Funding for Value: Maximizing the Impact of Career and Technical Education Funding

A PLAYBOOK FOR STATE POLICYMAKERS

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ExcelinEd

About Excel*in*Ed

Launched by former Florida Governor Jeb Bush in 2008, Excel*in*Ed supports state leaders in transforming education to unlock opportunity and lifelong success for each and every child.

From policy development to implementation, Excel*in*Ed brings deep expertise and experience to customize education solutions for each state's unique needs. Focused on educational opportunity, innovation and quality, Excel*in*Ed's agenda is increasing student learning, advancing equity and readying graduates for college and career in states across the nation.

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INTRODUCTION

Welcome to Excel*in*Ed's fourth Career and Technical Education (CTE) playbook, *Funding for Value: Maximizing the Impact of Career and Technical Education Funding.*

This CTE playbook series has explored strategies and processes states can use to strengthen CTE program quality and provide students with pathways to postsecondary credentialing and middle- and higher wage career opportunities.

In the first three CTE Playbooks, Excel*in*Ed provided a high-level view of how states can undertake the critical role of strengthening state CTE programs, illustrated the vital role that cross-sector partnerships play in developing CTE pathways and set forth a framework for auditing state CTE programs for quality.

Click on the cover image to view other playbooks in Excel*in*Ed's Career and Technical Education playbook series.

This fourth playbook presents various funding models state policymakers can consider as they prioritize their state CTE program offerings and desired outcomes. With CTE program audit results and priorities in hand, policymakers are ready to create their specific CTE funding approach to enact a high-quality CTE program and maximize long-term student success.

The recent federal Perkins V legislation offers states a timely opportunity to review their vision for a high-quality CTE program. States should consider ways to align their federal, state and local resources to get the most value for their K-12 CTE investments. States that align their funding sources and structures to support their priorities can maximize the return on investment of critical, but finite, resources.

Each state takes a unique, and often complex, approach to funding education, and these variations are often compounded with CTE funding. There is a wide range of possible funding sources and stakeholders involved in providing aligned workforce education. This fourth playbook offers three sections of information and guidance for state policymakers ready to create their CTE funding approach:

- **A look at the various ways states currently structure their CTE funding.**
- **Five steps states can take to seize the opportunity of Perkins V and maximize the impact of their CTE funding.**
- **Four state profiles on CTE funding for a deeper examination of what states are doing.**

Building on a Framework of CTE Program Quality

Our third playbook, *Auditing a State CTE Program for Quality*, outlines the state CTE program audit process. Through this process, states can assess the quality of their CTE programs in terms of industry alignment, content, rigor, human capital and financial resources using the following eight non-negotiables of high-quality state CTE systems.

CTE Program Non-Negotiables

1. **All promoted programs of study align with state and/or regional industry and labor market data.**
2. **Programs of study incorporate experiential learning and capstone experiences valued by industry.**
3. **Secondary programs of study vertically align with postsecondary programs.**
4. **Courses are sequential and progressive in a given program of study.**
5. **Secondary programs of study incorporate courses and exams eligible for postsecondary credit or hours where appropriate.**
6. **Course standards are robust and accurately represent the academic, technical and employability skills learners must master.**
7. **Educators receive ongoing, progressive training and professional development to ensure their instruction is reflective of course standards and current industry work environments.**
8. **Federal, state and local funding are utilized to leverage and drive programmatic changes leading to the implementation of vertically aligned education-to-career learning pathways**

"Value" in CTE

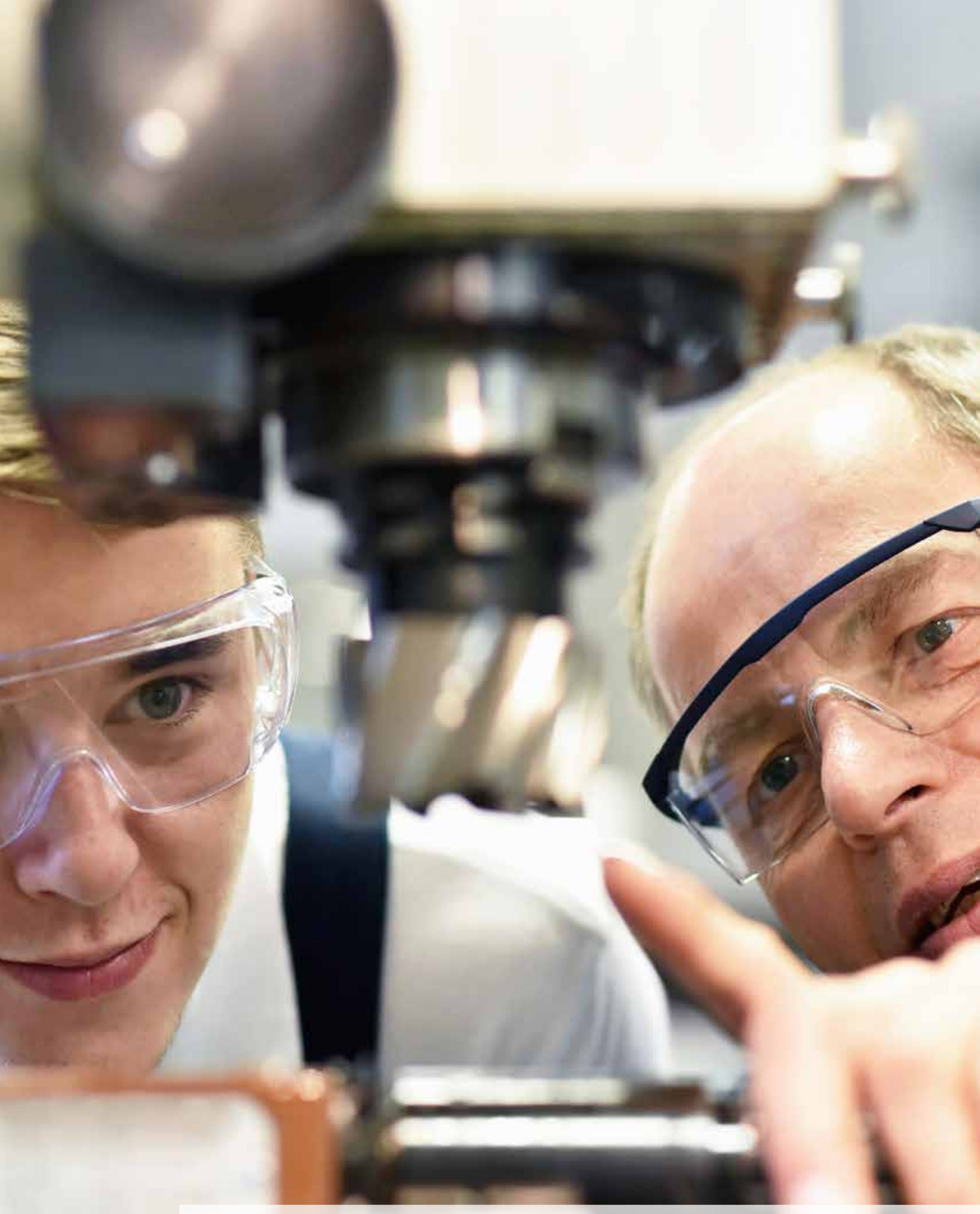
The CTE program non-negotiables identify critical inputs required for a high-quality state CTE program. However, not all CTE programs of study provide students with the same value in the labor market.

