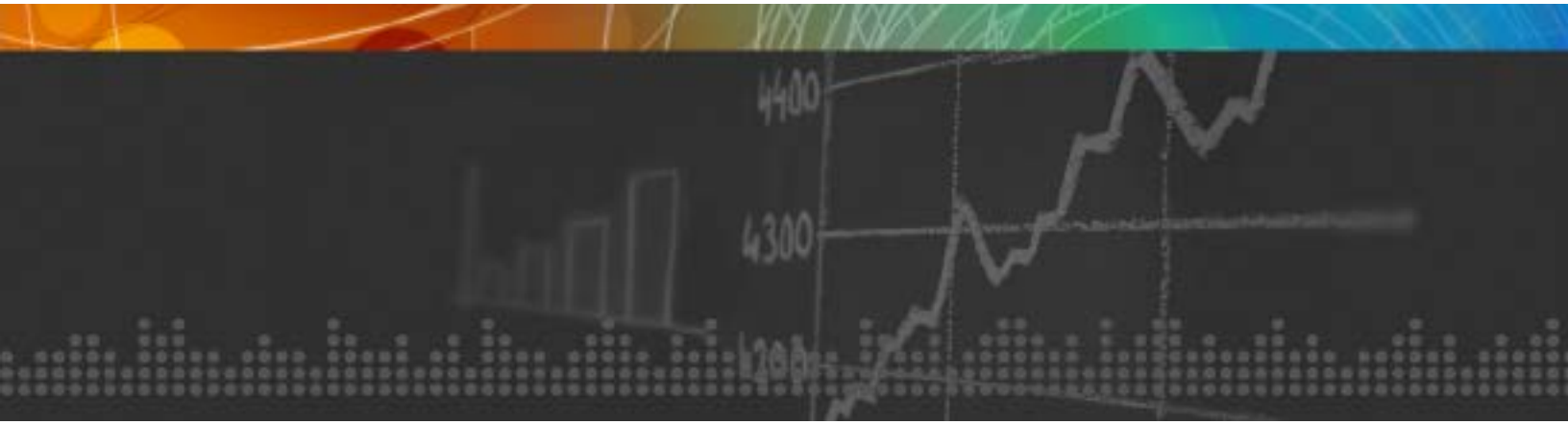
Evaluation of the Implementation of the *Carl D. Perkins Career and Technical Education Act of 2006*

Finance, Accountability, and Programs of Study



October 2014

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With contributions from Morgan Matthews, Vera Bersudskaya, Kara Smith, and Sharika Bhattacharya

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List of Abbreviations

CAR	Consolidated Annual Report
CTE	Career and technical education
Department	U.S. Department of Education
ESEA	*Elementary and Secondary Education Act of 2002* (also called the *No Child Left Behind Act*)
GED	General Educational Development (tests and certificate)
IHE	Institution of higher education
LEA	Local education agency
POS	Programs of study
NACTE	National Assessment of Career and Technical Education
NAVE	National Assessment of Vocational Education 2004
Perkins I	*Carl D. Perkins Vocational and Technical Education Act of 1984*
Perkins II	*Carl D. Perkins Vocational and Applied Technology Education Act of 1990*
Perkins III	*Carl D. Perkins Vocational and Applied Technology Education Act of 1998*
Perkins IV	*Carl D. Perkins Career and Technical Education Act of 2006*
SSN	Social Security number

Executive Summary

The *Carl D. Perkins Career and Technical Education Act of 2006* (*Perkins IV*), signed into law on August 12, 2006, lays out the statutory requirements governing federal support for career and technical education (CTE) services offered within secondary schools and postsecondary institutions throughout the United States. Aimed at more fully developing the academic and technical skills of students enrolling in CTE programs, *Perkins IV* stipulates the required and permissible uses of federal funds by states and local subgrantees and the administrative and compliance reporting expectations for states and local subgrantees. Since its inception in 1984, *Perkins* has undergone three reauthorizations; the current legislation covers a six-year period spanning fiscal years (FY) 2008–2013.

Congress has used successive reauthorizations of *Perkins* to support state and local innovation, advance programmatic initiatives to improve services, and hold grantees accountable for the resources they receive. One of the most noteworthy changes in *Perkins IV* was a new requirement that all local subgrantees offer one or more programs of study (POS) — career pathways that help students make the transition from secondary to postsecondary education while pursuing an industry-recognized credential, postsecondary certificate, or degree. *Perkins IV* also introduced new accountability requirements, including adding new indicators and reporting requirements aligned with the *Elementary and Secondary Education Act* and extending accountability and performance reporting requirements to local subgrantees.

The purpose of this study is to examine how state grantees and local subgrantees have implemented *Perkins IV* provisions related to finance systems, accountability, and POS, based on surveys and interviews with state and local administrators as well as analysis of extant data. Data collection was conducted in 2009 through 2010, and findings in this report relate to the 2008–09 and 2009–10 program years.

Research Questions and Study Methodology

This study presents information on the implementation of *Perkins IV* provisions by state grantees and local subgrantees, including local education agencies (LEAs) and institutions of higher education (IHEs), in regards to the research questions listed below.

Finance Systems

- How have federal appropriations for *Perkins* changed over time?
- How are *Perkins IV* funds distributed among state-eligible agencies?
- How are eligible agencies using *Perkins IV* resources to support state operations and local program improvement efforts?
- How are *Perkins IV* resources allocated among LEAs and IHEs?

Accountability

- How are states and local subgrantees implementing *Perkins IV* accountability requirements?
- What challenges are states and local subgrantees facing, and how are these challenges being resolved?
- Are states and local subgrantees setting and meeting performance targets, and what is happening when targets are not met?
- How are data used to promote program improvement and student success?

Programs of Study

- How are states and local subgrantees developing and implementing POS?
- What challenges are states and local subgrantees facing in developing and implementing POS?
- What is the scope of student participation in POS?
- How are states and local subgrantees addressing the core elements defined by federal legislation?

The study used a mixed methods research design that included quantitative and qualitative data from a variety of sources at the state and local levels. Web-based surveys were administered in fall 2009 to state directors responsible for overseeing *Perkins* implementation at the secondary and postsecondary levels in the 50 states and the District of Columbia. Surveys were also administered to local program directors in a stratified random sample of 1,993 LEAs, 48 independent area CTE centers, and 1,006 IHEs (in this report, survey data for area CTE centers were combined with LEA data due to the small sample size for the CTE centers). State and local surveys asked primarily about program implementation during the

2008–09 program year. Fiscal data on state reservations and suballocations for the 2009–10 program year were obtained from 50 secondary and 49 postsecondary directors. Case studies were conducted in six states and 18 local communities, including site visits and in-depth interviews. An expert panel was convened to review state POS materials and guidance. The research team also compiled extant data and administrative reports maintained by federal and state agencies and national stakeholder groups.

It is important to note that much of the data in this report is for years when grantees were still in the early stages of implementing *Perkins IV* provisions.

Key Findings

Perkins legislation has gradually evolved to keep pace with changing educational conditions. While Congress retained many of the key provisions and statutory requirements of preceding legislation in *Perkins IV*, it introduced several new provisions. These modifications have, over time, expanded the scope of the legislation, tightened administrative and compliance expectations, and introduced new policy initiatives intended to improve the effectiveness and reach of CTE instruction. Key findings identified in this study are discussed below.

Finance Systems

Fiscal analyses addressed how *Perkins* appropriations have changed over time and how funds are used at the state level and allocated to local secondary and postsecondary subgrantees. With few exceptions, study analyses reproduced findings from the 2004 *National Assessment of Vocational Education Final Report to Congress*, which provided information on the implementation of the *Carl D. Perkins Vocational and Applied Technology Education Act of 1998* (*Perkins III*). This result is not surprising given that resource distribution formulas in *Perkins IV* parallel those in *Perkins III*. One notable difference relates to Tech Prep: *Perkins IV* offers states the option of merging their Tech Prep funding into their basic grant, providing greater flexibility in how federal resources may be spent.

1. *When adjusted for inflation, federal* Perkins *allotments to states have declined over the lifetime of the legislation.*

With each reauthorization, Congress has escalated its investment in CTE, although these increases have not kept pace with inflation. For example, overall federal appropriations increased by 13 percent between the first years of *Perkins III* and *Perkins IV,* but they declined when adjusted for inflation. In real 2010 dollars, federal appropriations have declined in each reauthorization year, falling from nearly $1.71 billion in FY 1985 to $1.35 billion in FY 2007. This corresponds to a 20 percent decline in federal support for CTE, or a loss of roughly $360 million in purchasing power over the lifetime of *Perkins*. In contrast, the purchasing

power of the appropriations for the *Elementary and Secondary Education Act* (*ESEA*) Title I grants to states more than doubled during the same period.

2. *States invest a relatively greater proportion of funding in CTE at the secondary education level.*

Perkins IV provides states with considerable discretion in how they distribute their Title I funds across secondary and postsecondary education. On average, states allocated nearly two-thirds (64 percent) of their Title I funds to the secondary level in FY 2010, a proportion that has remained relatively constant since FY 1992. The division of funds between education levels typically is negotiated by state education agency representatives to support state education goals. A majority of state directors indicated that they did not anticipate any changes in the amounts allocated to the secondary and postsecondary education levels for the remainder of *Perkins IV*.

3. *The number of grants to LEAs and IHEs has remained relatively stable across* Perkins III *and* IV*, as has the targeting of resources to LEAs serving high-need populations and unique areas.*

Nationally, the number of grants to LEAs and IHEs were substantially unchanged between *Perkins III* and *IV*. Among states for which trend data on LEA grants were available, 4,388 grants were awarded to individual LEAs and consortia in FY 2009, compared to 4,424 grants in FY 2001. States for which IHE trend data are available reported a slight decline, awarding 971 grants in FY 2009, compared to 1,065 grants in FY 2001. *Perkins IV* also continues to target resources to LEAs serving high-poverty, rural, and urban areas. In particular, high-poverty LEAs received $53 per student in both 2001 and 2010, while the amount per student in low-poverty LEAs fell from $41 to $25. On a per student basis, *Perkins IV* funds disproportionately benefited rural and urban LEAs in 2010. These LEAs received an average of $53 and $45 per secondary pupil, respectively. By contrast, the funding per pupil in suburban LEAs was $32.

4. *States concentrate their administrative and leadership funds on providing technical assistance and professional development to local subgrantees.*

States may set-aside a portion of their *Perkins IV* grant to conduct state-level activities. Roughly half of states (48 percent) in FY 2009 reserved the maximum amount available for state grant administration (i.e., up to 5 percent of their state allotment). States also may reserve up to 10 percent of their federal funds for state leadership activities, such as assessing CTE program performance and providing technical assistance to grant recipients. The largest percentage of state leadership funds (about 20 percent of earmarked resources) were used to offer technical assistance to LEAs and IHEs, followed by the delivery of professional development activities (roughly 15 percent) and efforts to assess the performance of CTE programs (roughly 10 percent). State directors reported that they placed the least emphasis on

serving individuals in state institutions, such as state correctional facilities and institutions serving disabled students (about 5 percent each).

5. *States are making use of the increased grant flexibility to merge their Title II (Tech Prep) funding into their Title I (basic grant) allocation.*

Perkins IV permits states to merge their Tech Prep funding into their basic grant allocation. As of FY 2010, 27 states had taken advantage of this option. State directors cited the desire to incorporate Tech Prep into all CTE programs and the perceived similarity between Tech Prep and POS *National Assessment of Vocational Education Final Report to Congress* as the most common reasons for merging. Both secondary and postsecondary state directors also reported wishing to avoid the data burden associated with collecting new Tech Prep measures. As a result of states' consolidation of their Title I and II allocations, the number of grants to Tech Prep consortia declined by about half (49 percent) between 2001 and 2010, falling from 738 to 378.

Accountability

While the accountability framework in *Perkins IV* retains flexibility for states—by allowing them to use recommended indicators or existing state performance measures—the legislation expands and refines performance requirements for states and local subgrantees. In a change from *Perkins III*, *Perkins IV* identifies separate core indicators for CTE students at the secondary and postsecondary education levels and introduces nine Tech Prep measures. The legislation also asks that states align two secondary indicators with accountability measures contained in *ESEA* and establishes new expectations for collecting and reporting valid and reliable data. Finally, it extends requirements for continuous improvement to the local level by requiring subgrantees to negotiate performance targets for each indicator with their state agency; those falling short of their performance goals face sanctions that may include the loss of some or all of their grant funding.

1. *Most states and local subgrantees are working to improve the quality of their* Perkins IV *accountability systems.*

States and local subgrantees continue to refine the systems they use to collect and report data. Nearly all states (49 secondary, 44 postsecondary) have adopted more than one strategy to ensure quality control and promote the validity and reliability of locally reported data. Common strategies included providing technical assistance or guidance on collecting and editing data and performing electronic error checking and desk audits of data submitted by local subgrantees. The Department is supporting these state efforts by offering multiple opportunities for technical assistance and by providing nonregulatory guidance to support valid, reliable, and comparable reporting across states. States and local subgrantees also continued to

refine data collecting and reporting through initiatives such as introducing common student identifiers across education levels and connecting *Perkins IV* data systems with other education data systems.

2. Perkins IV *and the Department's nonregulatory guidance offer states flexibility in how they interpret accountability requirements, contributing to variation in data collection and reporting practices across states.*

The changes to the *Perkins IV* accountability requirements and the introduction of the Department's nonregulatory guidance have refined expectations for data collection and reporting. Both the legislation and the guidance, however, offer states the flexibility to determine what indicators they will use and how they will define populations and performance measures. This has resulted in differing state interpretations of accountability requirements. While many states at least consulted the nonregulatory guidance for one or more population and measure definitions, only nine states used the nonregulatory guidance verbatim when defining all of their secondary populations and performance measures, and only five states did the same for every postsecondary population and performance measure. The flexibility inherent in the legislation and the nonregulatory guidance may reduce the comparability of data across states and pose challenges to the Department in aggregating data at the national level.

3. *Capacity and infrastructure influence how states and local subgrantees approach data collection and reporting.*

Issues such as the capacity of student information systems, access to necessary data, timing of data collection and reporting, cost, and legal interpretations of federal privacy laws continue to affect the ability of some states and local subgrantees to implement accountability requirements. The postsecondary placement indicator is one example: while providers are required to report whether students are employed, in the military, or enrolled in an apprenticeship program after leaving their institution, a few states did not have the legal authority to access state employment databases to obtain students' labor market outcomes. More than 30 postsecondary state directors indicated the cost of matching student records with other state or national databases had at least some impact on their ability to report results for this indicator. These and other differences contribute to variations in how states report *Perkins IV* performance results to the Department and may reduce data comparability across states.

