reduces social costs and increases tax revenue in ways that offset the per-pupil costs of CTE.⁸² State leaders and policymakers should analyze their funding models to ensure that they align state secondary CTE funding with learner demand and support every learner's access to high-quality CTE.

States are exploring changes to their funding models. At least four states, including Maine,⁸³ New Hampshire,⁸⁴ Rhode Island⁸⁵ and Vermont,⁸⁶ have conducted research studies on state CTE funding in the past six years. Several changes have already taken place. Before the 2022 biennium budget, CTE at the secondary level in Kentucky was funded only for state-operated technology centers and local area centers. As a result of the 2022

biennium budget, Kentucky was able to fund all CTE regardless of location for the 2022-2023 and 2023-24 school years. And in 2023, Nebraska's Legislature authorized funding for CTE for the first time ever. These changes are promising, but there remains significant room for innovation in states' funding models for secondary CTE to ensure that all learners have access to, feel welcome in and find success through CTE.

To ensure high-quality CTE, state leaders and policymakers should consider the following recommendations and considerations to improve state funding models:

INNOVATION AND INCENTIVES



Evaluate the extent to which the use of state funds aligns with and reinforces the state's Perkins V plan and program quality indicators.⁸⁷

Perkins V introduced a renewed focus on equity in many states. Ensuring that the state's education and workforce goals are bolstered by the Perkins V plan and vice versa can help ensure buy-in toward and attention to a vision for high-quality, equitable CTE within a state.

Consider a performance-based add-on to foundational funding to focus on learner outcomes. LEAs could consider financial incentives or rewards for schools, districts and/or teachers for learners earning industry-recognized credentials, passing certification exams, or going to a post-program placement (e.g., workforce or further education in the program area).

Offer state secondary CTE competitive grants to encourage innovation and exploration. These grants, distributed in an equitable manner, could be one-time allocations or recurring funds for targeted priority areas. These funds may allow LEAs to implement new programs, pilot professional positions (e.g., work-based learning coordinators), support industry certifications or expand program offerings.

Incentivize success for special populations and subgroups. Providing LEAs with bonuses for outcomes achieved by special populations and subgroups not only encourages LEAs to eliminate CTE enrollment barriers but also incentivizes districts to provide all learners with the support they need to be successful. Consider tiered funding structures for LEAs based on learner enrollment in progressive CTE courses in programs of study.



FORMULA DESIGN



Acknowledge that each learner has unique experiences, backgrounds and needs by using learner markers (e.g., special population status) to direct additional state funding where it is needed most. These special population status markers can include low-income, disability and English language learner status. Embed learner characteristics or markers as a factor in formulas to ensure that the highest need learners are getting the supports to access and succeed in high-quality CTE programs. States can also align markers with special populations and subgroups commonly prioritized by districts in their Comprehensive Local Needs Assessment or Perkins V plans.

Consider how to provide CTE beyond geographic borders, incentivizing schools or districts offering virtual learning opportunities or access to publicly funded CTE programs not offered in learners' home LEA.⁸⁸ This strategy could be especially helpful in areas where geography can limit program availability and career exposure. If this construct is implemented, it must be done in a manner that centers learners, honoring their agency and ensuring that educational institutions do not limit learner options to retain their institution's funding.

Differentiate funding by CTE program type in formulas, as some programs may have higher costs due to equipment needs or are aligned with high-priority sectors. States should recognize the variable costs of CTE programs in funding formulas, especially higher-cost CTE programs.

ONGOING POLICY AND PRACTICE



Periodically review and update funding approaches to meet evolving state priorities and workforce goals. Some funding formulas have been used for decades. Adding funding mechanisms for enrollment in CTE programs that lead to high-skill, high-wage or high-demand occupations could help a state improve its economic health and meet labor market demands.

Introduce or strengthen state accountability frameworks to ensure that LEAs are using state funding to close equity gaps. Often, states default to Perkins V accountability requirements to gauge whether LEAs are making progress toward state education and workforce goals. However, this blunt instrument does not have authority over local-level decisions on the use of state funds.

Tell the story of state investment in CTE at the local level so LEAs can best leverage resources across funding streams. Although most states provide funding for secondary CTE, due to a lack of sufficient state-level accountability and data collection, states do not have lines of sight into how LEAs are using funds. Therefore, measuring the impact of state funding and advocating for evolution in either the structure or levels of state funding are challenging.



Conclusion

A state's priorities are reflected in its budget. Over the past few years, states have been investing more resources in secondary CTE. This positive trend compelled some governing and legislative bodies to review how those funds are allocated within states. The shifts among the state funding models reflect states' desire to leverage funding incentives and/or prioritize geographies, learner or program characteristics, and/or program areas in their state. With growing learner interest in CTE, more funds are needed but so too is continued vigilance to analyze how the funds are distributed to ensure that learners, communities and program areas with the greatest needs receive sufficient resources to support robust, high-quality CTE programs.

Visit ctek12funding.careertech.org for a state-by-state exploration of the different models states use to provide funding for secondary CTE.



METHODOLOGY

This **resource** details the definitions and sourcing for Advance CTE's 2023 The State of Career Technical Education: An Analysis of State Secondary CTE Funding Models resources, including the executive summary, research report, state case studies, map, and state-by-state table with funding model allocations.

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