When determining a program's value, states should focus on student outcomes—positive outcomes for students that result in positive outcomes for the state's economic health. The federal Perkins V legislation emphasizes that high-value CTE leads students to high-skill, high-wage and in-demand career opportunities.

High-skill occupations have a typical educational level needed for entry of postsecondary training (non-degree) or higher; or occupations with an apprenticeship as the "typical on-the-job training" level; or occupations typically needing related work experience or long-term on-the-job-training for entry and postsecondary training (non-degree) or above as competitive.

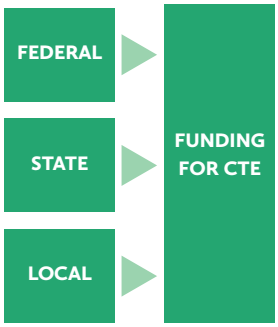
High-wage occupations pay at or above the median hourly wage or the mean annual wage for statewide or a particular region.

In-demand occupations have more than the median number of total (growth plus replacement) openings for statewide or a particular region.



SECTION ONE

How States Currently Structure CTE Funding



States invest in CTE through a variety of federal, state and local funding sources.

All states receive federal funds for CTE under the Perkins Act, and some states leverage other federal funds to support specific components of secondary CTE.

Most state-provided funding for CTE comes through funding formulas and budget line item allocations. These may or may not be specifically earmarked for CTE,[1] and typically are based on inputs, such as CTE courses, teachers, schools and/or competitive grants. School districts and other local education entities also often invest local funds to support their CTE programs.

Federal Funding for CTE

The biggest federal[2] source of funding for CTE is Perkins V. States must split their Perkins V allocation between their K-12 and postsecondary CTE systems, with each state determining how funds are divided. Perkins V allocations generally account for a small portion of the amount invested in CTE in each state.

At least 85 percent of each state's Perkins V allocation is distributed to local entities (school districts and postsecondary institutions) based on formulas that account for student demographics. A portion of the district and postsecondary funds can be used for Perkins Reserve activities (outlined on the following page.) The remaining 15 percent of the allocation is used to support state leadership and administration activities. Like other federal sources, Perkins V funds must "supplement not supplant" state and local funds. As a result, these funds are typically used to pay for one-time expenses, like equipment or professional development, rather than to sustain programs long-term.

Generally, federal CTE funds are less flexible than state CTE funding. But the comprehensive state plans required by Perkins V can drive the direction of state funds. Consequently, implementing the new federal law provides new opportunities for states to maximize federal CTE *and* state funding.

Innovating Through Perkins Reserve

One of the major changes in Perkins V is the Perkins Reserve section. Historically, states could set aside up to 10 percent of the funds for local recipients for Perkins Reserve activities in areas that meet specific demographic requirements. States had the ability to determine whether, how and for what purpose to allocate their Reserve funds: some states used Reserve funds for competitive grants, others allocated to districts for specific activities and still others used a formula to distribute this optional set-aside.

Under Perkins V, states can set aside up to 15 percent of the local funds for Perkins Reserve activities, which now must be used to innovate in CTE and to promote high-quality CTE programs.[3] This shift provides states with another way to use funds to drive value in CTE. Consider the following illustration of a hypothetical state's Perkins Reserve approach.

Illustration: Perkins IV v. Perkins V Funding

	Perkins IV		**Perkins V**	
State Allocation	**$50 million**		**$50 million**	
Leadership & Administration	**$7.5 million (15%)**		**$7.5 million**	
Local Entities	**$42.5 million (85%)**		**$42.5 million**	
	Secondary (50%)	*Postsecondary (50%)*	*Secondary (50%)*	*Postsecondary (50%)*
Local Institutions	$20.19 million (95%)	$21.25 million	$18.06 million (85%)	$18.06 million (85%)
Perkins Reserve	$1. 06 million (5%)	$0	$3.19 million (15%)	$3.19 million (15%)
Perkins Reserve Activities	Rural CTE equipment (rotating)	N/A	High-value secondary/postsecondary partnership programs	

Under Perkins IV, this hypothetical state set aside 5 percent (about $1 million) of secondary Perkins funds to provide non-competitive grants to rural districts to purchase or upgrade CTE equipment. The postsecondary system did not use the Perkins Reserve provision.

Following a CTE program audit and the Perkins V planning process, this state now seeks to replace dead-end programs of study with high-value programs of study. The state makes the following changes to maximize the impact of funds:

- **Sets aside the maximum amount of secondary Perkins Reserve funds (now 15 percent, or $3.91 million) to encourage districts to transition to high-value programs.[4]**
- **Combines the secondary Perkins Reserve funds with the maximum (also 15 percent or $3.91 million) postsecondary reserve funds to promote secondary and postsecondary partnerships that enable students to complete high-value postsecondary credentials while in high school.**

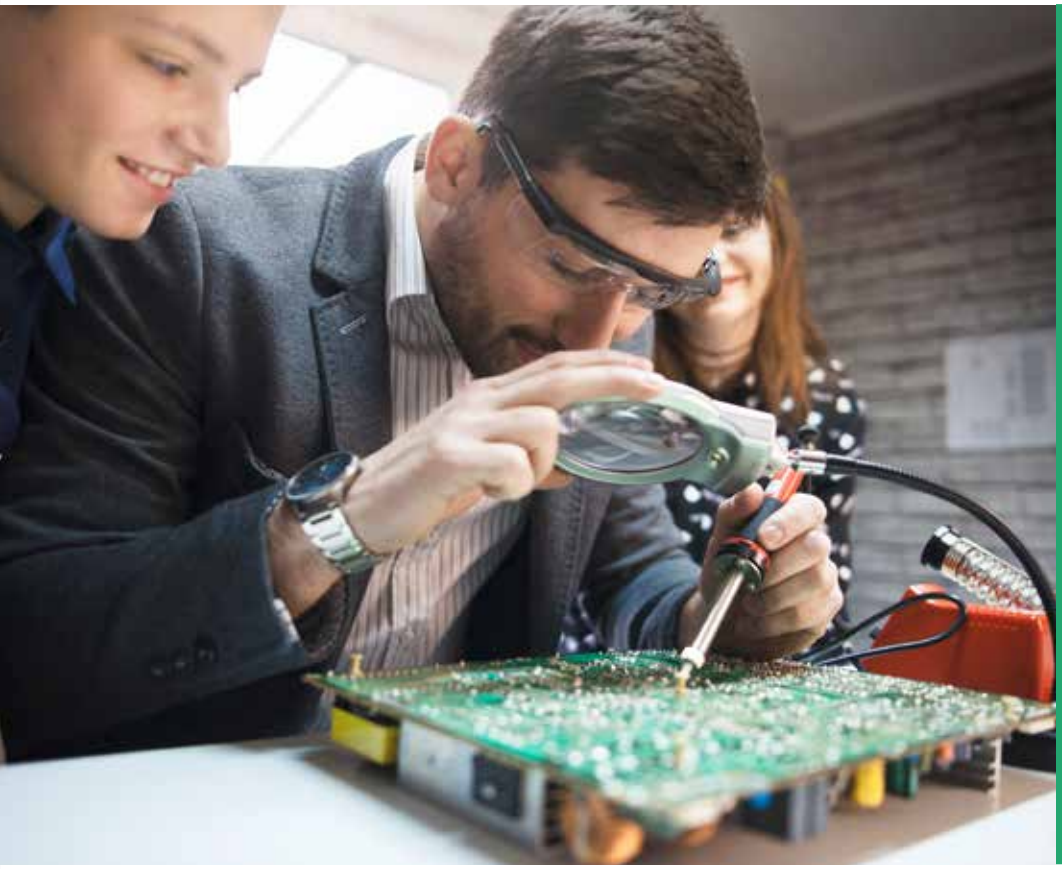
The $6.38 million combined Perkins Reserve funds are awarded through a competitive grant process. This process requires districts and postsecondary partners to submit joint applications that include program transition plans and goals for student outcomes. Awarded partnerships may spend these funds on planning activities, the purchase of new equipment and professional development. Recipients must commit to mentoring other partnerships to scale successful models in future years.