4. *States have implemented performance requirements for locals, although the effect of these requirements has yet to be fully measured.*

Most states had existing state policies requiring subgrantees that failed to meet targets on one or more core indicators to implement a local improvement plan (47 secondary, 38 post-

secondary).[1] Some states also had policies for restricting or eliminating local subgrantees' flexibility in expending *Perkins* funds (30 secondary, 22 postsecondary), while very few had policies to reduce or eliminate local subgrantee funding (11 secondary, 9 postsecondary). Most local directors were aware of the potential new performance requirements, and 65 percent of LEA directors and 78 percent of IHE directors reported that their state would require a program improvement plan if a local subgrantee failed to meet one or more targets. About half of local directors (48 percent of LEAs and 52 percent of IHEs) reported that negotiating local targets would have no impact on CTE administration and implementation, and more than one-quarter thought it would have a somewhat to very positive impact. Among LEAs and IHEs that negotiated performance targets with their states, most experienced little to no difficulty in the negotiation process for each indicator. A large proportion of local directors (61 percent of LEAs and 67 percent of IHEs) also reported that introducing sanctions would have no impact on local CTE administration and implementation, although very few (15 percent of LEA directors and 11 percent of IHE directors) said it would have a somewhat to very positive impact.[2]

5. *States and subgrantees use data to identify programs in need of improvement and provide technical assistance.*

States, LEAs, and IHEs have made efforts to use data for continuous improvement. More than half of states shared statewide averages with local subgrantees (40 secondary, 29 postsecondary), and many shared individual performance results with local subgrantees (35 secondary, 30 postsecondary). The majority of states used *Perkins IV* accountability data to identify programs in need of improvement. While most states also used *Perkins IV* data to provide targeted technical assistance (45 secondary, 40 postsecondary), only about one-third of local subgrantees thought their state had a policy of providing professional development to staff of underperforming programs. Nearly half of local subgrantees used *Perkins* data quite a bit or to a great extent to identify programs that need improvement (49 percent of LEAs and 47 percent of IHEs) or to make program funding decisions (49 percent of LEAs and 48 percent of IHEs).

Programs of Study

One of the most substantive changes introduced in *Perkins IV* is the requirement that all states offer POS that incorporate academic, career, and technical content to prepare students

[1] At the time of this study, not all states had enough information about their local providers' 2008–09 performance to determine how many providers were required to submit a plan for 2009–10.
[2] The surveys did not provide further insight into local subgrantees' reasons for reporting that sanctions would have no effect or a positive effect. It is possible, however, that the timing of the survey played a part. Local directors responded to the survey in late 2009, at the same time they were submitting the first full year of *Perkins IV* data. They had not yet had extensive experience with new state policies regarding sanctions for failing to meet negotiated targets.

to make successful transitions to postsecondary education and the workplace. All LEAs and IHEs must offer one or more POS that

- Incorporate secondary and postsecondary education elements;
- Include coherent, rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, nonduplicative progression of courses that align secondary education with postsecondary education to adequately prepare students for success in postsecondary education;
- Offer the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other activities to acquire postsecondary education credits; and
- Lead to an industry-recognized credential or certificate at the postsecondary level or an associate's or bachelor's degree.

In January 2010, the Department issued a *POS Design Framework* (Framework) that describes 10 components considered essential to creating and implementing high-quality comprehensive POS. Released in the third fiscal year of the legislation, findings within this report assess the extent to which POS created by state agencies and local subgrantees address the 10 Framework components, as well as how states are monitoring and evaluating POS.

1. *States and local subgrantees are developing and implementing POS, although the characteristics and quality of these programs vary.*

All secondary and postsecondary subgrantees reported that they were offering one or more POS, although study data revealed considerable variation in their structure and quality across states and, in some instances, among local subgrantees within states. This variability is a result of the flexibility that states had in implementing statutory provisions: most state directors reported that their state neither created legislation nor developed administrative guidance to support LEAs and IHEs in developing POS. A substantial number of state directors (29 secondary, 20 postsecondary) reported that state approval is required for all POS, which provides some assurance that a minimum level of program quality is achieved among local subgrantees. Both secondary and postsecondary state directors reported that POS developed locally with state guidance were the most common type of state-approved POS.

2. *States and local subgrantees face substantial challenges that complicate POS development and implementation.*

Most state and local administrators described good faith efforts to ensure that each *Perkins* subgrantee offered one or more POS. In working to develop these programs, state and local

directors most often cited a lack of funds, staff, and time as barriers to POS development. Both secondary and postsecondary state directors also cited a lack of understanding among local academic instructors about the purposes of POS, and they indicated that academic and CTE instructors often lacked sufficient time to plan programs and integrate curricula. Local LEA and IHE directors also reported that shortages of local CTE staff and lack of technical expertise were barriers to local POS development, though to a lesser extent than other factors. Finally, staff in area CTE centers reported difficulty in establishing meaningful POS sequences that included academic coursework taken by students in the 9th and 10th grades at their sending schools.

3. *Most states and local subgrantees are unable to quantify the number of students enrolled in POS or the outcomes that they achieve.*

Perkins IV neither provides a statutory definition of POS students nor requires that state agencies or local subgrantees report the number of students participating in POS or the outcomes of their involvement. As such, relatively few state or local *Perkins* subgrantees can provide accurate counts of the scope of student participation in POS or the educational outcomes associated with POS completion. Many states also lack the capacity to track secondary students from high school through completion of a postsecondary credential, even in states and communities that have worked to establish secondary-postsecondary partnerships or opportunities for students to earn postsecondary credit while in high school. In some instances, state directors reported being able to track secondary students into selected in-state institutions (e.g., community colleges), but they were unable to assess student transitions into two- or four-year colleges located beyond state lines.

4. *Secondary and postsecondary administrators and instructors have difficulty coordinating POS development across levels.*

Although LEA and IHE program administrators reported that they cooperated to design POS, case study visits suggested that the formation of effective partnerships between the secondary and postsecondary education levels can be logistically challenging. Some case study respondents noted that teachers and faculty within high schools and colleges were often physically isolated, which reduced their opportunities to collaborate. Other perceived barriers included the amount of time and training needed to support teachers and faculty in aligning secondary and postsecondary curricula, the processes required to develop local articulation agreements, and resistance from some postsecondary faculty, who considered POS primarily a strategy for secondary program delivery.

5. *Secondary students participating in POS often lack opportunities to earn college credit or earn an industry-recognized credential or a postsecondary degree or certificate.*

Perkins IV suggests, but does not require, that POS offer secondary students the opportunity to earn college credit. Although three-quarters of secondary local directors reported that their district had articulation agreements in place with at least one postsecondary institution, only half reported that they offered dual credit opportunities in one or more of their POS. Furthermore, although required by the legislation, fewer than half of LEA directors reported that the POS offered led to an industry-recognized credential or a postsecondary certificate or degree, with many responding that they did not know whether this opportunity existed.

Summary

Perkins IV plays an important role in promoting continuous improvement in the organization and delivery of state and local CTE services. The financial support that *Perkins IV* provides is critical to maintaining state leadership and keeping local programs and equipment up-to-date with the skill demands of a dynamic workplace. Accountability requirements continue to hold states and local subgrantees responsible for achieving results. And the introduction of POS also is promoting alignment and coordination of CTE services across the secondary and postsecondary levels.

Successive reauthorizations have, however, added to the legislation's requirements at a time when many states, LEAs, and IHEs are struggling to maintain CTE programs and staff due to budget cutbacks. This combination of increased requirements and decreased resources has made it difficult for states and local subgrantees to implement *Perkins IV*'s components and monitor program effectiveness. While the Department has worked to improve the validity and reliability of *Perkins IV* accountability data, measures and reporting approaches vary within and across states. This variation may be traced to flexibility inherent in the legislation, the nonregulatory nature of the Department's guidance, and continuing challenges in tracking students across secondary and postsecondary education levels. While POS offer a new framework for organizing the content and delivery of CTE coursework, *Perkins IV* resource distribution formulas are not designed to promote this initiative, and the absence of performance accountability expectations also prevents federal and state policymakers from assessing the potential contribution these programs may offer.

As Congress begins its reauthorization deliberations, careful consideration should be directed to the scope and specificity of the current legislation. While policymakers have historically used reauthorization to improve and redirect the legislation, for example, by adding expectations for POS development, the continued addition of new requirements complicates state and local administration and program management. Statutory flexibility also has, to date, allowed states to respond differently to grant requirements. Congress may wish to use reauthorization to assess the extent to which current legislative provisions and state flexibility to respond contribute to achieving the legislation's intended purposes.

Chapter 1. Introduction

The *Carl D. Perkins Career and Technical Education Act of 2006* (*Perkins IV*) extends a longstanding federal commitment to supporting career and technical education (CTE) services offered within states[1] at the secondary and postsecondary education levels. Signed into law on August 12, 2006, *Perkins IV* originally covered a six-year period encompassing 2008–2013.[2] Aimed at more fully developing the academic and career and technical skills of secondary and postsecondary students enrolling in CTE programs, the legislation details the required and permissible uses of federal funds and the administrative and compliance reporting expectations of all state agency and local secondary and postsecondary grant recipients.

This study examines the implementation of *Perkins IV* provisions related to three main areas:

1. *Finance Systems*—how state financing of CTE occurs and is changing over time;
2. *Accountability*—how, and to what extent, performance reporting requirements are promoting accountability and program improvement; and
3. *Programs of Study (POS)*—how states and local subgrantees are integrating challenging academic standards and rigorous technical content into sequenced, nonduplicative coursework aligned across secondary and postsecondary education levels.

Historical Context

Federal support for CTE has its origins in the *Morrill Act of 1862*, which required states to apply revenue from the sale of federally donated land to establish at least one college dedicated to instruction in agriculture and the mechanical arts. Following its reauthorization in 1890, Congress adopted the landmark *Smith-Hughes National Vocational Education Act of 1917*, the first congressional legislation to earmark funds for career studies and, in particular, agricultural education. Since then, Congress has continued to demonstrate its support for CTE

[1] *Perkins IV* defines a "state" as "each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and each outlying area" (Sec. 3). The term "state" as it is used in this report includes the 50 states of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and the outlying areas of the United States Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau.
[2] Congress extended the legislation to cover the 2014–15 program year.

by directing federal resources to CTE programs and students through successive legislative efforts.

Early Support

Congress laid the foundation for contemporary CTE fiscal and accountability policies at the dawn of the Great Society era with its authorization of the *Vocational Education Act of 1963*. The legislation introduced a federal-to-state allotment formula that allocated funds based on the number of students in different age categories within states, a variant of which is still employed in *Perkins IV*. Congress also used the 1963 legislation to abolish categorical funding for specific CTE program areas, such as agriculture, giving states increased flexibility in spending federal funds. To hold states accountable, the legislation mandated that states conduct follow-up studies to assess the extent to which graduates entered training-related employment, although states were not required to share these results with the Department.

The *Vocational Education Amendments of 1968* expanded expectations for state expenditures of federal funds, introducing a state-to-local distribution formula that earmarked funds for disadvantaged populations, out-of-school individuals seeking employment, and the handicapped. The 1968 legislation also called for state advisory councils to conduct evaluations of program activities, again without imposing any reporting requirements. The legislation preceding the *Perkins* era, the *Educational Amendments of 1976,* augmented federal investment in CTE while maintaining existing resource distribution formulas. The 1976 legislation also required that states evaluate whether those who had completed or left programs found training-related employment and whether employers were satisfied with the preparation of these individuals.

The Perkins *Era*

Congressional passage of the *Carl D. Perkins Vocational and Technical Education Act of 1984* (*Perkins I*) established the legal precedent upon which more than a quarter of a century of federal CTE policy rests. *Perkins I* included an innovation affecting how state funds were to be expended: specifically, it set aside just over half of its resources for special populations, including the handicapped, the disadvantaged, adults in retraining, single parents and homemakers, and the incarcerated. Remaining resources were directed to program improvement. *Perkins I* also laid the groundwork for a formal accountability framework, requiring states to develop measures to assess the effectiveness of vocational education programs in meeting state labor market needs and in supplying workplace competencies desired by employers.

The *Carl D. Perkins Vocational and Applied Technology Education Act of 1990* (*Perkins II*) introduced a substantive policy shift in federal support for CTE. With respect to finances, *Perkins II* reformulated the state-to-local distribution formula, requiring that three-fourths of funds

be allocated as a basic grant predicated on the number of persons enrolling in eligible institutions. At the secondary level, federal funds were distributed based on the number of youth in participating local agencies, with 70 percent based on the number living in poverty, 20 percent on the number who were handicapped, and 10 percent on the total number enrolled. Postsecondary funds were allocated based on the number of Pell Grant recipients and recipients of assistance from the Bureau of Indian Affairs, the formula that continues to be used today.

Equally noteworthy in *Perkins II* was the fact that it specified a set of performance accountability requirements. The legislation directed states to create measures of learning and competency gains—including those related to basic and advanced academic skills—and to adopt one or more measures of performance related to technical competency attainment; job or work skills enhancement; retention in schooling; or placement into additional training, education, military service, or employment. Although *Perkins II* did not require states to report outcome data on these measures to the Department, it held local recipients responsible for conducting program evaluations and implementing improvement plans if they failed to make substantial progress toward meeting identified standards.

Perkins II also is distinctive for introducing Tech Prep[3] as a demonstration grant program. Tech Prep was first introduced in high schools in the early 1980s as a locally driven improvement strategy that offered a combined secondary and postsecondary program leading to the award of an associate's degree or a certificate. Congress used *Perkins II* to support consortia of secondary and postsecondary agencies in developing and operating Tech Prep programs that, because of their focus on coordinating instruction across education levels, serve as a precursor to the programs of study (POS) framework introduced in the *Perkins IV* legislation.

The *Carl D. Perkins Vocational and Applied Technology Education Act of 1998* (*Perkins III*) formalized the funding and accountability criteria upon which *Perkins IV* is based. Specifically, *Perkins III* increased the percentage of local resources dedicated to the basic grant (from 75 to 85 percent) and introduced a reserve fund to enhance state flexibility in allocating federal CTE funds. *Perkins III* also eliminated previous set-asides for some special populations and for state gender equity coordinators, and it voided requirements that local agencies direct funds to schools and programs with the greatest concentration of special populations.