State CTE Funding

State-level funding for CTE provides the greatest lever to ensure investments in CTE result in value for students and state economies. However, many existing state funding structures for CTE reflect the belief that CTE courses are more expensive to implement than general education courses without accounting for the value of various CTE programs or student outcomes.

The subsections below describe the most common ways that states currently invest in CTE. Inherent in each of these structures are advantages and disadvantages in relation to their ability to fund for value.

In general, states employ a combination of multiple funding mechanisms to support CTE. Examples of four states' approaches to CTE funding, including the amounts they fund, can be found at the end of this playbook.



Many existing state funding structures for CTE reflect the belief that CTE courses are more expensive to implement than general education courses without accounting for the value of various CTE programs or student outcomes.

FUNDING FOR CTE COURSES

Most states with earmarked CTE funding focus on the number of CTE courses students take. In several states, districts receive an additional amount for each CTE course in which a student is enrolled. The amount can be flat amount, or it can be a weight (i.e., a multiplier of base funding).

Texas, for example, provides a weight of 0.35, or 35 percent more, for each CTE course in which a student is enrolled. In several other states, the extra funding per CTE course fluctuates yearly based on the availability of a specific CTE funding pool, with each district getting a proportion based on its CTE enrollment.

Advantages

- Provides states with the opportunity to differentiate weights for CTE courses based on value.
- When incorporated into the state funding formula, CTE funds can naturally increase or decrease based on enrollment. This prevents enrollment gaps or budget cuts during tighter fiscal times.

Disadvantages

- If funded through a separate line item in the state budget, can result in enrollment caps and is potentially subject to cuts when fiscal times are tight.

FUNDING FOR CTE TEACHERS AND OTHER EXPENSES

Many states provide districts with funding for CTE teachers and other expenses connected with offering CTE courses.

North Carolina reimburses districts based on the number of CTE teachers hired, with maximum reimbursement amounts determined by student enrollment. Several other states reimburse districts for providing CTE courses. **Colorado** and **Idaho** provide districts with additional flat amounts, with expense eligibility restrictions, intended to offset a portion of extra costs associated with CTE classes.

Disadvantages

- Focuses on the extra costs of CTE courses.
- Can cause inequities, as extra CTE enrollment may not generate an additional position, depending on how the state rounds.
- Does not incentivize efficiency or innovation; the more a program costs the more funding it receives.

FUNDING FOR CTE SCHOOLS AND CENTERS

Nearly a dozen states directly fund schools or regional centers that specialize in CTE.

Arkansas funds area CTE centers, with a cap on funding if more than 60 percent of students come from a single sending school. In **Massachusetts**, single districts can run specialized CTE schools, which must be approved by the state to receive additional CTE funding. **New Hampshire** students can attend CTE schools run by other districts, either full- or part-time, with the state paying 75 percent of the cost per student to the district operating the school. **New York** subsidizes a portion of the cost of CTE schools run by regional Boards of Cooperative Educational Services.

Advantages

- Can promote collaboration and efficiency, so the state is not paying for two expensive programs serving the same geography.
- Students in these schools are more likely to proceed through a sequence of CTE courses, with integration of academic courses, rather than enroll in stand-alone CTE courses.

Disadvantages

- The number of available seats can be severely limited and is often below student demand.
- Runs the risk of promoting a "tracking" mentality, especially if the programs offered at CTE schools are perceived as low-rigor and low-prestige.

OUTCOMES-BASED INCENTIVES

Over a dozen states use recurring funds to reward schools and teachers based on student outcomes in CTE, such as attainment of industry credentials.[5]

Florida rewards schools for each student who earns a promoted industry certification.[6] The incentive amount is based on the value of the credential (determined by industry demand, postsecondary transferability and other factors).[7] **North Carolina** funds bonuses of up to $3,500 for CTE teachers whose students earn industry-recognized credentials.

Advantages

- Rewards high performance on desired student outcomes.
- Allows higher-performing programs to grow and serve more students.
- Measures CTE program quality based on attainment of desired outcomes.

Disadvantages

- Often does not provide sustainable support for programs, unless incentives are fully incorporated into the budget.

COMPETITIVE GRANTS

Many states offer competitive grants to districts interested in improving or expanding their CTE programs. These grants can be recurring funds, or one-time budget allocations intended to offset start-up or program transition costs. Competitive grants encourage innovation and high performance.

In 2017, **Tennessee** awarded $15 million to help districts purchase or upgrade equipment for CTE programs in in-demand career clusters.

Advantages

- States can set and fund priorities that are associated with desired student outcomes.
- Can focus on the start-up costs of valued CTE programs, courses and outcomes.

Disadvantages

- Typically provides much less funding statewide than other funding models.
- Availability can fluctuate so much that funds can often only be used for one-time costs.

ADDITIONAL STATE FUNDING

Funding for High Schools and Smaller Districts

Eleven states provide additional funding for districts based on their high school enrollment, irrespective of how many students take CTE courses. In **California**, for example, high schools are funded at 26 percent higher than base funding per student, with the express intent to support CTE. Many states also provide supplemental funding for smaller school districts, based on the assumption that these districts need extra funding to provide the same array of courses as larger districts.

K-12 Funding Available for CTE

States have numerous other funding programs that are available for CTE, even if they are not restricted to CTE. For example, some states fund technology and equipment, which districts can use for CTE courses. Other states provide a base funding amount per student that includes the cost of CTE courses.

Advantages

- Districts have flexibility in funding priorities that are associated with desired student outcomes.

Disadvantages

- Districts are not required to use funds to support CTE.
- It is difficult to calculate the state's investment in CTE.

Local and Private Funding for CTE

School districts often use local funds to support their CTE programs as well. This practice varies widely and often reflects the district's priorities. Additionally, some districts receive financial support from local businesses, community organizations and foundations for CTE programs. Local and private funds are the most flexible of the various funding sources and can often generate high impact, but they also carry the risk of being repurposed or phased out, especially in times of budget strain.

Student-Centered Funding and CTE

Student-centered funding is based on student enrollment and characteristics, like student poverty or students with special needs. Typically, this means there is a base funding amount for each student with weights for student characteristics. For example, a weight of 1.30, means 30 percent higher than base funding. As students move from districts or schools, funding fully follows them.

Student-centered funding provides districts and schools with flexibility to innovate. It maximizes the ability of parents and students to choose the school that is best for them, and it is fairer. Student-centered funding can be especially beneficial for students who want to enroll in specific CTE programs that may not be offered by their school or district.

Applying the concept of student-centered funding to CTE means providing a weight for each CTE course in which the student is enrolled. These weights can be adjusted for course value, cost and how advanced a course is. Any school can receive that additional funding weight by offering the CTE course.

Through student-centered CTE funding, states can avoid locking themselves into specific schools or programs and can create a simple, flexible and equitable CTE funding structure. For more on how states can implement student-centered funding, see Excel*in*Ed's *Student-Centered State Funding: A How-to Guide for State Policymakers*.

State Funding for Dual and Concurrent Enrollment

High-quality CTE programs include opportunities for students to earn postsecondary credits. This commonly occurs through dual and concurrent enrollment, where students earn both high school and postsecondary credit for completing a postsecondary course. Students can participate in dual enrollment courses in both general education and CTE content areas either at their high schools, on postsecondary campuses or online.

Many states invest additional funds in CTE through their dual enrollment programs, though these funds are not always perceived to be part of the state's investment in CTE. Determining the exact funding structure and cost of dual enrollment is particularly difficult, as it is often buried in secondary and higher education budgets, and states may not distinguish CTE from non-CTE courses. However, the investment in dual enrollment generally, and CTE dual enrollment specifically, is growing in many states. A sample of ways states fund dual enrollment is listed below:

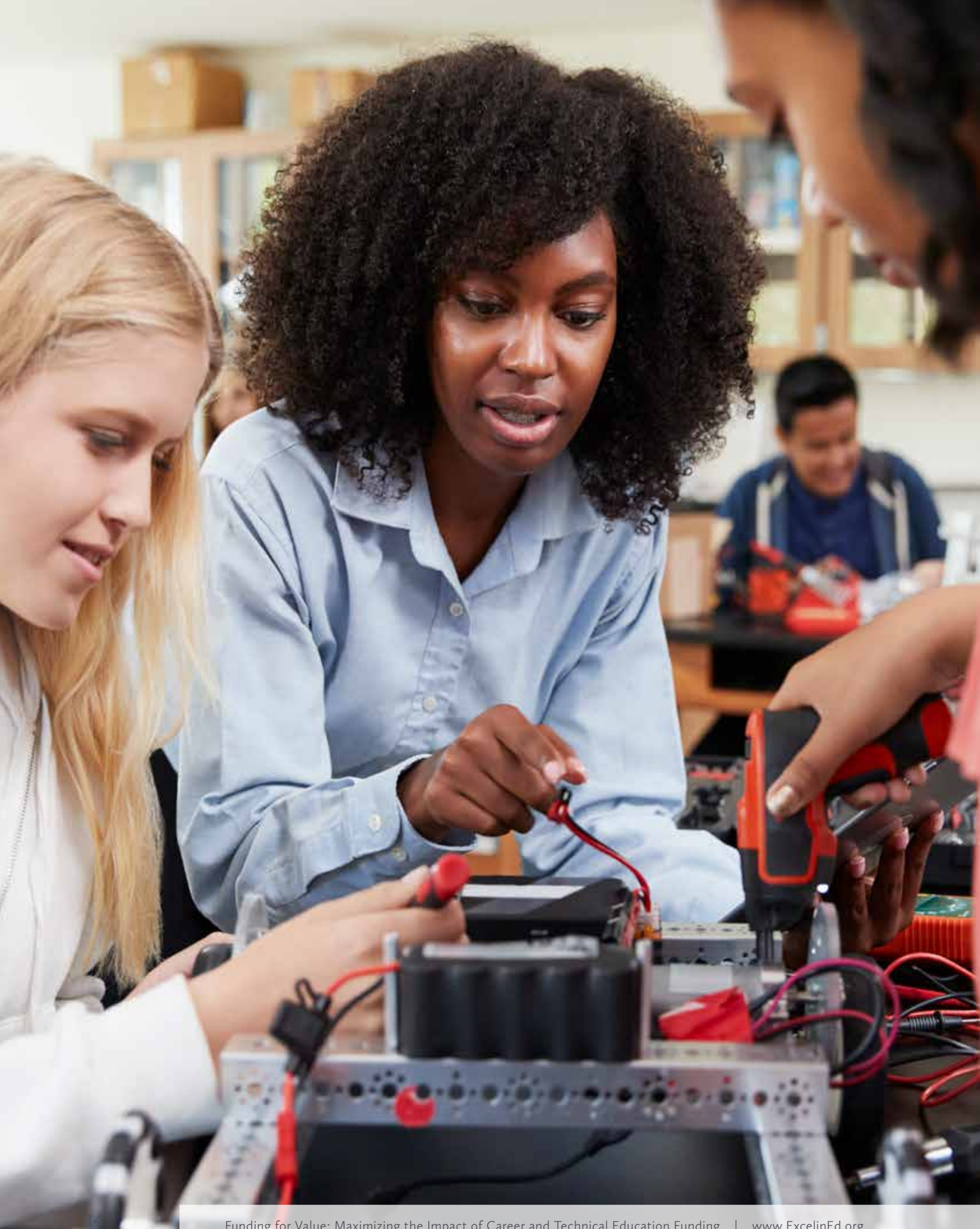
- **Secondary Funding:** High schools generate state K-12 funding for students in dual enrollment through existing funding structures.
- **Postsecondary Funding:** Postsecondary institutions generate state higher education enrollment funding for high school students in dual enrollment courses.
- **Student Funding:** Students receive grants to offset postsecondary tuition/fees required for dual enrollment participation.
- **Double-Funding:** Both the secondary and postsecondary systems generate funding based on student enrollment, regardless of where the course is offered (high school or postsecondary campus).
- **Triple-Funding:** Both the secondary and postsecondary systems generate funding based on dual enrollment and students receive grants to offset tuition.

States should consider convening secondary and postsecondary partners to review dual and concurrent enrollment funding approaches. Once states have determined how funding structures are aligned, they can adjust their dual enrollment funding structures to promote the highest-value courses and programs and to maximize the state's return on investment.

Funding: One of Several Levers to Drive Quality and Value in CTE

States are at very different places in terms of aligning their CTE funding mechanisms to support their vision for high-quality CTE programs and strong student outcomes. Regardless of the funding structure, states should consider that funding is just one of several tools states can use to promote and incentivize high-value, high-performing CTE programs of study. States can strategically align and incorporate several of the following approaches to drive quality and value in their state and local CTE programs:

- **Tiered Funding for Value:** Tiered funding encourages local systems to offer courses and programs that provide the most value for students and are best aligned with labor market demands.
- **Incentives for Outcomes:** Funding incentives reward districts, schools and teachers for desired student outcomes, and incentives help ensure quality programs of study through their focus on outcomes.
- **Perkins Reserve Funding:** Increased flexibility of the Perkins Reserve provision under Perkins V supports innovation and value in CTE tied to specific student outcomes. These funds can support the development and expansion of high-value programs and remove financial barriers to high-value opportunities (such as early postsecondary coursework or industry certification exam fees).
- **Program Review and Approval:** Strong program review and approval processes for local CTE programs (1) establish criteria for program quality indicators and outcomes and (2) are regularly reviewed to ensure alignment with high-skill, high-wage, in-demand occupations. These processes can be embedded in the Perkins V local comprehensive needs assessment and local applications or can exist separately. States can also incorporate student achievement and outcome data within the processes to identify strengths and gaps in program quality and equity.
- **Accountability and Reporting:** Strong accountability and reporting examines the performance of specific sites offering a program of study based on student outcomes data. Data on priority outcomes can be included in statewide accountability systems (such as ESSA, Perkins or state report cards), as well as reported publicly to allow students, families and communities to understand the effectiveness of their local CTE programs.