Perkins III further expanded state accountability requirements, introducing a set of four core performance indicators on which all states were required to report. States failing to achieve performance targets negotiated with the Department faced sanctions, beginning with developing a program improvement plan and extending to the loss of some or all of their federal

[3] "Tech Prep" refers to the content of tech prep programs described in Sec. 3(32) of *Perkins IV*.

allotment. In keeping with provisions introduced in *Perkins II*, *Perkins III* held local subgrantees responsible for making substantial progress in achieving state-established performance levels, with those falling short directed to develop a program improvement plan.

Perkins IV*: Federal CTE Policy Today*

Current federal CTE policy is governed by the provisions of *Perkins IV*. Although *Perkins IV* formally went into effect in the 2007–08 program year,[4] many policies governing state and local accountability and POS implementation were delayed a year to allow states to develop a five-year plan for implementing legislative requirements. During the one-year transition period, state administrators consulted with local subgrantees, educators, students and parents, institutions of higher education, representatives of business and industry, and other stakeholders to identify any changes needed to state policies, programs, or accountability systems, as they began to implement these changes for the 2008–09 program year. States submitted their five-year state plans for *Perkins IV* on April 1, 2008.

Although *Perkins IV* introduces some innovations, consistency with past legislation is an overarching theme. This study focuses on assessing state and local implementation of *Perkins IV* in three key areas, as described below.

Finance systems

Perkins IV continues most of the fiscal policies contained in *Perkins III*. Congress primarily fine-tuned formula operations by, for example, introducing new allotment procedures for years in which new federal funds are appropriated. The most substantive change in fiscal policy introduced in *Perkins IV* relates to Tech Prep: states now can consolidate all or a portion of their Tech Prep allocation with their basic grant. States exercising this option must treat consolidated funds as they would other funds allocated as part of their basic grant. This new provision has increased state flexibility in allocating funds to secondary eligible recipients and postsecondary eligible institutions. [5] For the purposes of this report, the terms LEA and IHE are used to refer to all local subgrantees at the secondary and postsecondary education levels that are eligible recipients of *Perkins IV* funding.

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[4] A program year begins on July 1 and ends on June 30 of the following calendar year. The 2007–08 program year began on July 1, 2007, and ended on June 30, 2008.

[5] *Perkins IV* Sec. 3. Secondary eligible recipients include local education agencies, charter schools operating as a local eligible recipient, an area career and technical school, an educational service agency, or a consortium. A postsecondary eligible institution may include a public or nonprofit private institutions of higher education that offers CTE courses that lead to technical skill proficiency, and industry recognized credential, a certificate, or a degree; and postsecondary subgrantees also include a small proportion of middle schools and adult programs, a local education agency providing education at the postsecondary level, an area career and technical education school providing education at the postsecondary level; a postsecondary institution operated by the Bureau of Indian Affairs or operated by or on behalf of an Indian tribe; an educational service agency; or a consortium.

Accountability

Perkins IV continues to hold state eligible agencies[6] responsible for collecting and reporting performance data but asks for a higher level of data quality. In a break from earlier legislation, federal policymakers crafted a separate set of core indicators for secondary and postsecondary education and introduced new indicators for Tech Prep programs, previously not subject to measurement. Only states that elect to maintain a separate Tech Prep funding allocation are accountable for the new Tech Prep indicators.

The legislation also incorporates two core indicators from the *Elementary and Secondary Education Act of 2002* (*ESEA*) to link CTE student performance to academic performance assessments and high school graduation measures used for all secondary students. Finally, *Perkins IV* extends the expectations for reporting and continuous improvement to the local level, requiring that secondary and postsecondary subgrantees negotiate performance goals for each indicator with the state. Those that fall short of their negotiated targets face progressive sanctions that begin with developing a program improvement plan and may culminate in the loss of some or all of their *Perkins IV* funds.

Programs of study

Perkins IV introduces the requirement that all local recipients of its funds offer one or more POS to link secondary and postsecondary CTE. Programs of study can be defined as a sequenced, nonduplicative progression of courses that intentionally connect high school and postsecondary CTE curricula and lead to an industry-recognized credential or certificate, or an associate's or bachelor's degree. Curriculum and instruction are standards-based and emphasize the linkages between rigorous academic and technical content. Where appropriate, students also can earn college credits while still enrolled in high school. Students completing the secondary component of a POS can transition seamlessly into an articulated postsecondary program without the need for remedial education or duplicating coursework that they completed in high school. Although local subgrantees are required to make POS available, they are neither accountable for student performance in these programs nor asked to collect data on student participation or outcomes.

Research Questions

This study uses a complex research design to gather information on how states, LEAs, and IHEs organize, administer, and deliver CTE services. Study activities call for evaluating three

[6] According to *Perkins IV*, an "eligible agency" is a state board designated or created consistent with state law as the sole state agency responsible for the administration of career and technical education in the state or for the supervision of the administration of career and technical education in the state (Sec. 3(12)).

aspects of state and local implementation of programs funded by *Perkins IV*, with the goal of answering the following research questions, among others:

- Finance Systems
  - How have federal appropriations for *Perkins* changed over time?
  - How are *Perkins IV* funds distributed among state-eligible agencies?
  - How are eligible agencies using *Perkins IV* resources to support state operations and local program improvement efforts?
  - How are *Perkins IV* resources allocated among LEAs and IHEs?
- Accountability
  - How are states and local subgrantees implementing *Perkins IV* accountability requirements?
  - What challenges are states and local subgrantees facing, and how are these challenges being resolved?
  - Are states and local subgrantees setting and meeting performance targets, and what is happening when targets are not met?
  - How are data used to promote program improvement and student success?
- Programs of Study
  - How are states and local subgrantees developing and implementing POS?
  - What challenges are states and local subgrantees facing in developing and implementing POS?
  - What is the scope of student participation in POS?
  - How are states and local subgrantees addressing the core elements defined by federal legislation?

Data Collection

Answering the study research questions required assembling a substantial amount of quantitative and qualitative data, using a mixed methods research approach. Study activities included collecting original source data and compiling extant data and administrative reports—maintained by federal and state agencies or produced by CTE researchers, professional associations, and national stakeholder groups. The following section provides a brief summary of

the data collection approaches used for this study; a detailed description of the study methodology is presented in Appendix A.

Original Data Sources

The research team constructed a set of data collection tools to address the study research questions. This task included formulating web-based surveys to collect feedback from state CTE directors and LEAs and IHEs; collecting fiscal allocation data from states; conducting case study site visits to a subset of representative states; and conducting expert panel reviews of state POS materials and guidance. Protocols for structuring case design visits and expert panel reviews were pilot-tested with state and local CTE administrators prior to their use.

State director surveys

Each state designates a state director of CTE with primary oversight of the federal grant. Typically, this person is located at either a state secondary or postsecondary education agency, board, or commission, though other administrative structures exist. To ensure the collection of comprehensive data, researchers developed and administered separate surveys to the state director and the person charged with CTE oversight at the counterpart secondary or postsecondary education agency. Surveys were administered to a total of 57 secondary and 57 postsecondary state directors.[7] Study findings are based on responses obtained from 51 secondary and 48 postsecondary state directors.

LEA and IHE surveys

To identify a random, representative sample of survey participants, the researchers constructed a stratified sampling frame from two National Center for Education Statistics (NCES) datasets: the Common Core of Data (CCD) and the Integrated Postsecondary Education Data System (IPEDS). They then administered surveys to local directors at a random sample of 1,993 LEAs and 1,006 IHEs, as well as 48 area CTE centers that operated independent of a school district.[8,9] Completed surveys were received from 77 percent of LEAs, 91 percent of IHEs, and 93 percent of area CTE centers.

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[7] The term "state director" as it is used in this report refers to the individuals at the secondary and postsecondary education levels who are charged with oversight of federal grant resources and who responded to the secondary and postsecondary state director surveys.

[8] The term "local director" as it is used in this report refers to the individuals at LEAs, IHEs, and area CTE centers who responded to the LEA and IHE surveys.

[9] Area CTE centers provide CTE instruction to students who receive all or most of their academic instruction at their home high school. An area CTE center often serves multiple high schools within multiple school districts.

State fiscal allocation survey

Federal resources are allotted to states using a formula specified in *Perkins IV*. A portion of these funds are used by state eligible agencies to administer the grant and offer technical assistance and program support; remaining funds are distributed among participating LEAs and IHEs. To assess these state-to-local formula allocations, researchers asked state directors to submit their Title I and Title II fiscal allocation data for LEAs and IHEs in the 2009–10 program year. Researchers also requested information on consortia membership and state-level allocations of leadership and administrative funds. Fiscal data were obtained from 50 secondary and 49 postsecondary state directors.

Grant Components

Perkins IV resources are allocated to states for different purposes, as follows:

Title I—CTE Assistance to the States
Details the formula for distributing federal resources among states for state administrative uses and for state formula allocations to local providers as basic grants.

Title II—Tech Prep Education
Describes the allotment and uses of federal funds to support Tech Prep programs offered by local providers.

Title III—General Provisions
Summarizes federal and state administrative provisions governing the uses of funding.

Case study site visits

Researchers conducted case study visits to six states. The states were selected to represent the continuum of state approaches to implementing *Perkins IV* legislative provisions. Site visitors conducted in-depth interviews with secondary and postsecondary state directors and administrative staff, and visited three randomly selected local communities (one urban, one suburban, and one rural) to collect data from LEA and IHE administrators, faculty, and staff. Visits also included meetings with business, industry, and labor representatives, where feasible.

Expert panel reviews

The research team convened and facilitated virtual meetings of a 10-member expert panel to assess the usefulness of state CTE guidance and technical assistance materials related to POS design and implementation. Panel members reviewed state materials submitted by state directors as part of the survey effort, along with other publicly available documents posted online. Materials were obtained for the 50 states and the District of Columbia. A list of expert panel members is included in Appendix B.

Extant Data Sources

Researchers conducted an exhaustive search of the literature to identify existing data and published reports documenting efforts by the Department, state education agencies, and local subgrantees to implement *Perkins IV* finance, accountability, and POS provisions.

Department databases

Each year, states report financial and accountability data to the Department to be used for *Perkins IV* compliance and monitoring purposes. Study researchers obtained permission from Department staff to access relevant administrative databases to identify state uses of federal resources.

Additional resources

Federal and state education agencies annually release information on the design, implementation, and administration of secondary and postsecondary CTE programs, including those funded with *Perkins IV* resources. Researchers accessed publicly available data and reports posted on Department websites, along with those maintained by state secondary and postsecondary education agencies, to identify information relevant to the study. They also accessed websites maintained by public and private CTE stakeholders and associations, and searched relevant literature for supplemental information about the design and implementation of *Perkins IV*. Finally, they accessed state five-year *Perkins IV* plans and annual plan updates to assess ongoing grant administration.

Organization of the Report

This report summarizes data and information collected as part of the study. Each chapter opens with a summary of key findings. Throughout the report, and where appropriate, data from multiple sources have been integrated into the text to support and illustrate key study findings. For example, observations and feedback collected through case study site visits reinforce findings distilled from the state CTE director and LEA and IHE surveys. Similarly, data from the state fiscal allocation survey are supplemented with information from the federal database review to provide additional information on state uses of funds for administrative purposes.

Chapter 2 provides a summary of *Perkins IV* fiscal policies, documenting federal allotments of funds to states, uses of funds by states for administration and leadership, and state allocations to local providers. Where appropriate, trend data illustrate changes in states' receipt of federal funds and how resources are targeted to student subpopulations and programs.

Chapter 3 presents a detailed discussion of federal efforts to improve the collection of state accountability data and documents issues affecting the comparability, reliability, and validity of performance data. The chapter reviews the changes in accountability under *Perkins IV*; outlines challenges that states face in collecting and reporting data; and discusses how states and subgrantees negotiate performance targets, address difficulties in meeting targets, and use performance results to improve programs.

Chapter 4 provides information on the development of POS—one of the most substantive changes introduced in *Perkins IV*—and issues related to local implementation. The chapter describes how states, LEAs, and IHEs design POS, the scale of these programs, the strategies states used to promote their implementation, and the challenges encountered in the design and implementation process.

The report closes with a summary of key findings found across the three topical areas and issues deserving continued attention. Appendix A describes the study methodology and technical documentation associated with data collection and includes copies of the protocols used to collect survey data and to conduct case study interviews. Appendix B summarizes the expert panel review of state POS materials and guidance. Finally, Appendix C presents a cross case analysis of information collected during case study visits to six states, and three local partnerships within each state, selected as representative of the range of approaches states are using to develop and implement POS.

Chapter 2. Finance Systems

The *Carl D. Perkins Career and Technical Education Act of 2006* (*Perkins IV*) details the funding distribution formulas and criteria used to allot the nearly $1.3 billion that the federal government invests annually in secondary and postsecondary career and technical education (CTE). This chapter examines the flow of *Perkins IV* basic grant (Title I) and Tech Prep (Title II) funds from the federal level to state eligible agencies, and from eligible agencies to local education agencies (LEAs) and institutions of higher education (IHEs).

The analyses in this chapter seek to answer the following research questions:

- How have federal appropriations for *Perkins* changed over time?
- How are *Perkins IV* funds distributed among state-eligible agencies?
- How are eligible agencies using *Perkins IV* resources to support state operations and local program improvement efforts?
- How are *Perkins IV* resources allocated among LEAs and IHEs?

The chapter opens with an assessment of how federal fiscal priorities and distribution formulas for CTE changed with *Perkins IV* in 2006 and the implications of these changes for states and local providers. This discussion is followed by an analysis of how states allocate federal resources in support of secondary and postsecondary education programs. The review of state grants is divided into two parts. The first addresses how funds are spent at the state level for state administration and state leadership, and the amounts dedicated to services for individuals in institutions and preparing for nontraditional occupations. The second addresses how funds are allocated to LEAs and IHEs through the use of the reserve fund and the statutory formula that governs the disbursement of remaining Title I funds. The analysis also addresses local spending for required and permissive uses and how local CTE administrators determine how funds are spent.

The final sections address the flow of Tech Prep funds from the federal to state and local levels and the option states have for consolidating Title I and II funds. The discussion closes with an examination of how Tech Prep funds are allocated by states to consortia of LEAs and IHEs and how recipients use these resources.