SECTION TWO

5 Steps to Maximize the Impact of CTE Funding

States can use the five steps outlined below to review, adjust and verify that CTE funding structures are designed to support high-quality, high-performance and high-value CTE programs of study.

5 Steps to Maximize the Impact of CTE Funding

STEP 1 CONDUCT AN ANALYSIS OF CTE FUNDING

STEP 2 FOCUS ON THE VALUE OF A CTE COURSE

STEP 3 INCENTIVIZE OUTCOMES

STEP 4 ADDRESS OBSTACLES TO VALUE AND EQUITY

STEP 5 ALIGN CTE FUNDING

STEP 1: CONDUCT AN ANALYSIS OF CTE FUNDING

Download the State CTE Funding Analysis Template.

To calculate a return on investment and avoid duplications and inconsistencies, a state must first understand its investment in CTE.

Policymakers should consider reviewing state funding allocations as well as expenditures of state CTE funds. This dual approach will provide insights into how funds are used to drive current student achievement and provide an understanding of which funds could be repurposed to support state CTE priorities and CTE program audit recommendations.

Analyzing Investment in CTE

- State Funding Structures & Amounts
- State CTE Expenditures
- Local Investment

Finally, states may also want to consider understanding the local investment that each of their districts makes in CTE. This can provide a comprehensive view of investments and additional context about program quality and outcomes.

STEP 2: FOCUS ON THE VALUE OF A CTE COURSE

Effective approaches to CTE funding consider the value of CTE courses and programs in terms of future career opportunities, advancement and earning potential.

One way to fund CTE for value is to provide a significantly larger supplemental amount for each student enrollment in a high-value CTE course than for a lower-value CTE course. **Ohio** provides more funding for CTE courses in certain career clusters than others. Similarly, **Indiana** funds at a higher amount CTE courses that are associated with high-value careers.

Students benefit the most when they complete a full CTE program of study. Thus, to get the most out of their dollars, states can provide significantly more funding for upper-level CTE courses of value, which can include early postsecondary courses such as Advanced Placement or dual enrollment.

Effective approaches to CTE funding consider the value of CTE courses and programs in terms of future career opportunities, advancement and earning potential.

Focusing Funding on the Value of CTE Courses

A hypothetical state CTE program audit[8] finds that 65 percent of the existing programs of study are high-quality, which includes a baseline definition for skill, wage and demand. The high-quality programs of study include early childhood education, animal science, construction, diesel mechanics, cybersecurity, nursing and welding.

This state established a point system to determine the value that each program of study *adds above the high-quality baseline*, using a 9-point scale based on thresholds for specific skill, wage and demand data evaluated annually through a review process set forth in policy.

Illustration: CTE Program of Study Point System *Value Above High-Quality Baseline*

Program of Study	Skill Level	Wage Potential	Current Demand	Projected Growth	Overall Value	Value Tier
	2 points	3 points	2 points	2 points	9 points	
Cybersecurity	2	3	2	2	9	1
Nursing	2	2	2	2	8	1
Diesel Mechanics	1	2	1	1	5	2
Welding	1	2	2	1	6	2
Animal Science	1	1	1	1	4	3
Construction	1	0	1	1	3	3
Early Childhood Ed	1	0	1	0	2	3

In this hypothetical scenario, the state also created a funding structure that encourages student progression through high-quality programs of study. It used the value tiers to set increasing funding amounts based on student advancement, where more advanced courses generate more funding. CTE courses not included in a program of study or programs of study that do not qualify for value tier criteria, do not generate any additional funding.

Illustration: CTE Program of Study Value Tier

Program of Study Value Tier	Course Funding Weight			
	Level 1	Level 2	Level 3	Level 4
Tier 1	1.2	1.3	1.4	1.5
Tier 2	1.1	1.2	1.3	1.4
Tier 3	1.05	1.1	1.15	1.2

This approach allows the state to use policy, funding and student outcomes to promote offerings that provide the most value for students and the greatest return on investment for the state.

STEP 3: INCENTIVIZE OUTCOMES

States should consider exploring ways to link a portion of funding to actual student performance. Incentivizing improved student outcomes rewards schools and districts for implementing high-quality, effective programs.

For example, states can provide additional funding based on the number of students passing industry certification exams that demonstrate mastery within a program of study. **Florida**, **Indiana** and **North Carolina** offer additional funding for schools and teachers when students earn industry certifications.[9]

Similarly, states could establish performance incentives for other desired student outcomes, such as postsecondary CTE credential attainment while in high school or completion of a youth apprenticeship program. Performance incentive outcomes should measure the quality of the program of study.

The chart below illustrates how a state can use funding weights based on course value as part of a program of study with performance incentives. It also shows how a state can factor in additional funds for high-cost courses.

Program of Study Value Tier	Program of Study and Course Funding Weights					
	Level 1	Level 2	Level 3	Level 4	Performance Incentive	High-Cost Course Adjustment
Tier 1	1.2	1.3	1.4	1.5	1.15	1.1
Tier 2	1.1	1.2	1.3	1.4	1.15	1.1
Tier 3	1.05	1.1	1.15	1.2	1.15	1.1

STEP 4: ADDRESS OBSTACLES TO VALUE AND EQUITY

As states focus funding on CTE courses that provide the highest value to students, they can also use funding to address—and phase out—lower-value courses.

States can also use their Perkins Reserve funds or other state funds to prioritize start-up costs for new, high-value CTE programs of study and professional development to recruit or retrain teachers to offer these programs[10]. When new CTE courses have start-up costs, states can focus funding for CTE equipment on the creation and expansion of high-value CTE courses. They can also require each district to demonstrate how it will address their specific obstacles in the local comprehensive needs assessments and local application required by Perkins V.

Additionally, states can offer targeted incentives to overcome equity gaps related to race or poverty. For example, states could offer districts an incentive to enroll students in high-value CTE programs of study offered by other districts or postsecondary institutions through a Course Access incentive program.[11]

Managing Change

States can take the following steps to reduce disruption and backlash as they shift funding to high-performing, high-value CTE programs of study:

- **Make the process transparent.**
- **Prioritize ongoing communication and stakeholder engagement.**
- **Allow districts to appeal using local data.**
- **Give districts time to adjust and plan for new programs.**
- **Provide funding for re-training of teachers.**
- **Provide start-up funds for new programs.**

STEP 5: ALIGN CTE FUNDING, MAKE IT TRANSPARENT AND REWARD EFFICIENCY AND INNOVATION

Once a state has clear vision about how it wants to invest in and incentivize CTE, it can align and braid its funding. Aligning means that if the state has identified high-value programs of study, the majority of state funding supports those priority programs. Braiding indicates that the various streams of funding complement each other.

For example, although federal funds tend to have more restrictions, states can prioritize federal funds for high-value programs of study, while taking full advantage of the greater flexibility of state funds. States can allow districts to submit combined federal and state applications for approval. This means setting clear expectations for districts to align their Perkins V and state CTE funding, in concert with ESSA and dual enrollment funding, in support of high-value, high-performing programs of study.

As states align and braid their funding, they should also consider their program review and approval, accountability and reporting systems. States that do not align these systems risk creating unintended incentives or consequences that can undermine the effectiveness of the state's CTE program. Alignment across each of these important tools is critical to successfully implementing a CTE system that is funded for value, encourages innovation and rewards desired student outcomes.

Key Questions for Policymakers

- Does the state have a process to determine high-value programs of study and desired student outcomes?
- To what extent does the state's current funding structure encourage districts to offer high-value programs and reward desired student outcomes?
- Does the current CTE funding structure incentivize low-value or low-quality programs, or have other unintended consequences?
- What are the desired behaviors, program offerings and student outcomes the state's funding structure should encourage to support the state's vision for high-quality CTE?
- What other mechanisms (for example, accountability or program approval) are currently in place that support high-value CTE programs and student outcomes?
- What should the funding structure look like to help achieve the state's goals for high-value CTE?
- What will be the impact to individual districts if the state changes existing CTE funding structures?
- Which partners should be engaged and when?
- What process and timeline are required to change the current funding structure?


No 3

SECTION THREE

How States Are Investing in CTE: 4 State Profiles

Beyond meeting the Perkins V matching requirements,[12] state CTE funding approaches—and amounts—vary widely based on overall education funding calculations and historical funding practices.

Calculating CTE funding is complex because it requires looking at a multitude of funding streams, cutting across both K-12 and higher education. Earmarked funds are relatively simple to calculate. It is much harder to determine the portion of broader funding programs going to CTE. This is especially true for the extra cost of dual or concurrent CTE courses, as it is often buried in higher education budgets and states may not distinguish CTE from non-CTE courses.

Because there is no multi-state source on the amount of funding states provide for CTE, Excel*in*Ed conducted research, including interviews with state CTE officials, in an illustrative set of states. These four state examples show how varied states are in terms of funding CTE for value, with many considering a move toward more value-based approaches as they implement Perkins V.

Calculating CTE funding is complex because it requires looking at a multitude of funding streams, cutting across both K-12 and higher education.

Arkansas

CTE FUNDING AT A GLANCE: ARKANSAS

$213 average supplemental funding for CTE per high school student[13]

CTE in Comprehensive High Schools

- **Each high school must offer at least nine CTE courses in three career clusters**
- **Each student must take six "career focus" courses[14]**
- **Funding for CTE included in base student funding amount**

Area CTE Centers

- **+$480 per CTE course per student[15] (86 percent more than comprehensive high school courses)[16]**
- **~10,000 students (7 percent of high school population)**

Funding Sources and Amounts

- **$20.1 million state funding for area CTE centers**
- **$2.3 million state funding for new equipment for CTE programs[17]**
- **$12.3 million in federal Perkins funding[18] (75 percent secondary, 25 percent postsecondary)**
- **$785,000 set aside for Perkins Reserve competitive grants**

Arkansas exemplifies how states fund high school CTE programs at both regional CTE centers that serve multiple districts and at comprehensive high schools. These two delivery systems are supported by different funding sources, though both are based on student enrollment.

High School CTE Programs

Students who take CTE courses at their comprehensive high school do not generate additional funding for their CTE coursework. Rather, base funding for high school students reflects the cost of elective teachers, which includes CTE teachers.[19] The majority of students taking CTE courses in Arkansas take them at their comprehensive high schools.

CTE Centers

Arkansas concentrates its earmarked state CTE funding on area CTE centers by providing supplemental funding ($480) for each CTE course a student takes at an area CTE center. The original rationale for these schools was that districts individually could not afford certain high-cost CTE courses, recruit qualified teachers for certain CTE programs or have enough students to justify some CTE courses.[20] Students travel from their comprehensive high school to area CTE centers for one or more CTE course per day. The state approves new area CTE centers based on demonstrated need.

CTE Funding

Arkansas annually provides $2.3 million for districts to purchase equipment for new CTE programs at comprehensive high schools. Additionally, the $8 million secondary portion of the state's Perkins allocation is distributed to support CTE, including $785,000 set aside for competitive Perkins Reserve grants.

Currently, Arkansas does not differentiate funding amounts based on the value of various CTE programs of study at either comprehensive high schools or area CTE centers, although the state is currently considering creating tiers of CTE programs based on workforce demand. A recent legislative report found a misalignment between the programs of study completed and occupations projected to have the largest employment growth in Arkansas.[21] Over the past few years, the agency overseeing the area CTE centers has conducted informal audits and eliminated a few lower-value programs of study area CTE centers.[22] The state hopes that the new Perkins V comprehensive local needs assessment requirement will support districts' choices to offer high-value programs of study.

HOW IS ARKANSAS FUNDING CTE FOR VALUE?

- **Area CTE centers focus on high wage, high cost, in-demand CTE programs of study.**
- **State provides recurring funds to support new equipment.**
- ***Considering:*** **Incorporating value in the state's local comprehensive needs assessment approach.**
- ***Considering:*** **Establishing tiers of CTE programs based on workforce demands at area CTE centers.**

Indiana

CTE FUNDING AT A GLANCE: INDIANA

$445[23] average supplemental funding for CTE per high school student[24]

Funding for Value in CTE

- **$120 million state funding for student CTE enrollment based on value of courses completed**
- **$5 million state funding for performance incentives**

Other Funding Sources and Amounts

- **$26.9 million in federal Perkins funding[25] (65 percent secondary, 35 percent postsecondary)**
- **0 percent set aside for Perkins Reserve**

Indiana exemplifies how a state can differentiate funding based on the value of each CTE course, as well as through performance incentives. Since implementing this funding structure, Indiana has continued to iterate on their course value definitions and processes to increase the return on investment of high-value CTE courses.

Course Completion & Course Value

Indiana predominantly funds CTE by course enrollment in comprehensive high schools. It provides a tiered supplemental amount for CTE courses based on the wage and demand for occupations most closely associated with skills and competencies learned by students in the CTE course. Employers, industry experts, teachers, administrators and public officials from the Indiana Department of Workforce Development and the Indiana Department of Education worked together to determine the relevant occupations that were associated with each CTE course to ultimately determine the funding value for the course (based on wage and demand data associated with each occupation). This approach is intended to encourage successful student completion of "high value" courses, ultimately leading students to careers in Indiana's most promising industries.

Altogether, state supplements for CTE provide $120 million in funding. On average, this supplement is 45 percent higher than for a non-CTE course.[26] For students who travel to another school for CTE, the state provides $150 in addition to the course-specific supplement.[27]

Indiana CTE Course Funding Values	Supplement Per Credit Hour or Student	Supplement Per Semester Course[28]
Advanced – High Value	$680	$340
Advanced – Moderate Value	$480	$200
Advanced – Less than Moderate Value	$200	$100
Introductory	$300	$150
Foundational	$150	$75
Work-Based Learning*	$150	$75
Area Participation	$150	$75

*Includes work-based learning, co-op and apprenticeship experiences

CTE Performance Incentives and Grants

Indiana also provides $5 million in performance incentives based on the percentage of each district's students who (1) concentrate in CTE[29], (2) earn postsecondary dual credits and/or (3) earn industry certifications. This performance incentive approach rewards districts that helps students demonstrate mastery and accelerate through their programs of study.

Indiana provides state funding for CTE based on the value of, and student performance in, CTE courses. However, there are not any requirements on local uses of Perkins funding beyond those required in the federal legislation. Indiana has not chosen to set aside Perkins Reserve funds in the past.

HOW IS INDIANA FUNDING CTE FOR VALUE?