This chapter is based on survey data submitted by state directors and local directors, fiscal data obtained from state directors and staff, site visits with state and local directors and CTE staff, and information retrieved from federal administrative databases.

Key Findings

1. *When adjusted for inflation, federal* Perkins *grants to states have declined over the lifetime of the legislation.*

Federal appropriations for CTE, in real 2010 dollars, have declined in each reauthorization year, falling from nearly $1.71 billion in FY 1985 to $1.36 billion in FY 2007. This represents a 20 percent decline in federal support for CTE, a loss of roughly $350 million in purchasing power, between the first year of the *Carl D. Perkins Vocational and Applied Technology Education Act of 1985* (*Perkins I*) and the most recent reauthorization.

2. *States invest a greater proportion of* Perkins *funding at the secondary education level.*

On average, states allocated about 64 percent of their Title I funds to the secondary level in FY 2010, a proportion remaining relatively constant since FY 1992. The average percentage of Title I resources allocated to the secondary level between FY 2001 and FY 2010 differed by 5 percent or less in 33 of the 44 states for which multi-year data are available. Among the eleven states with percentage changes greater than 5 percent, five decreased the proportion of resources flowing to the secondary level, resulting in a more balanced split across the secondary and postsecondary education levels.

3. *The number of LEA subgrantees has remained relatively stable across* Perkins III *and* IV*, as has the targeting of resources to LEAs serving high-need populations and rural areas. The number of IHE and other postsecondary subgrantees declined by about 9 percent between FY 2001 and FY 2010.*

Nationally, the number of LEA subgrantees was substantially unchanged between *Perkins III* and *Perkins IV*. Among the 39 states for which trend data were available, there were 4,388 LEAs and consortia subgrantees in FY 2010, compared to 4,424 subgrantees in FY 2001, a difference of less than 1 percent. The number of local postsecondary grants declined by about 9 percent over the same time period; states reported awarding 971 grants in FY 2010 and 1,065 grants in FY 2001. As in *Perkins III,* LEAs serving high-poverty, rural, and urban areas received relatively larger proportions of *Perkins IV* resources. High-poverty LEAs received $53 per student in both FY 2001 and FY 2010, while the amount per student in low-poverty LEAs fell from $41 to $25. On a per student basis, *Perkins IV* funds disproportionately benefited rural and urban LEAs in FY 2010. These LEAs received an average of $53 and $45 per secondary pupil, respectively. By contrast, the funding per pupil in suburban LEAs was $32.

4. *States concentrate their administrative and leadership funds on providing technical assistance and professional development to local subgrantees.*

A portion of each state's *Perkins IV* grant may be set-aside for state-level activities. Nearly half of states (47 percent) in FY 2009 reserved the maximum amount allowed for state grant administration. States also may reserve up to 10 percent of their federal funds for state leadership activities, such as assessing CTE program performance and providing technical assistance to subgrantees. State directors reported that the largest percentage of state leadership funds (about 20 percent) supported technical assistance to LEAs and IHEs, followed by the delivery of professional development activities (roughly 15 percent) and efforts to assess the performance of CTE programs (roughly 10 percent). Reflecting legislated limits, the lowest percentage was for serving individuals in state institutions, such as state correctional facilities and institutions serving disabled students (about 5 percent of leadership funds).

5. *States are making use of the increased grant flexibility to merge their Title II (Tech Prep) and Title I (basic grant) funds.*

As of FY 2010, a total of 27 states had merged their Title I and II funds, with one state consolidating only a portion of its resources. The most common reasons for merging cited by secondary state directors were the desire to incorporate Tech Prep into all CTE programs, followed by the similarity between Tech Prep and programs of study (POS). A further incentive, mentioned by both secondary and postsecondary state directors, was that merging funds allowed states to avoid the data burden associated with collecting new Title II measures.

The Federal Investment in CTE

Federal funding for *Perkins IV* has declined since the legislation's passage in 2006; appropriations fell by roughly 2 percent between FY 2007 and FY 2008, declining from $1.30 to $1.27 billion. Congressional appropriations have since remained constant at $1.27 billion annually in FY 2009 and FY 2010 (U.S. Department of Education 2010, 2010a). Historically, however, the dollar amount of *Perkins* grants to states and territories has increased with each legislative reauthorization (Exhibit 2.1).[1] In nominal dollars, federal appropriations for CTE climbed by roughly 20 percent between 1985 and 1991 (the first years of *Perkins I* and *Perkins II*), rising from $0.84 billion in FY 1985 to $1.01 billion in FY 1991.[2] Following the reauthorization of *Perkins III*, first-year appropriations rose by 14 percent to $1.15 billion by FY 1999. Finally, congressional authorizations for the first year of *Perkins IV* climbed by about 13 percent from FY 1999 to FY 2007, increasing to about $1.3 billion.

Although federal appropriations for CTE rose in nominal dollars from FY 1985 to FY 2007, appropriations declined over this period when adjusted for inflation. In real 2010 dollars, federal appropriations for CTE fell from nearly $1.71 billion in FY 1985 (*Perkins I*) to $1.36 billion in FY 2007 (*Perkins IV*) (Exhibit 2.1). This represents a 20 percent decline in federal support for CTE, and is equivalent to a loss of roughly $350 million in purchasing power between the first years of *Perkins I* and *Perkins IV*.

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[1] The amounts cited here are based on federal appropriations in the first fiscal years of *Perkins I* through *Perkins IV*; Congress determines federal appropriations for *Perkins* in the fiscal year preceding the year in which the funds are expended by states. For example, Congress made the first appropriations for *Perkins IV* in FY 2007 for use by states during FY 2008.

[2] Appropriations for CTE are allocated through *Perkins* programs. Nominal dollars are amounts unadjusted for inflation. Real dollars are amounts adjusted for inflation with reference to a particular year. The real dollars reported here were calculated using the inflation calculator maintained by the U.S. Bureau of Labor Statistics (http://www.bls.gov/data/inflation_calculator.htm) (accessed January 20, 2011).

Exhibit 2.1.

Federal fiscal year appropriations for CTE in nominal and real 2010 dollars (in billions of dollars) in the first years of *Perkins I* to *Perkins IV*: Fiscal Years 1985, 1991, 1999, and 2007

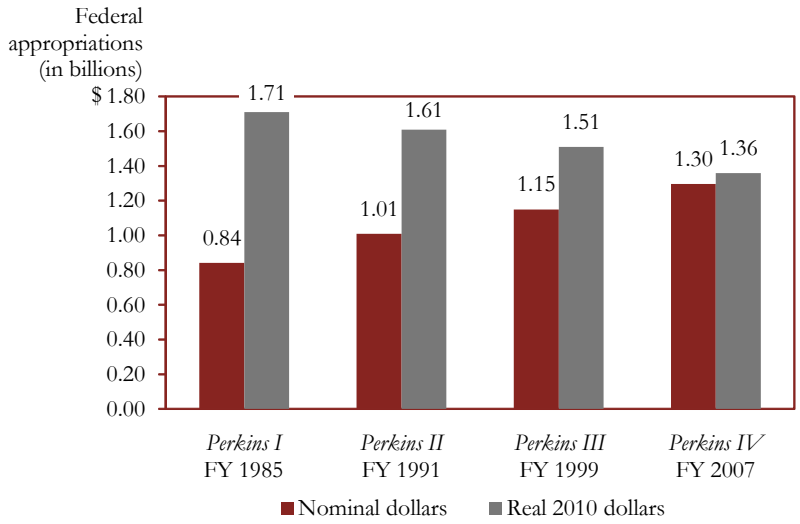

Exhibit reads: In nominal dollars, the federal appropriation for CTE was $1.30 billion in FY 2007 and $0.84 billion in FY 1985. In real 2010 dollars, the federal appropriation for CTE was $1.36 billion in FY 2007 and $1.71 billion in FY 1985.
NOTE: Appropriations for CTE are allocated through *Perkins* programs.
SOURCE: U.S. Department of Education Budget History Tables, FY 1980–FY 2009, http://www2.ed.gov/about/overview/budget/history/edhistory.pdf (accessed January 12, 2011); and Real dollar calculations: Bureau of Labor Statistics, Inflation Calculator, http://data.bls.gov/cgi-bin/cpicalc.pl (accessed January 20, 2011).

By contrast, federal appropriations for the U.S. Department of Education increased from 18.9 to 67.1 billion dollars in nominal terms, and from 38.5 to 70.9 billion in real 2010 dollars, an increase in purchasing power of about 84 percent.[3] Funding for some major programs has increased accordingly. For example, appropriations for the *Elementary and Secondary Education Act* (*ESEA*)[4] Title I grants to LEAs increased in both nominal and real 2010 dollars over the same period (Exhibit 2.2). The nominal increase in funds from about $3.2 to $12.8 billion from FY 1985 to FY 2007 is equivalent to an increase in purchasing power of about $7 billion in real dollars, or about 108 percent.

[3] Education Department Budget History Table FY 1980–FY 2009, retrieved September 19, 2010, from http://www2.ed.gov/about/overview/budget/history/edhistory.pdf.
[4] P.L. 89-10, 79 Stat. 27.

Exhibit 2.2.

Federal appropriations for *Elementary and Secondary Education Act (ESEA)* Title I grants to LEAs (in billions of dollars): Fiscal Years 1985, 1991, 1999, and 2007

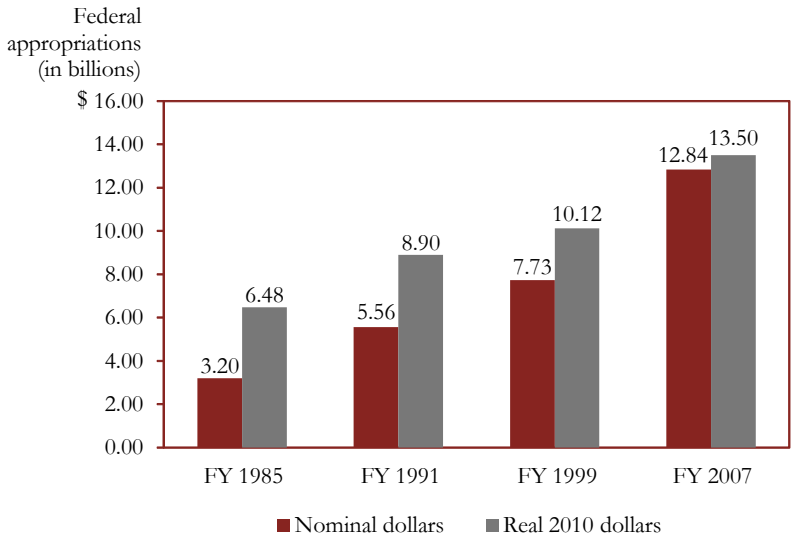

Exhibit reads: In nominal dollars, the federal appropriation for *ESEA* Title I grants to LEAs was $12.84 billion in FY 2007 and $3.20 billion in FY 1985. In real 2010 dollars, the federal appropriation for this program was $6.48 billion in FY 1985 and $13.50 billion in FY 2007.

SOURCE: U.S. Department of Education Budget History Tables, FY 1980–FY 2009, http://www2.ed.gov/about/overview/budget/history/edhistory.pdf (accessed January 12, 2011); and Real dollar calculations: Bureau of Labor Statistics, Inflation Calculator, http://data.bls.gov/cgi-bin/cpicalc.pl (accessed January 20, 2011).

Title I National Activities and Programs

Most federal CTE funds are allotted through *Perkins* Title I programs. In FY 2007, Title I funding was $1.18 billion, or about 91 percent of the total $1.30 billion appropriated. The appropriation for Title II programs was $105 million, or about 8 percent of the total.[5] In addition to funding state grants, *Perkins IV* Title I funds provide for a number of national activities aimed at improving CTE quality and effectiveness.[6] These funds support research, development, and evaluation through a national research center and the National Assessment of Career and Technical Education (NACTE) study. In FY 2007, about $10.0 million was appropriated for these programs. The amount fell to $7.86 million in FY 2008, and remained constant at that level in FY 2009 and FY 2010.[7]

[5] Education Department Budget History Table FY 1980–FY 2009, retrieved September 19, 2010, from http://www2.ed.gov/about/overview/budget/history/sthistbypr01to08.pdf.

[6] Sec. 114.

[7] FY 2011 Department of Education Justifications of Appropriation Estimates to the Congress, retrieved February 10, 2010, from http://www2.ed.gov/about/overview/budget/budget11/justifications/index.html.

In keeping with preceding legislation, Congress has also reserved a portion of Title I resources as set-asides for special purposes; these amounts are deducted before funds are distributed to states. *Perkins IV* introduced two changes to these set-asides.[8] The first ended the eligibility of Micronesia and the Marshall Islands for funds, reducing funds to outlying areas from 0.2 to 0.13 of the *Perkins* Title I appropriation.[9] The second change eliminated the state incentive grant program introduced in *Perkins III* (1998) and maintained from FY 2000 to FY 2003. This program provided financial rewards for states meeting their negotiated performance targets for *Perkins III* and Titles I and II of the *Workforce Investment Act* (*WIA*).[10]

In addition to the assistance for outlying areas, Congress also provides separate appropriation for three other Title I programs:

- Native American Programs (Sec. 116)—to provide grants to Indian tribes, tribal organizations, and Alaska Native groups to carry out CTE programs consistent with the legislation. A portion of the overall appropriation under this section is reserved for grants to community-based organizations serving and representing Native Hawaiians for the same purpose.
- Tribally Controlled Postsecondary CTE Institutions (Sec. 117)—to provide grants to support CTE programs for Indian students and offset institutional support costs.
- Occupational and Employment Information (Sec. 118)—to provide grants to states for technical assistance and the dissemination of information, products, and services to assist states in carrying out the legislation.

Funds for Title II of the legislation, covering Tech Prep education, are allotted through a separate appropriation, with state grant eligibility estimated using the same distribution formula used to award Title I funds. Title II funds to states and distribution trends are discussed in a later section.

Title I State Grants

After funds reserved for special purposes and the programs are deducted, nearly all remaining Title I funds—referred to as a "basic grant"—are allotted by formula to the 50 states and

[8] Sec. 111(a)(1).
[9] Outlying areas and their grant eligibilities and amounts are stipulated in *Perkins IV* (Sec. 3(21) and Sec. 115). These areas include American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, and Palau. Although defined as an outlying area, the U.S. Virgin Islands receive *Perkins IV* funds through the federal state grant allocation formula.
[10] P.L. 105-220, 112 Stat. 936.

the District of Columbia, Puerto Rico, and the U.S. Virgin Islands.[11] State grants are based on states' relative share of the national population across four age groups and the state's per capita income, averaged over three years, relative to the national average. Generally, the income adjustment means that a state with a lower average per capita income will receive more funding per student than one with higher relative wealth.

Perkins IV also places several conditions on the Title I grants received by states, and initial amount calculations are adjusted until these conditions are met.[12] Two provisions place a floor on the total amount that states can receive. According to the special rule known as the *small state minimum*, no state can receive less than 0.5 percent of basic grant funds (excluding set-asides). In FY 2009, the small state minimum was $5.7 million. Further, the *hold-harmless* provision prohibits states from receiving less than their FY 1998 grant. Another provision caps grant amounts at no more than 150 percent of their prior fiscal year grant, or 150 percent of the national per pupil payment of *Perkins* funds multiplied by the number of individuals counted in the state's *Perkins* formula, whichever is less.[13] In practice, these limits have capped grant amounts for some states qualifying for the small state minimum grant at an amount less than 0.5 percent of basic grant funds. In order to increase funds for small states, *Perkins IV* changed the funding formula to direct one-third of any federal appropriations that exceed the FY 2006 funding level to small states until they reach the small state minimum; the remaining two-thirds would be allocated to all states by formula. Since appropriations have declined since FY 2006, this provision has not yet come into effect.[14]

Federal funds to outlying areas are allotted on a nonformula basis subject to terms specified in Sec. 115 of the legislation. In the first year of *Perkins IV* (FY 2007), Guam received $660,000; American Samoa and the Commonwealth of the Northern Mariana Islands each received $350,000; and the Republic of Palau received $160,000.[15] Subsequent amounts were adjusted based on the amount appropriated and then distributed in equal proportions to Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.[16]

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[11] The U.S. Virgin Islands has consolidated funding status and receives all of its federal education funding, including for *Perkins* and other education programs such as special education, as a single allocation from the Office of Elementary and Secondary Education. While the U.S. Virgin Islands does report CTE performance data to OVAE, they do not report the amounts allocated to *Perkins* funding categories and are therefore excluded from the state-level analyses in this chapter.

[12] Sec. 111(a).

[13] Sec. 111(a)(3).

[14] Sec. 111(a)(4).

[15] *Perkins IV* made the Republic of Palau ineligible for further funding if it enters into an agreement to extend U.S. education assistance under the Compact of Free Association.

[16] Palau is excluded from subsequent year allocations (Sec. 115(d)). Outlying areas, with the exception of Puerto Rico and, where noted, the U.S. Virgin Islands, are excluded from the analysis in this chapter because funds for outlying areas are not subject to the same fiscal requirements as those for other state grantees (Sec. 115(b)(2)).

Trends in Grant Amounts

State grant amounts changed between FY 1992, FY 2001, and FY 2009, years that correspond to the first program year of *Perkins II* and the second program years of *Perkins III* and *Perkins IV* (Exhibit 2.3).[17] Because the distribution formula remained essentially the same across *Perkins III* and *IV*, changes in states' eligibility from FY 2001 to FY 2009 are a function of annual changes in federal appropriations, changes in states' population and/or three-year average per capita income relative to those of other states, and/or the application of the hold-harmless provision and other limits on grant size.

In nominal dollars, total Title I state grants increased by 4 percent between FY 2001 and FY 2009. As a consequence, grants for the majority of recipients increased. Of the 34 states (excluding outlying areas) gaining funds, amounts allocated to five states increased by more than 15 percent. All five of these states were among the 10 states that experienced the highest rates of population growth between 2000 and 2010, and this growth likely contributed to the funding increase.[18]

Although most states experienced a nominal increase in their federal grant, not all benefitted equally from appropriations added across the two most recent reauthorizations, and in 11 states resources declined. Again, these changes may result from relative shifts in states' population, the three-year average of per capita income relative to that of other states, and/or the application of the hold-harmless provision and other limits on grant amounts.

Grants to three outlying areas increased between *Perkins III* and *IV,* with Guam gaining more than 30 percent and American Samoa and the Commonwealth of the Northern Mariana Islands gaining more than 80 percent. Although grants for these areas were lower under *Perkins III,* these outlying areas also received *Perkins* funding through Pacific Resources for Education and Learning (PREL) (not shown in Exhibit 2.3). Together, these two sources resulted in total grants to each of these territories that are similar to the funds that they received under *Perkins IV*, making the proportion of *Perkins* funds received by these areas similar across the different authorizations of the legislation.[19]

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[17] These dates were selected to provide roughly equivalent time periods across *Perkins I*, *II*, *III*, and *IV*, as well as to provide the most recent data available for analysis.
[18] U.S. Census Bureau, 2010 Census Data, Population Change By State: 2000–2010 http://2010.census.gov/2010census/data/ (accessed April 19, 2011).
[19] Personal communication with the Budget Service, Office of Planning, Evaluation and Policy Development, Aug. 3, 2010.

Exhibit 2.3.

Perkins Title I state grant amounts, fiscal years 1992, 2001, and 2009, and percent change, by state: FY 2001 through FY 2009

State	*Perkins II* FY 1992	*Perkins III* FY 2001	*Perkins IV* FY 2009	Percent change from FY 2001 through FY 2009
Alabama	$18,493,908	$20,036,322	$19,217,606	-4
Alaska	4,214,921	4,214,921	4,214,921	0
Arizona	14,813,300	20,178,519	25,047,298	24
Arkansas	10,276,155	11,925,341	11,989,737	1
California	95,689,053	120,745,507	128,360,005	6
Colorado	11,448,761	14,415,073	15,782,973	10
Connecticut	9,005,327	8,826,329	10,020,303	14
Delaware	4,214,921	4,468,631	4,803,968	8
District of Columbia	4,214,921	4,214,921	4,214,921	0
Florida	41,552,691	51,525,165	60,428,537	17
Georgia	26,758,908	31,493,636	38,592,850	23
Hawaii	4,699,626	5,376,800	5,709,941	6
Idaho	4,699,626	6,619,244	6,499,494	-2
Illinois	37,481,798	41,157,929	44,837,143	9
Indiana	22,791,404	24,786,555	25,818,445	4
Iowa	10,662,123	12,381,109	12,103,307	-2
Kansas	8,940,430	11,370,063	10,961,229	-4
Kentucky	16,637,536	18,364,632	17,905,647	-3
Louisiana	19,221,631	22,051,050	21,041,943	-5
Maine	4,695,577	5,376,800	5,709,941	6
Maryland	13,742,757	15,994,426	16,440,022	3
Massachusetts	17,429,978	17,323,922	18,687,903	8
Michigan	34,720,846	38,255,683	40,835,345	7
Minnesota	15,092,540	17,410,608	17,697,927	2
Mississippi	12,364,726	13,920,402	13,363,550	-4
Missouri	19,059,451	22,506,237	23,405,180	4
Montana	4,214,921	5,268,996	5,363,650	2
Nebraska	5,917,914	7,138,876	7,053,557	-1
Nevada	4,699,626	5,854,216	8,031,665	37
New Hampshire	4,699,626	5,376,800	5,709,941	6
New Jersey	21,151,258	22,257,214	24,078,336	8
New Mexico	6,595,354	8,559,863	8,858,892	4
New York	52,699,128	52,486,933	57,403,836	9
North Carolina	28,486,370	29,975,525	35,752,471	19
North Dakota	4,214,921	4,214,921	4,214,921	0
Ohio	41,619,711	44,682,695	45,028,414	1
Oklahoma	13,368,617	16,119,667	15,094,180	-6

See notes at end of table.

Exhibit 2.3.—cont.
***Perkins* Title I state grant amounts, fiscal years 1992, 2001, and 2009, and percent change, by state: FY 2001 through FY 2009**

State	*Perkins II* FY 1992	*Perkins III* FY 2001	*Perkins IV* FY 2009	Percent change from FY 2001 through FY 2009
Oregon	$10,379,115	$13,191,901	$14,063,250	7
Pennsylvania	41,635,031	42,540,576	44,795,856	5
Rhode Island	4,699,626	5,376,800	5,709,941	6
South Carolina	16,293,814	17,647,448	19,078,798	8
South Dakota	4,214,921	4,328,867	4,294,134	-1
Tennessee	20,831,856	22,531,516	23,882,364	6
Texas	71,509,430	86,234,261	92,532,081	7
Utah	8,372,087	12,453,906	12,925,301	4
Vermont	4,214,921	4,214,921	4,214,921	0
Virginia	21,516,428	24,827,445	25,292,041	2
Washington	16,653,997	21,232,147	21,617,410	2
West Virginia	8,009,762	8,428,617	8,428,617	0
Wisconsin	18,463,176	21,603,995	21,594,496	0
Wyoming	4,214,921	4,214,921	4,214,921	0
American Samoa	191,336	190,000	347,509	83
Guam	503,513	500,000	655,304	31
Northern Mariana Islands	191,336	190,000	347,509	83
Puerto Rico	17,816,604	19,089,614	18,458,484	-3
Virgin Islands	509,173	567,534	605,536	7
Freely associated states	0	0	158,862	n/a
Indian set-aside	12,259,166	13,750,000	14,511,388	6
Other (non-State allocations)	898,256	10,010,000	2,902,278	n/a
Total	953,968,830	1,100,000,000	1,160,911,000	6

Exhibit reads: The Title I allocation for Alabama was $20,036,322 in 2001 and $19,217,606 in FY 2009, a decrease of about 4 percent.
n/a Not applicable.
SOURCE: U.S. Department of Education, Office of the Deputy Secretary, Budget Service. *State Funding History Tables by Program,* http://www.ed.gov/about/overview/budget/history/index.html?src=rt (FY 2001 data; accessed June 16, 2010); and http://www2.ed.gov/about/overview/budget/statetables/11stbyprogram.pdf (FY 2009 data, accessed February 1, 2011).

In FY 2011, overall *Perkins IV* funding declined by about 12 percent (in nominal dollars) when Congress eliminated Title II funding and reduced Title I basic grants by about 4 percent from the previous year. As a result, grants made to all states declined (Exhibit 1.4). The percent change ranged from a low of about -1.9 percent to as much as -19.7 percent from FY 2010 to FY 2011, reflecting states' relative population and income levels as used in the formula calculations.

Exhibit 2.4.
Estimated federal grants to states before and after the FY 2011 reduction in Title I funds and elimination of Title II and percent difference, by state: FY 2010 through FY 2011

State	FY 2010 total (base grant plus Tech Prep)	Estimated FY 2011 total (base grant)	Amount difference FY 2010 through FY 2011	Percent difference FY 2010 through FY 2011
Alabama	$21,169,358	$19,175,065	-$1,994,293	-9
Alaska	4,465,084	4,214,921	-250,163	-6
Arizona	26,950,635	24,555,169	-2,395,466	-9
Arkansas	12,905,743	11,403,795	-1,501,948	-12
California	139,243,327	117,708,010	-21,535,317	-15
Colorado	17,242,558	15,573,228	-1,669,330	-10
Connecticut	10,831,245	9,564,397	-1,266,848	-12
Delaware	5,052,516	4,618,602	-433,914	-9
District of Columbia	4,349,598	4,214,921	-134,677	-3
Florida	64,193,572	58,075,608	-6,117,964	-10
Georgia	41,807,825	38,228,368	-3,579,457	-9
Hawaii	6,121,451	5,468,243	-653,208	-11
Idaho	7,006,710	6,429,955	-576,755	-8
Illinois	49,157,223	41,593,212	-7,564,011	-15
Indiana	28,052,743	25,109,985	-2,942,758	-10
Iowa	13,208,250	11,963,946	-1,244,304	-9
Kansas	11,721,389	10,245,408	-1,475,981	-13
Kentucky	19,767,916	17,905,647	-1,862,269	-9
Louisiana	23,230,400	21,041,943	-2,188,457	-9
Maine	6,235,453	5,468,243	-767,210	-12
Maryland	18,424,911	15,367,652	-3,057,259	-17
Massachusetts	20,565,053	17,912,559	-2,652,494	-13
Michigan	44,594,721	39,142,926	-5,451,795	-12
Minnesota	19,395,706	16,754,034	-2,641,672	-14
Mississippi	14,753,419	13,363,550	-1,389,869	-9
Missouri	24,871,527	22,165,679	-2,705,848	-11
Montana	5,825,871	5,170,438	-655,433	-11
Nebraska	7,525,881	6,816,893	-708,988	-9
Nevada	8,609,174	8,441,770	-167,404	-2
New Hampshire	6,086,100	5,468,243	-617,857	-10
New Jersey	26,071,027	22,219,837	-3,851,190	-15
New Mexico	9,279,588	8,028,287	-1,251,301	-13
New York	66,954,138	53,752,353	-13,201,785	-20
North Carolina	38,904,958	35,259,396	-3,645,562	-9

See notes at end of table.

Exhibit 2.4.—cont.
Estimated federal grants to states before and after the FY 2011 reduction in Title I funds and elimination of Title II and percent difference, by state: FY 2010 through FY 2011

State	FY 2010 total (base grant plus Tech Prep)	Estimated FY 2011 total (base grant)	Amount difference FY 2010 through FY 2011	Percent difference FY 2010 through FY 2011
North Dakota	$4,528,072	$4,214,921	-$313,151	-7
Ohio	49,171,479	42,750,001	-6,421,478	-13
Oklahoma	16,664,042	15,094,180	-1,569,862	-9
Oregon	15,361,296	13,566,146	-1,795,150	-12
Pennsylvania	49,131,116	42,285,519	-6,845,597	-14
Rhode Island	6,048,484	5,468,243	-580,241	-10
South Carolina	20,567,894	18,256,242	-2,311,652	-11
South Dakota	4,697,519	4,214,921	-482,598	-10
Tennessee	25,366,106	23,208,260	-2,157,846	-9
Texas	101,081,082	88,684,893	-12,396,189	-12
Utah	14,197,655	12,544,692	-1,652,963	-12
Vermont	4,452,109	4,214,921	-237,188	-5
Virginia	27,720,438	23,932,351	-3,788,087	-14
Washington	23,061,524	20,335,265	-2,726,259	-12
West Virginia	9,305,231	8,428,617	-876,614	-9
Wisconsin	23,499,683	20,782,582	-2,717,101	-12
Wyoming	4,448,650	4,214,921	-233,729	-5
Puerto Rico	20,378,250	18,458,484	-1,919,766	-9
Virgin Islands	655,450	571,147	-84,303	-13

Exhibit reads: The total *Perkins* state grant amount for Alabama was $21,169,358 in FY 2010 and $19,175,065 in FY 2011, a difference of -$1,994,293 or about -9 percent.
SOURCE: U.S. Department of Education, Office of the Deputy Secretary, Budget Service, Fiscal Year 2010-FY 2012 President's Budget State Tables for the U.S. Department of Education http://www2.ed.gov/about/overview/budget/statetables/index.html; and U.S. Department of Education, Office of Vocational and Adult Education. (2011). Program Memorandum: Revised Estimated Federal Fiscal Year (FY) 2011 State Allocations under the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV)

State Categorical Funding for CTE

CTE instruction is often costlier to provide than academic instruction. These greater costs are mainly due to the smaller classes associated with CTE instruction: schools adopt lower student-teacher ratios for CTE because of the high cost of specialized equipment and the potentially higher risk associated with its use (Klein 2001). To offset these added expenses, some states have adopted categorical funding for CTE to steer supplemental funding to local providers. In many cases, these state resources are supplemented by local resources and exceed the contribution made by federal *Perkins* funds to local programs.