- **Determines each course's value using a definition that includes the wage and demand of the occupations aligned with the course.**
- **Rewards desired student outcomes through performance incentives.**

Funding for Value: Lessons Learned

Indiana has learned the following lessons from its process of determining the value of CTE courses:

- Funding for the value of program outcomes alone does not consider that CTE courses vary widely in the program implementation costs—especially in terms of equipment and supplies. If a low-cost course is funded equal to a high-cost course because they provide students with similar workforce advantages, districts have a strong incentive to increase student enrollment in the lower-cost course. This may require distinguishing between advanced courses or factoring in course cost.[30]
- Indiana has recognized the importance of an appeals process in which a district can provide regional labor market data to justify offering a CTE program that aligns with local economic demand.
- Indiana is considering further enhancements to their system of funding CTE for value. One possibility is to recognize student persistence through high-value career pathways. Another is recognizing specific schools offering effective programs of study through performance incentives. Indiana is also examining industry-recognized credentials to verify that employers really value them and then determining whether there are gaps in the availability of courses leading up to these credentials.

North Carolina

CTE FUNDING AT A GLANCE: NORTH CAROLINA

$1,117 average supplemental funding for CTE per high school student[31]

State Funds

- **$489 million for CTE teachers and programs, including categorical CTE support and funds to offset student industry certification exam fees**
- **$261 average CTE supplement (66 percent compared with non-CTE courses)**
- **$2 million funding for teacher bonuses based on industry certification attainment[32]**
- **$1.4 million for CTE program expansion (competitive grants through the Education and Workforce Innovation Commission)**

Other Funding Sources and Amounts

- **$40.3 million in federal Perkins funding (66 percent secondary, 34 percent postsecondary)**
- **6 percent Perkins Reserve set-aside[33] for secondary/postsecondary partnerships**

North Carolina offers an example of how states invest in CTE programs by providing funding to support specific costs and teachers. North Carolina also shows how states can align their state and federal funding through a combined local approval process.

Teachers

North Carolina funds CTE by paying for the cost of CTE teachers, regardless of the value of the course or program being offered. This model projects the number of CTE teachers each district will generate based on the number of students in grades 8-12 in each district, not actual CTE enrollment. Each district is allocated a minimum number of five CTE teachers, and position counts for smaller districts are rounded up.[34]

The specific amount of funding provided (through a reimbursement process) is based on the experience and education of each CTE teacher employed.[35] As a result, districts with more experienced teachers get more funding when enrollment remains the same. This approach leads to a high variation in state CTE funding per student by district,[36] and does not take into account the value of the CTE programs offered by the funded teachers.

Grants and Incentives

North Carolina provides additional funding for industry certifications. Districts receive funding to pay for student certification exam fees, and teachers whose students earn approved industry certifications receive up to $3,500 bonuses. While the funds to offset certification exam fees are intended to reduce financial barriers for students, the teacher bonuses reflect targeted funding that rewards attainment of North Carolina's desired student outcomes.

Additionally, North Carolina sets aside six percent for competitive Perkins Reserve grants, which are awarded to secondary/postsecondary partnerships intended to remove barriers to student completion of career pathways. The state is considering using Perkins V reserve funds to create a work-based learning incentive program.[37]

Combined Review and Approval

North Carolina uses a consolidated local CTE application review process to encourage districts to offer CTE programs that are aligned with industry demand. Districts annually submit an application that covers both federal and state funding and must be approved by the Department of Public Instruction. The state has tight restrictions on the ability of districts to spend earmarked state CTE funds elsewhere. As a result, nearly all CTE funds provided to districts are actually spent on CTE.[38] The state is updating its district application and review process in alignment with Perkins V. The state also plans to use the local comprehensive needs assessment requirement to encourage districts to focus on high-value careers.

HOW IS NORTH CAROLINA FUNDING CTE FOR VALUE?

- **Offers CTE program expansion grants and secondary/postsecondary partnership Perkins Reserve grants.**
- **Provides teacher bonuses for student industry certification attainment.**
- ***Considering:* Using local comprehensive needs assessment in Perkins V to drive high-value programs.**
- ***Considering:* Establishing incentives for work-based learning experiences.**

Ohio

CTE FUNDING AT A GLANCE: OHIO

$374 average supplemental funding for CTE per high school student[39]

- **$139 million state funding based on CTE course enrollment**
- **$254 for most courses, +51 percent more than non-CTE course[40]**
- **$7 million supplemental CTE funding to districts**
- **$9 million state funds to regional "lead" districts**
- **$1 million to reimburse districts for industry credential exam fees for economically disadvantaged students**

Other Funding Sources and Amounts

- **$43.8 million in federal Perkins funding[41] (87 percent secondary, 13 percent postsecondary)**
- **10 percent set aside for Perkins Reserve to support Adult Education**
- **$6 million ESSA Title I competitive grants (Expanding Opportunities for Each Child) to expand CTE**

Ohio exemplifies how states fund CTE based on the demand and perceived cost of each career cluster *and* encourage collaboration through regional lead CTE districts. Ohio also provides an example of how a state can use funding, program approval and reporting to drive quality in CTE.

Tiered Funding by Career Cluster

Ohio funds CTE largely by course through a full-time equivalent student (FTE) calculation. The state provides a tiered supplemental amount based on the career cluster or content area with which the course is associated. All CTE courses within each career cluster are funded equally.[42]

Ohio CTE Funding	Amount Per Course
Category 1: Agricultural & Environmental Systems, Construction Technologies, Engineering & Science Technologies, Finance, Health Science, Information Technology, Manufacturing Technology	**$256**
Category 2: Business Administration, Hospitality & Tourism, Human Services, Law & Public Safety, Transportation Systems, Arts & Communications	**$251**
Category 3: Career-Based Intervention Programs	**$100**
Category 4: Education and Training, Marketing, Public Administration, Career Development, Academics	**$79**
Category 5: Family and Consumer Science	**$59**

The funding category for each career cluster is determined by the state legislature as part of the budget bill approved every other year. The legislature has loosely considered the cost of offering courses in a career cluster and industry demand for jobs in the career cluster but, historically, has not considered potential wages in aligned careers.

Cosmetology, for example, is part of the human services career cluster, and receives the Category 2 funding amount, in large part because of the cost of implementing the program rather than labor market potential for students. The legislature has adjusted the supplement amount for each category but not moved career clusters from one category to another to reflect changing labor markets.[43] Additionally, there is a negligible difference in the funding amounts between Categories 1 and 2, which include 13 of the state's 16 career clusters.

The strengths of this approach include Ohio's ability to adjust the criteria and funding amounts for each category on a regular basis. The limitations of this approach rest on the state's ability to clearly identify and align criteria for high-value CTE programs with meaningful differences in CTE funding amounts. Additionally, determining the value of an entire career cluster may mask variations in value of programs of study within career clusters (e.g., a state may value an interior design program differently than a commercial construction program based on labor market demand and potential wages, even though both are included in the architecture and construction career cluster).

Additional CTE Funding

Ohio also provides additional CTE funds to districts, as well as "lead" districts that provide primary CTE leadership and services for a consortium of districts. Ohio also leverages ESSA Title I funds to support a competitive *Expanding Opportunities for Each Child* grant program, which helps districts expand their CTE offerings.

Ohio provides districts with funds to offset the cost of industry certification exam fees for low-income students. This $1 million investment is notable when considering that industry certification attainment is required for one of Ohio's high school graduation pathways. The amount provided for certification exam fees is not determined by the value of the aligned program of study or certification.