Findings from the survey of state directors indicate that about half of states provided some form of categorical aid to support secondary CTE programs.[20] Of the 48 secondary state directors who provided information on categorical funding, 22 reported that their states provided some form of dedicated funding in FY 2008 for CTE in secondary schools. This result is not consistent with the findings in a previous report, which indicated that in FY 2001, 40 states reported offering some form of categorical funding for CTE services in secondary schools (Klein 2001).[21] Among the 22 state directors who reported categorical statewide support for CTE, 16 indicated that the source of the funds was the state, seven reported local sources, and four federal sources. At the postsecondary level, state directors reported that CTE categorical funding was available during the 2008–09 program year in roughly two-fifths (18) of the 42 states responding to the question. With regard to the source of funds, the majority of directors (13) indicated they did not know the funding source.[22]

State Uses of *Perkins* Funds

A small portion of *Perkins IV* funds allotted to states may be harnessed by state staff for grant administration, leadership, and other legislated uses. The following section details the statutory requirements associated with these funds and how states are using them to carry out the legislation's provisions.

Eligible Agencies

Perkins IV requires states to designate or create a single board—called an *eligible agency*—to be responsible for the administration or supervision of CTE in the state.[23] Generally, this board is located within the state department of education, with 40 of the 55 total *Perkins* state grantees charging their K–12 education agency with *Perkins IV* oversight. Nine states chose a postsecondary system office or institution to serve in this role, and six states designated a state department of CTE or workforce development agency.[24] The choice of eligible agency likely reflects the relative amounts of funds flowing into each education level, state administrative capacities, historical precedent, and other state-specific factors.

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[20] Secondary and Postsecondary State Director Surveys, 2009.
[21] The results may reflect changes in state funding formulas over time, directors' misunderstanding of the survey question, or different interpretations of the question's intent. For example, directors in states providing categorical funding for stand-alone area CTE centers might have responded negatively if they believed that the question only applied to comprehensive high schools.
[22] The response rate for some question items was less than 85 percent; results should be interpreted with caution.
[23] Sec. 3(10).
[24] This total includes territories and outlying areas. http://www.careertech.org/state_profile/ (accessed June 10, 2010).

The eligible agency is directly responsible for developing, submitting, and implementing the *Perkins IV* state plan and evaluating all Title I-related programs, services, and activities.[25] The eligible agency also is responsible for administering funds in accordance with *Perkins IV* statutory provisions. States are required to divide their Title I state grant into the following categories:

- State Administration: up to 5 percent or $250,000 (whichever is greater) for use in administering the state plan.
- State Leadership: up to 10 percent for use in carrying out state programs, with not more than 1 percent for individuals in state institutions and not less than $60,000 or more than $150,000 for services to prepare individuals for nontraditional fields.
- Grants to Local Providers: at least 85 percent for secondary and postsecondary education programs.

State Administration

Congress allows states to use up to 5 percent or $250,000 of their Title I grant (whichever is greater) for administering *Perkins IV*. Allowable uses include (1) developing the state plan, (2) reviewing local plans, (3) monitoring and evaluating program effectiveness, (4) ensuring compliance with federal law, (5) providing technical assistance, and (6) supporting and developing state data systems relevant to *Perkins* provisions.[26]

Just under half of states made full use of the state administration provision to offset the staffing and resource costs associated with *Perkins IV* administration. Twenty-four of the 51 states for which FY 2010 data are available reserved the maximum amount available for state administrative activities (Exhibit 2.5).

Federal law stipulates that states provide a dollar-for-dollar match for funds used for state administrative purposes, although states are not required to obligate these funds for any specific purpose.[27] It appears that 19 of 50 states for which data are available are contributing state funds in excess of the federal match requirement. While in some instances, additional funds are simply due to states' rounding of their contribution, in others, the state contribution substantially exceeds the match requirement.

[25] Sec. 121.
[26] Sec. 112(a)(3).
[27] Sec. 112(b).

Exhibit 2.5.
Amount and percentage of state *Perkins* Title I and II funds allocated to administration and amount and percentage of state match, by state: FY 2010

State	Total Title I and II funds	State administration amount	Percent of total state *Perkins* allocation	Matching state contribution	Percent of total state *Perkins* allocation
Alabama*	$21,169,358	$1,028,468	5	$1,028,468	5
Alaska	4,465,084	250,000	6	250,000	6
Arizona	26,950,635	1,253,518	5	2,358,900	9
Arkansas*	12,905,743	645,287	5	1,000,000	8
California	139,243,327	6,399,575	5	6,399,575	5
Colorado*	17,242,558	792,447	5	792,447	5
Connecticut*	10,831,245	541,562	5	51,189,507	473
Delaware	5,052,516	250,000	5	71,000,000	1405
District of Columbia*	4,349,598	250,000	6	250,000	6
Florida*	64,193,572	1,350,000	2	1,350,000	2
Georgia*	41,807,825	2,090,390	5	2,090,390	5
Hawaii*	6,121,451	306,073	5	523,137	9
Idaho*	7,006,710	350,335	5	n/a	n/a
Illinois	49,157,223	2,255,395	5	2,255,395	5
Indiana	28,052,743	494,923	2	494,923	2
Iowa	13,208,250	$598,197	5	598,197	5
Kansas*	11,721,389	586,069	5	586,069	5
Kentucky*	19,767,916	988,396	5	2,167,818	11
Louisiana*	23,230,400	1,161,520	5	1,161,520	5
Maine*	6,235,453	311,773	5	311,773	5
Maryland*	18,424,911	921,246	5	921,246	5
Massachusetts	20,565,053	600,000	3	600,000	3
Michigan	44,594,721	2,047,648	5	2,047,648	5
Minnesota*	19,395,706	969,785	5	969,785	5
Mississippi	14,753,419	668,178	5	668,178	5
Missouri	24,871,527	1,134,685	5	1,667,627	7
Montana	5,825,871	269,892	5	285,091	5
Nebraska*	7,525,881	376,294	5	376,294	5
Nevada*	8,609,174	430,458	5	488,233	6
New Hampshire	6,086,100	304,305	5	285,498	5
New Jersey*	26,071,027	1,303,551	5	1,303,551	5
New Mexico	9,279,588	422,287	5	422,287	5
New York	66,954,138	1,400,000	2	1,400,000	2
North Carolina	38,904,958	1,795,580	5	1,800,000	5
North Dakota*	4,528,072	250,000	6	2,100,000	46

See notes at end of table.

Exhibit 2.5.—cont.
Amount and percentage of state *Perkins* Title I and II funds allocated to administration and amount and percentage of state match, by state: FY 2010

State	Total Title I and II funds	State administration amount	Percent of total state *Perkins* allocation	Matching state contribution	Percent of total state *Perkins* allocation
Ohio	$49,171,479	$2,233,195	5	$2,233,195	5
Oklahoma	16,664,042	754,709	5	754,709	5
Oregon*	15,361,296	768,064	5	768,064	5
Pennsylvania	49,131,116	2,244,788	5	2,244,788	5
Rhode Island*	6,048,484	285,497	5	437,252	7
South Carolina*	20,567,894	956,407	5	956,407	5
South Dakota	4,697,519	250,000	5	561,852	12
Tennessee*	25,366,106	1,268,305	5	1,268,305	5
Texas	101,081,082	3,290,344	3	3,290,344	3
Utah*	14,197,655	709,882	5	1,539,536	11
Vermont*	4,452,109	250,000	6	282,668	6
Virginia	27,720,438	1,265,133	5	1,669,645	6
Washington	23,061,524	1,051,234	5	1,051,234	5
West Virginia	9,305,231	421,431	5	1,203,000	13
Wisconsin	23,499,683	1,069,723	5	119,915,408	510
Wyoming*	4,448,650	250,000	6	442,593	10
Puerto Rico*	20,378,250	n/a	n/a	n/a	n/a
Total	1,244,255,700	51,866,549	4	299,762,557	24

Exhibit reads: In FY 2010, Alabama allocated $1,028,468, or 5 percent, of its *Perkins* funds for administration. Alabama's matching state contribution was also $1,028,468, which is equivalent to 5 percent of the state's *Perkins* funds.
n/a Not applicable
* State merged (or in the case of Alabama, partially merged) Title II funds with Title I funds in program year 2009–10 or earlier.
SOURCE: U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal Perkins Data Base System and State Consolidated Annual Report data system information for FY 2010.

It is unknown whether these funds represent additional resources that would not otherwise be provided for CTE, or simply reflect funds already legislated by state formula. This study did not collect comprehensive data on the source of state matching funds, but it appears that some states may be classifying state categorical funding for CTE as meeting the state match requirement. For example, in the survey of state directors, one director explained that the matching funds reported in excess of the required amount represent all the funds spent at the state level for the administration of CTE programs. State directors in three states reported that the matching funds come from the state general fund or general revenue for the state agency's administrative functions.

The variation in matching amounts raises a question, however, about the intent of the state match requirement. Some states may be providing supplemental funding for CTE administration and programs to meet the match requirement, whereas others may be recording resources that would be committed to CTE support in the absence of the match requirement. The legislation does not specify how matching funds should be obligated.

State Leadership

States may reserve up to 10 percent of their Title I funds as state leadership funds, which can be used to carry out a set of required and permissible activities.[28] In FY 2010, forty-two states allocated 10 percent for these activities, nine states at least 8 percent but less than 10 percent, and one state 5 percent.[29] There are nine required activities that states must implement using federal funds, such as assessing CTE programs funded under *Perkins IV* and providing technical assistance to eligible recipients. Permissible uses cover 17 activities, ranging from establishing articulation agreements between secondary and postsecondary CTE programs to supporting CTE student organizations.

Perkins IV expands upon the required and permissible state leadership activities in *Perkins III* (Exhibit 2.6). For example, among required activities, *Perkins IV* includes providing guidance on the content of professional development programs, such as "the effective use of scientifically based research and data to improve instruction."[30] Congress also added a requirement that states provide technical assistance for eligible recipients, which was previously a permissible use. The reauthorization added seven new permissible activities, including entrepreneurship education and training and the development of technical skill assessments, among others.

[28] See Sec. 124(b) for a list of required uses and Sec. 124(c) for a list of permissible uses of funds.
[29] Internal *Perkins* Database System and State Consolidated Annual Report data system information for FY 2010.
[30] Sec. 124(b)(3).

Exhibit 2.6.
Summary of required and permissible state leadership activities: *Perkins III* and *IV*

Required uses of state leadership funds	*Perkins III*	*Perkins IV*
Preparing individuals for nontraditional fields*	√	√
Assessing CTE programs*	√	√
Developing, improving, or expanding the use of technology in CTE*	√	√
Professional development programs*	√	√
Integration of academics with vocational and technical education*	√	√
Supporting partnerships among secondary, postsecondary, adult education, and other local institutions*	√	√
Serving individuals in state institutions	√	√
Programs for special populations*	√	√
Technical assistance for eligible recipients[a]		√

Permissible uses of state leadership funds	*Perkins III*	*Perkins IV*
Technical assistance for eligible recipients[a]	√	
Career guidance and academic counseling*	√	√
Establishing articulation agreements*	√	√
Cooperative education[b]	√	
Vocational student organizations (VSOs)	√	√
Public charter schools operating secondary CTE programs	√	√
Programs offering exposure to all aspects of an industry	√	√
Family and consumer sciences programs	√	√
Education and business partnerships*	√	√
Improving or developing new CTE courses and initiatives*	√	√
CTE programs for adults and school dropouts	√	√
Job and continuing education support for CTE students	√	√
Initiatives to facilitate transition of subbaccalaureate CTE students into baccalaureate degree programs		√
Incentive grants to local grant recipients		√
Entrepreneurship education and training		√
Developing technical skills assessments		√
Developing and enhancing data systems to collect academic and employment outcome data		√
CTE faculty and other personnel recruitment and retention		√
Occupational and employment information resources		√

Exhibit reads: Required and permissible uses of state leadership funds increased by one required and seven permissible activities between *Perkins III* and *Perkins IV*.

* Focus of activity was the same in *Perkins III* and *IV*, but language and/or section details changed.

[a] Changed from a permissible to a required use from *Perkins III* to *IV*.

[b] Combined with support for education and business partnerships in *Perkins IV* (*Perkins IV*, Sec. 124(c)(8).

NOTE: For full description of activities, see *Perkins IV*, Sec. 124(b) and Sec. 124(c).

SOURCE: *Perkins IV*, Sec. 124(b) and Sec. 124(c).

Secondary and postsecondary state directors were asked to report on the proportion of leadership funds that were dedicated to different required leadership activities in the 2008–09 program year (Exhibit 2.7). According to the state directors, the largest percentage of funds (about 20 percent) went to technical assistance for eligible grant recipients, followed by providing professional development activities (16 and 15 percent at the secondary and postsecondary levels, respectively) and assessing CTE programs (11 and 10 percent at the secondary and postsecondary levels, respectively). Reflecting the limit the legislation places on funds for this purpose, directors reported the lowest percentages for serving individuals in state institutions, such as state correctional facilities and institutions serving disabled students (about 5 percent).[31]

Exhibit 2.7.
Average percentage of state leadership funds allocated for required activities: Program year 2008–09

Activity	Secondary	Postsecondary
Technical assistance for eligible recipients	20	21
Providing professional development	16	15
Assessing CTE programs	11	10
Strengthening the integration of academic and CTE instruction	9	8
Expanding the use of technology in CTE programs	8	7
Preparing individuals for nontraditional employment	7	7
Supporting partnerships among secondary, postsecondary, adult education, and other local institutions	8	9
Support for programs for special populations that lead to high-skill, high-wage, high-demand occupations[a]	8	6
Serving individuals in state institutions, such as state correctional and institutions serving disabled students	6	5
Number of responses	**34**	**22**
Don't know/ no response	**16**	**26**

Exhibit reads: States reported spending an average of 20 percent at the secondary level and 21 percent at the postsecondary level of state leadership funds on technical assistance for eligible recipients.
N=50 (secondary); 48 (postsecondary).
[a] Reflects the language included in the Act (Section 124(b)(8)). The category included in the survey was "Supporting programs that prepare special education students for entry into high-skill, high-wage, high-demand occupations."
NOTE: Responses were not required to sum to 100 percent.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

[31] Comparisons of trend data across the 1998 and 2006 legislation are not possible due to differences in survey questions included in the 2004 NAVE national assessment; the 2004 study combined a subset of required and permissible uses of state leadership funds, while the 2010 survey focused solely on required uses.

Perkins IV introduced a new requirement that local providers offer one or more POS to deliver CTE services. POS are coherent programs of CTE instruction that (1) incorporate secondary and postsecondary education elements; (2) offer rigorous technical content aligned with challenging academic standards in a coordinated, nonduplicative progression of courses aligning secondary and postsecondary education; (3) may offer high school students the opportunity to participate in dual or concurrent enrollment programs to earn postsecondary credits; and (4) lead to an industry-recognized credential or certificate at the secondary level or an associate's or bachelor's degree.[32]

Some 24 state directors at the secondary level and 19 at the postsecondary level reported directing state leadership funds to establish POS. At the secondary level, states allocated roughly 17 percent of their leadership funds to POS development and 15 percent to implementation. Investment was somewhat lower for the postsecondary level: states used about 9 percent for POS development and 7 percent for POS implementation.[33] These data support findings on POS discussed in Chapter 4, which indicate that POS development and implementation activities tend to be focused mainly at the secondary education level.

[32] Sec. 122(c)(1).

[33] Secondary and Postsecondary State Director Surveys, 2009. N=50 (secondary); 48 (postsecondary). The numbers of state directors who responded that they didn't know or did not respond were 27 and 29 at the secondary and postsecondary levels, respectively. Because items on these questions had response rates of less than 85 percent, data should be interpreted with caution.

Nontraditional employment

Perkins IV mandates that states reserve no less than $60,000 or more than $150,000 of their state leadership funds for services that prepare individuals for nontraditional fields.[34]

State support for nontraditional services declined from *Perkins III* to *IV* in nominal dollars. On average, states expended $91,500 in FY 2006 versus $80,983 in FY 2010 (Exhibit 2.8).[35] The number of states spending at the minimum of $60,000 increased from 25 in FY 2006 to 32 in FY 2010. Two fewer states in FY 2010 than in FY 2006 spent the maximum amount; 11 states directed $150,000 to nontraditional services in FY 2006 and 9 in FY 2010.

Exhibit 2.8.
Number of states at different funding levels for services that prepare individuals for nontraditional fields and the average amount allocated: FY 2006 and FY 2010

Nontraditional funding level	FY 2006	FY 2010
Minimum amount ($60,000)	25	32
More than $60,000 but less than $150,000	16	10
Maximum amount ($150,000)	11	9
Average allocation	$91,500	$80,983

Exhibit reads: In FY 2006, 25 states allocated $60,000 for services that prepare individuals for nontraditional fields. The average amount that states allocated for this purpose was $91,500.
N=52 (FY 2006); 51 (FY 2010).
SOURCE: U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal Perkins Data Base System and State Consolidated Annual Report data system information for FY 2010.

Many states have staff to coordinate state gender equity and activities for special populations at the secondary and postsecondary levels, even though the requirement that states do so was eliminated in *Perkins III*. More than one-half (29 of 44) of states responding at the secondary level and 23 of 36 states at the postsecondary level reported that they had a gender equity or special populations coordinator, or both, on staff in the 2000–01 program year (Exhibit 2.9) (Silverberg et al. 2004).

[34] Sec. 112(1)(2)(B). "Nontraditional fields" are defined in Sec. 3(17) as "occupations or fields of work, including careers in computer science, technology, and other emerging high-skill occupations, for which individuals from one gender comprise less than 25 percent of the individuals employed in each such occupation or field of work."

[35] State-level allocation comparisons are between FY 2006 and FY 2009. FY 2006 is the first year for which reliable and complete data are available, and corresponds to the second to last year of *Perkins III*. FY 2009 corresponds to the second year of *Perkins IV,* and is the most recent year for which data were available at the time of writing.

Exhibit 2.9.
Number of states reporting gender equity and special populations coordinators at the secondary and postsecondary levels: Program years 2000–01 and 2008–09

	2000–01[a]		2008–09[b]	
Position	**Secondary**	**Postsecondary**	**Secondary**	**Postsecondary**
Gender equity coordinator only	10	6	6	6
Special populations coordinator only	6	5	4	5
Both gender and special populations coordinator	13	12	23	13
Neither	15	13	16	19
No response	2	10	1	5
Average number of FTEs dedicated to these positions[c]	1.5	1.5	1.1	1.0

Exhibit reads: In program year 2000–01, 10 states reported having a gender equity coordinator only at the secondary level. The average number of full-time equivalent positions (FTEs) dedicated to these positions was 1.5 at the secondary level in 2000–01.

[a] N=46.

[b] N=50 (secondary); 48 (postsecondary).

[c] Among states reporting one or both of these positions in full-time equivents (FTEs).

NOTE: The results may overestimate the number of positions because coordinators shared across levels may have been reported for both levels in some states.

SOURCE: Silverberg et al. (2004); White et al. (2004); and Secondary and Postsecondary State Director Surveys, 2009.

Some 33 of 49 states at the secondary level and 24 of 43 states at the postsecondary level reported having a gender equity or special populations coordinator, or both, in the 2008–09 program year. The number of full-time equivalent positions dedicated to these positions declined between 2000–01 and 2008–09. In states that reported having one or both of these positions in 2000–01, the positions represented an average of 1.5 FTEs at the secondary and postsecondary levels. In 2008–09, the average FTEs fell to 1.1 and 1.0 at the secondary and postsecondary education levels, respectively, indicating that more of these positions were part time than in 2000–01.

Individuals in state institutions

States are required to use a portion of their state leadership funds to serve individuals in state institutions, which include correctional facilities and facilities serving individuals with disabilities.[36] Although the legislation does not specify a minimum amount, it caps spending at no more than 1 percent of a state's Title I funds.

In both FY 2006 and FY 2010, states spent, on average, about 0.8 percent of their Title I funds on programs serving individuals in state institutions (Exhibit 2.10). The majority of states allocated more than 0.8 percent of Title I funds for this purpose in both years (34 in FY 2006 and 32 in FY 2010).

Exhibit 2.10.

Average and total amounts, and the average percentage of Title I funds allocated to serve individuals in state institutions, and the distribution of states by the percentage of Title I funds allocated for this purpose: FY 2006 and FY 2010

	FY 2006	FY 2010
Average amount allocated	$181,020	$179,790
Total amount allocated[b]	9,413,014	9,169,303
Average percentage of Title I funds allocated[a]	1	1
Number of states allocating:		
Less than 0.3 percent	6	9
0.3 to 0.8 percent	12	10
More than 0.8 percent	34	32

Exhibit reads: In FY 2006, states allocated an average amount of $181,020 for programs to serve individuals in state institutions, and 34 states allocated more than 0.8 percent of Title I funds for this purpose.
N=52 (FY 2006); 51 (FY 2010).

[a] The national average is the average percentage of Title I funds dedicated for this purpose across all states.

[b] The total amount allocated is the sum of allocations across all states.

SOURCE: U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal Perkins Data Base System and State Consolidated Annual Report data system information for FY 2010.

[36] Sec. 112(a)(2).

Reserve funds

Perkins III increased the minimum amount of resources that states must distribute to local programs from 75 percent to 85 percent of the overall state grant. At the same time, Congress offered states the option of creating a reserve fund of up to 10 percent of local subgrantee funding (or 8.5 percent of the state's total grant), which gave states flexibility in adjusting to the new requirement.[37]

Reserve funds are allocated to eligible recipients through means other than the statutory formula chosen by the state, such as alternative formulas or competitions. *Perkins III* required states to target their reserves to local programs that (1) were located in rural areas, (2) had high numbers of vocational students, (3) had large percentages of vocational students, or (4) had experienced funding losses due to within-state formula changes introduced in the 1998 legislation. Because *Perkins IV* introduced no changes to the within-state allocation formula, the latter provision was dropped in the 2006 legislation, along with a requirement that states spend funds on at least two of the specified categories.[38]

A growing number of states are making use of the reserve provision (Exhibit 2.11); between FY 2006 and FY 2010 the number of states using the reserve fund increased from 24 to 41. As a result, the total amount of reserve funds recorded across states grew from roughly $34.4 to $51.7 million, or about 50 percent. Among states opting for the reserve fund, the average percentage of local funds allocated was 7.6 percent in FY 2006 and 7.7 percent in FY 2010. Ten states chose the full 10 percent permitted in FY 2006, and 21 did so in FY 2010.

States have discretion over how to divide reserve funds between the secondary and postsecondary education levels (Exhibit 2.12). As with formula-allocated Title I funds, in FY 2010 the bulk of reserve funds across all states was allocated to the secondary level (63 percent). Fourteen states with a reserve fund used the funds exclusively for secondary education. By contrast, just five states allocated their entire reserve fund to the postsecondary level.

[37] Sec. 112(a)(1).
[38] Sec. 112(c).

Exhibit 2.11.
Percentage and amount of Title I local funds used as reserve funds, by state: FY 2006 and FY 2010

State	FY 2006		FY 2010	
	Reserve (percentage of local funds)	Reserve amount	Reserve (percentage of local funds)	Reserve amount
Average percentage and total reserve amount[a]	**8**	**$34,379,591**	**8**	**$51,728,212**
Alabama	7	1,121,513	7	1,223,877
Alaska	10	358,268	10	358,268
Arizona	9	1,763,956	4	818,590
Arkansas	*	*	6	600,000
California	*	*	*	*
Colorado	10	1,329,388	10	1,486,522
Connecticut	4	344,613	8	736,526
Delaware	*	*	10	409,068
District of Columbia	*	*	*	*
Florida	7	3,818,842	5	2,872,902
Georgia	5	1,554,931	10	3,553,664
Hawaii	*	*	2	78,049
Idaho	*	*	7	410,915
Illinois	*	*	*	*
Indiana	6	1,451,510	*	*
Iowa	*	*	2	150,000
Kansas	*	*	10	996,318
Kentucky	*	*	8	1,344,218
Louisiana	*	*	10	1,974,584
Maine	10	491,258	10	530,014
Maryland	*	*	5	717,585
Massachusetts	3	428,350	2	300,000
Michigan	*	*	1	300,000
Minnesota	*	*	10	1,651,822
Mississippi	*	*	*	*
Missouri	10	2,020,867	10	1,928,963
Montana	10	463,856	10	458,817
Nebraska	8	500,000	8	500,000
Nevada	2	156,892	10	695,190

See notes at end of table.

Exhibit 2.11.—cont.
Percentage and amount of Title I local funds used as reserve funds, by state: FY 2006 and FY 2010

State	FY 2006		FY 2010	
	Reserve (percentage of local funds)	Reserve amount	Reserve (percentage of local funds)	Reserve amount
New Hampshire	5	$245,629	5	$258,659
New Jersey	10	2,100,839	8	1,662,028
New Mexico	10	787,405	10	717,887
New York	*	*	*	*
North Carolina	*	*	7	2,034,991
North Dakota	*	*	10	382,775
Ohio	10	3,873,461	10	3,801,957
Oklahoma	10	1,355,174	10	1,283,005
Oregon	*	n/a	10	1,305,710
Pennsylvania	5	1,936,992	*	*
Rhode Island	*	*	10	519,199
South Carolina	*	*	10	1,755,469
South Dakota	10	368,831	10	366,357
Tennessee	*	*	10	2,156,119
Texas	6	4,943,999	10	8,013,031
Utah	*	*	3	400,000
Vermont	*	*	5	187,845
Virginia	*	*	*	*
Washington	6	1,077,164	10	1,787,097
West Virginia	*	*	*	*
Wisconsin	10	1,885,853	6	1,000,191
Wyoming	*	*	*	*
Puerto Rico	*	*	*	*

Exhibit reads: Alabama allocated $1,121,513 or 6.6 percent of local funds to the reserve fund in FY 2006 and $1,223,877 or 7.0 percent in FY 2010.

* State did not have a reserve fund.

[a] Average and total calculated for the 24 states in FY 2006 and the 41 states in FY 2010 that had a reserve fund.

SOURCE: U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal Perkins Data Base System and State Consolidated Annual Report data system information for FY 2010.

Exhibit 2.12.
Percentage and amount of reserve funds allocated to the secondary and postsecondary levels, by state: FY 2010

		Secondary		Postsecondary	
	Reserve amount	Amount	Percent	Amount	Percent
Total reserve amount	**$51,728,212**	**$32,375,776**	**63**	**$19,352,437**	**37**
Alabama	1,223,877	1,223,877	100	0	0
Alaska	358,268	310,000	87	48,268	14
Arizona	818,590	818,590	100	0	0
Arkansas	600,000	600,000	100	0	0
California	*	*	*	*	*
Colorado	1,486,522	891,913	60	594,609	40
Connecticut	736,526	405,089	55	331,437	45
Delaware	409,068	409,068	100	0	0
District of Columbia	*	*	*	*	*
Florida	2,872,902	2,517,324	88	355,578	12
Georgia	3,553,664	1,776,832	50	1,776,832	50
Hawaii	78,049	39,025	50	39,025	50
Idaho	410,915	0	0	410,915	100
Illinois	*	*	*	*	*
Indiana	*	*	*	*	*
Iowa	150,000	0	0	150,000	100
Kansas	996,318	498,159	50	498,159	50
Kentucky	1,344,218	739,320	55	604,898	45
Louisiana	1,974,584	0	0	1,974,584	100
Maine	530,014	349,809	66	180,205	34
Maryland	717,585	466,430	65	251,155	35
Massachusetts	300,000	300,000	100	0	0
Michigan	300,000	300,000	100	0	0
Minnesota	1,651,822	693,765	42	958,057	58
Mississippi	*	*	*	*	*
Missouri	1,928,963	1,928,963	100	0	0
Montana	458,817	229,408	50	229,409	50
Nebraska	500,000	275,000	55	225,000	45
Nevada	695,190	195,190	28	500,000	72
New Hampshire	258,659	258,659	100	0	0
New Jersey	1,662,028	1,662,028	100	0	0
New Mexico	717,887	717,887	100	0	0
New York	*	*	*	*	*
North Carolina	2,034,991	2,034,991	100	0	0

See notes at end of table.