CTE Program Review and Reporting

Ohio leverages its program approval, accountability and reporting systems to share progress toward desired student outcomes. Each local CTE program is reviewed for approval at least every five years. Additionally, CTE student outcomes are included on the state's A-F report cards. While these approaches do not directly impact Ohio's funding structure, this alignment of funding and reporting structures is intended to help ensure the quality of Ohio's CTE programs.

HOW IS OHIO FUNDING FOR VALUE?

- **Offers competitive grants to expand CTE.**
- **Provides limited distinctions between the cost and demand (but not value) of career clusters.**
- **Includes CTE performance indicators, including student outcomes, on school and district report cards.**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What's Next?

This playbook is the fourth in our five-part CTE playbook series that explores strategies and processes that states can engage in to improve their Career and Technical Education programs. Looking ahead, Excel*in*Ed will explore ways policymakers can ensure CTE programs are vertically aligned to postsecondary credential and advanced training opportunities.

Excel*in*Ed looks forward to working with states as they navigate this vital process to improve their CTE programs and provide students opportunities for lifelong advancement and success.

For more resources and the complete CTE Playbook series, visit ExcelinEd.org/CTE-Playbook-Series.

Endnotes

1 This section reflects Excel*in*Ed research on specific states and consults these multi-state sources: U.S. Department of Education, *State Strategies for Financing Career and Technical Education* (2014); EdBuild, *Career and Technical Education Funding*; Education Commission of the States, *State Information Request CTE Funding* (2017).

2 States can use federal funding from the Workforce Innovation and Opportunity Act (WIOA) and Title I and Title IV of the Every Student Succeeds Act (ESSA). States have some discretion on how much of their WIOA and ESSA funds to allocate to CTE. States have the option to submit a combined state plan that covers both WIOA and Perkins V.

3 See Excel*in*Ed's *Perkins V Brief* for more information.

4 Note: Increasing the Perkins Reserve set-aside percentage reduces the amount that flows to districts and local postsecondary institutions through Perkins basic formula funds, but it increases the extent to which Perkins funding can be leveraged for value.

5 See Excel*in*Ed's *Industry Certifications Policy Brief*.

6 See Florida's *CAPE Industry Certification Funding List*.

7 See Florida's law on funding for industry certifications.

8 Note: This is a hypothetical value system not based on any state and not reflective of any state's labor market data.

9 Even 10 or 15 percent of funding is enough to incentivize higher-performance. For more on performance funding, see Excel*in*Ed's, *Issue Brief: Performance Funding* (2018).

10 For some CTE courses, the most realistic way to get qualified staff may be to recruit people who are currently working in that field. This may require changes to licensure rules so mid-career professionals qualify to teach.

11 For more, see Excel*in*Ed's *Course Access Incentive Policy Brief*.

12 States must contribute the larger of 5 percent of the Perkins allocation or $250,000, which typically support state administration and leadership activities.

13 This is state and federal funding for FY 2018; high school enrollment comes from the National Center for Educational Statistics (fall 2017 estimate).

14 The "career focus" courses can include non-CTE courses if they are in a student's career development portfolio.

15 $271 of this supplement is a pass-through between districts and the CTE centers; the remainder goes directly to the CTE centers, and the amount per course has decreased as the number of students in CTE centers has increased. The state figures are per full-time equivalent student, which is then divided by 12 for a per-course amount.

16 High school course funding is based on base funding of $6,713 per student divided by 12 courses.

17 Districts must provide labor market data and letters of support from area businesses.

18 See PCRN for FY 2018.

19 See Bureau of Legislative Research, *Career and Technical Education in Arkansas's K-12 Schools* (2016).

20 Interview with Charisse Childers, Maria Claudio, Stephanie Isaacs, Angela Kremers and Cody Waits, Arkansas Department of Career Education (Nov. 19, 2018).

21 The analysis did not consider wages.

22 Also, a study commissioned by the state found a significant number of concentrators in a CTE program of study with few anticipated job openings. Shaun Dougherty, *The Condition of Participation, Outcomes, Expenditures and Funding of Secondary Area Centers in Arkansas* (2017).

23 This is state and federal funding for FY 2018, in addition to ADM. Indiana estimates this will be $468 for FY 2019 (Nicholas Goodwin email, Jan. 13, 2019).

24 High school enrollment comes from the National Center for Educational Statistics. (fall 2017 estimate).

25 See PCRN state profile for FY 2018.

26 High school course funding is based on a foundation grant of $5,352 per student divided by 12 courses. The 45-percent figure reflects the $200 per semester course supplement for a moderate-value course..

27 Advanced courses are funded based on credit hours, but only for a student's fall semester. For a high-value CTE course that is two credits and year-long, a district receives $680 for the one credit in the Fall. This equals $340 per semester. See *Indiana funding memo*.

28 Estimates for semester-long CTE course supplements are used in this analysis to provide consistent comparisons across states. Indiana uses the supplement per credit-hour amounts to calculate funding allocations.

29 A concentrator is defined as a student who earns six credits in a CTE pathway.

30 Interview with Elizabeth Meguschar and Nicholas Goodwin, Indiana Department of Workforce Development, and Stefany Deckard, Indiana Department of Education (Nov. 15, 2018).

31 This is state and federal funding for 2018; high school enrollment comes from the National Center for Educational Statistics (fall 2017 estimate).

32 North Carolina Department of Public Instruction, *CTE Industry Certifications and Credentials Teacher Bonus Program* (2018)

33 See PCRN state profile for FY18.

34 Positions are allocated based on months of employment, i.e., 10 months equal one, full-time teacher.

35 High school course funding is based on $4,782 per high school student divided by 12 courses. The CTE supplement is based on average teacher salary of $47,034 divided by 15 students and 12 courses. See North Carolina Department of Public Instruction, *Highlights of the North Carolina Public School Budget* (2018)

36 See Program Evaluation Division, North Carolina General Assembly, *Allotment-Specific and System-Level Issues Adversely Affect North Carolina's Distribution of K-12 Resources* (2010) at page 98.

37 Interview with John Kirkman, North Carolina Department of Public Instruction (Nov. 8, 2018).

38 Interview with John Kirkman, North Carolina Department of Public Instruction (Nov. 8, 2018).

39 This is state and federal funding for FY 2018; high school enrollment comes from the National Center for Educational Statistics (fall 2017 estimate).

40 Funding for a non-CTE high school course is based on $6,010 per student divided by 12 courses. The percent of the CTE course supplement uses funding for category 1 and 2 CTE courses, reflecting only the amount the state provides after considering local district wealth.

41 See PCRN state profile for FY18.

42 The per-course figures are from the state amounts, which are for full-time equivalent students, divided by 12 one-hour, semester-long courses during a school year. Only included is the state portion, which varies depending on the wealth of each district. In contrast to states like Texas, there is no requirement that districts fund what the state does not provide. See Ohio Department of Education, *FY18 School Finance Payment Report (SFPR) Line by Line Explanation* (2017); Ohio Department of Education, *FY18 Detailed School Funding Report for City, Exempted Village and Local School Districts* (accessed Jan. 23, 2019); Ohio Department of Education; *FY18 Detailed School Funding Report for Joint Vocational School Districts* (accessed Jan. 23, 2019). The summary report provides the FTEs for each CTE category and also total state funding by CTE category; these figures are used to determine how much the state is providing per CTE course by category.

43 Interview with Emily Passias, Ohio Department of Education (Nov. 21, 2018).