Exhibit 2.12.—cont.
Percentage and amount of reserve funds allocated to the secondary and postsecondary levels, by state: FY 2010

		Secondary		Postsecondary	
	Reserve amount	Amount	Percent	Amount	Percent
North Dakota	$382,775	$82,775	22	$300,000	78
Ohio	3,801,957	0	0	3,801,957	100
Oklahoma	1,283,005	1,283,005	100	0	0
Oregon	1,305,710	652,855	50	652,855	50
Pennsylvania	*	*	*	*	*
Rhode Island	519,199	137,068	26	382,131	74
South Carolina	1,755,469	1,755,469	100	0	0
South Dakota	366,357	274,768	75	91,589	25
Tennessee	2,156,119	1,724,895	80	431,224	20
Texas	8,013,031	5,649,446	71	2,363,585	30
Utah	400,000	200,000	50	200,000	50
Vermont	187,845	187,845	100	0	0
Virginia	*	*	*	*	*
Washington	1,787,097	786,323	44	1,000,774	56
West Virginia	*	*	*	*	*
Wisconsin	1,000,191	0	0	1,000,191	100
Wyoming	*	*	*	*	*
Puerto Rico	*	*	*	*	*

Exhibit reads: Alabama allocated $1,223,877 or 100 percent of its reserve fund to the secondary level in FY 2010.
* State did not have a reserve fund.
SOURCE: U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal Perkins Data Base System and State Consolidated Annual Report data system information for FY 2010.

In the 2008–09 program year, state directors reported most often using secondary reserve funds to support programs in rural areas (12 respondents), followed by areas with high percentages of CTE students (9 respondents) (Exhibit 2.13). At the postsecondary level, rural areas and areas with high numbers of CTE students tied for the most common target categories. Case study evidence indicates that states used the reserve fund to encourage innovation or allocate additional funds to districts and institutions based on need. Although most states have established reserve funds, not all have. Administrators from one of the 11 states that chose not to establish a reserve fund reported state concerns that a reserve fund might be perceived as taking money from districts.

Exhibit 2.13.
Number of states using reserve fund allocation criteria options: Program years 2000–01 and 2008–09

	2000–01[a]		2008–09[b]	
Criteria	**Secondary**	**Postsecondary**	**Secondary**	**Postsecondary**
Rural areas	12	7	12	6
Areas with high percentages of CTE students	10	6	9	2
Areas with high numbers of CTE students	7	5	8	6
Other[c]	8	2	4	2
Don't know/No response	2	2	16	13
No reserve/No reserve at level	25	35	17	26

Exhibit reads: In program year 2000–01, 12 states reported allocating reserve funds at the secondary level to rural areas.
[a] N=46.
[b] N=50 (secondary); 48 (postsecondary).
[c] In 2000–01, "Other" includes "Communities negatively affected by the 1998 Act."
NOTE: Respondents could use more than one type of criteria.
SOURCE: White et al. (2004); Secondary and Postsecondary State Director Surveys, 2009.

Title I Resources at the Secondary and Postsecondary Levels

Perkins IV provides states with considerable discretion in how they distribute their Title I funds across secondary and postsecondary education. This section examines trends in the distribution of resources across these education levels and explores whether, and to what extent, new legislative features have affected states' distribution decisions.

Historically, states have distributed a larger share of *Perkins* funds to the secondary level, a trend that continues with *Perkins IV*. Nationally, states allocated an average of about 64 percent of funds to the secondary level in FY 2010, a proportion that has risen by just 2 percentage points since FY 1992 (Exhibit 2.14).[39]

[39] These funds exclude the up to 10 percent reserve funding that states may choose to distribute using criteria detailed in Sec. 112(c).

Exhibit 2.14.

Percentage of *Perkins* Title I formula-allocated funds allocated to the secondary and postsecondary levels, fiscal years 1992, 2001, and 2010, and change in the percentage share allocated to the secondary level, by state: FY 2001 through FY 2010

State	Secondary			Postsecondary			Change in percentage share allocated to secondary from FY 2001 through FY 2010
	FY 1992	FY 2001	FY 2010	FY 1992	FY 2001	FY 2010	
National average[a]	**62**	**63**	**64**	**38**	**37**	**36**	**1**
Alabama	66	63	68	34	37	32	5
Alaska	n/a	87	85	n/a	13	15	-2
Arizona	86	86	84	14	14	16	-1
Arkansas	71	75	74	29	25	26	-1
California	45	41	38	55	59	62	-4
Colorado	40	42	40	60	58	60	-2
Connecticut	79	86	81	22	14	19	-5
Delaware	85	n/a	85	15	n/a	15	n/a
District of Columbia	n/a	n/a	81	n/a	n/a	19	n/a
Florida	53	53	51	47	47	49	-3
Georgia	50	49	50	50	51	50	1
Hawaii	50	50	50	50	50	50	0
Idaho	70	65	65	30	35	35	0
Illinois	66	60	60	34	40	40	0
Indiana	64	n/a	64	36	n/a	36	n/a
Iowa	28	56	51	72	44	49	-6
Kansas	50	56	50	50	45	50	-6
Kentucky	44	49	55	56	51	45	6
Louisiana	56	55	56	44	45	44	1
Maine	53	50	50	47	50	50	0
Maryland	70	65	65	30	35	35	0
Massachusetts	81	71	70	19	29	30	-1
Michigan	58	n/a	60	42	n/a	40	n/a
Minnesota	9	36	42	91	64	58	6
Mississippi	46	53	53	54	48	47	1
Missouri	70	71	72	30	30	28	2
Montana	65	63	65	35	37	35	2

See notes at end of table.

Exhibit 2.14.—cont.
Percentage of *Perkins* Title I formula-allocated funds allocated to the secondary and postsecondary levels, fiscal years 1992, 2001, and 2010, and change in the percentage share allocated to the secondary level, by state: FY 2001 through FY 2010

State	Secondary			Postsecondary			Change in percentage share allocated to secondary from FY 2001 through FY 2010
	FY 1992	FY 2001	FY 2010	FY 1992	FY 2001	FY 2010	
Nebraska	50	60	55	50	40	45	-5
Nevada	75	68	68	25	32	32	0
New Hampshire	n/a	79	80	n/a	21	21	0
New Jersey	77	66	55	23	34	45	-11
New Mexico	8	36	50	92	64	50	14
New York	66	57	52	34	43	48	-5
North Carolina	69	n/a	64	31	n/a	36	n/a
North Dakota	65	65	65	35	35	35	0
Ohio	82	82	88	18	18	12	6
Oklahoma	84	88	84	16	12	16	-4
Oregon	50	n/a	50	50	n/a	50	n/a
Pennsylvania	71	70	70	29	30	30	0
Rhode Island	90	n/a	85	11	n/a	15	n/a
South Carolina	87	82	67	13	18	33	-15
South Dakota	42	43	50	58	57	50	7
Tennessee	86	89	85	14	11	15	-4
Texas	56	57	71	44	43	30	13
Utah	60	58	60	40	42	40	2
Vermont	80	80	75	20	20	25	-5
Virginia	85	85	85	15	15	15	0
Washington	42	43	44	58	57	56	1
West Virginia	77	78	71	23	22	29	-7
Wisconsin	45	44	48	55	56	52	3
Wyoming	n/a	65	60	n/a	35	40	-5

Exhibit reads: Alaska allocated 87 percent of local funds to the secondary level in FY 2001 and 85 percent in FY 2010, a decrease of 2 percent.

n/a not available or missing data.

[a] The national average is the average proportion of Title I funds dedicated to each level across all states available in a given year (47 states in FY 1992; 44 states in FY 2001; and all U.S. states, including the District of Columbia, in FY 2010).

SOURCE: Silverberg et al. (2004); and U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal Perkins Data Base System and State Consolidated Annual Report data system information for FY 2010.

Of the 44 states for which data from *Perkins III* and *IV* are available, the percentage of funds allocated to the secondary level differed by 5 percent or less in 33 states from FY 2001 to FY 2010, with 13 states registering virtually no change (i.e., differences of 1 percent or less). Among the eleven states with percentage point changes greater than 5 percent, six states increased the proportion of resources flowing to the secondary level, and five reduced the secondary share of the funds.

The case studies indicate that some states had recently changed the division of funds based on negotiations between representatives for the secondary and postsecondary levels, while other states maintained divisions that were determined many years ago. For example, negotiations within the last three years in one state resulted in a formula based on enrollments averaged over several years. In another state, the proportion allocated to each level had been negotiated in the early 1990s. One state-level administrator noted that the issue could be contentious: "I think the hardest part with *Perkins*, looking at it from a state level, is there seems to be more or less a constant battle between postsecondary and secondary on how much money they get."

In the survey, state directors indicated that they did not anticipate changes to the amounts allocated to the secondary and postsecondary levels for the remainder of *Perkins IV*.[40] The majority (37) of the 50 secondary respondents anticipated no changes, and just one director reported an expected increase to the postsecondary amount; another 11 responded that they did not know. None of the 45 postsecondary respondents anticipated changes, and 12 reported that they did not know.

Secondary Title I Local Allocations

After the state has deducted administrative, leadership, and (if applicable) reserve fund resources, remaining Title I funds are disbursed to eligible secondary and postsecondary providers. Grant resources flowing into the secondary level are distributed to qualifying LEAs using a legislated distribution formula. The following section describes how states distribute these funds at the secondary level, and provides information on the number and characteristics of participating LEAs.

Allocation criteria

States allocate Title I secondary funds to eligible LEAs using a statutory distribution formula. The formula allocates 30 percent of funds based on the number of individuals aged 5–17 residing in the school district, and 70 percent based on the number aged 5–17 in the school

[40] Secondary and Postsecondary State Director Surveys, 2009.

district who lived in poverty during the preceding fiscal year.[41] Calculations are based on all LEAs in the state eligible for *Perkins IV* resources. For example, an LEA serving 5 percent of those aged 5–17 living in poverty among all eligible districts in the state would be eligible to receive 5 percent of the 70 percent of formula-allocated funds. Because the formula distributes resources based on the number of individuals residing within a district's boundaries and not on the number participating in CTE programs, funding amounts are not tied to the presence or size of CTE programs offered within LEAs. Consequently, demographically similar districts may qualify for roughly equivalent amounts of *Perkins IV* funding irrespective of student participation in CTE or the level of LEA investment in CTE programs.

Perkins IV offers two alternatives to the legislated formula. First, states may apply for a waiver for more equitable distribution that allows states to use an alternative formula to distribute resources to local subgrantees.[42] This waiver may be granted only if an eligible agency can demonstrate that its use more effectively targets resources on the basis of poverty, as defined by the Office of Management and Budget. Second, if 15 percent or less of a state's grant is made available to either the secondary or postsecondary level, the Special Rule for Minimal Allocation allows these funds to be distributed on a competitive basis or by an alternative method.[43] According to Department staff, no state used these options at the secondary level during the first four years of *Perkins IV*; the options also were available but unused for secondary disbursement under *Perkins III* (Silverberg et al. 2004).[44]

As part of the allocation process, state agencies issue an annual application that LEAs seeking funds must complete and submit. To prepare the application, an LEA must develop a plan for CTE programs that indicates how it will use federal resources to address the required activities detailed in *Perkins IV* and the state plan.

Findings from the secondary state director survey indicated that, with few exceptions, states approved nearly all of the 4,060 secondary local subgrantee applications submitted across 45 states for the 2008–09 program year.[45] States described working closely with LEAs to improve applications that did not initially meet *Perkins* requirements so that all or most applicants eventually qualified to receive funds. Among the 45 secondary state directors responding, only three reported rejecting funding applications, with one state accounting for 23 of the 26 rejected applications. The odds that an LEA would qualify for funding, either in response to its original application or after revision and resubmission, approached 100 per-

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[41] States must use either Census data used to determine district eligibilities under Title I of the *Elementary and Secondary Education Act* (*ESEA)* or data collected by the National Center for Education Statistics (Sec. 131(a)). Poverty data are obtained from Sec. 1124(c)(1)(A) of *ESEA*.
[42] Sec. 131(c).
[43] Sec. 133 (a).
[44] *Perkins IV* information obtained through personal communication with Andrew Johnson, Grants Management Specialist at the Office of Vocational and Adult Education, April 18, 2011.
[45] Secondary and Postsecondary State Director Surveys, 2009.

cent. This finding parallels that reported in the previous national assessment, which found that 93 percent of local applications for *Perkins* secondary funds in FY 2001 were approved and awarded, with only six states rejecting one or more local applications (Silverberg et al. 2004).

State directors in the three states that rejected one or more local applications offered several reasons for their decision not to award funding. These included failure on the part of the LEA to provide an adequate plan for allocating funds and collecting accountability data, failure to provide past accountability data, poor past performance, insufficient program quality, or an inability or unwillingness to join a consortium.[46]

Percentage and type of LEAs awarded funding

Although all LEAs enrolling students may qualify for a *Perkins IV* grant, resources typically are distributed to those offering secondary programs (i.e., where grades 10–12 are the highest offered) (Exhibit 2.15).

Exhibit 2.15.
Percentage of LEAs with secondary schools awarded Title I funds: Fiscal years 1992, 2001, and 2010

	FY 1992	FY 2001	FY 2010
LEAs with secondary school(s) awarded Title I funds	68	64	68

Exhibit reads: Among the 39 states for which data were available in all three years, about 68 percent of LEAs with secondary schools received a Title I grant in FY 1992.
NOTE: "LEAs with secondary schools," as defined here and used as the denominator in these calculations, include all LEAs and identifiable CTE area schools that have at least 10th-, 11th-, or 12th-grade education, based on an analysis using the NCES Common Core of Local Education Agency Universe Survey: School Year 2007–08 (most recent year available). In FY 2010, these institutions accounted for about 95 percent of all grantees for which a CCD match was found. The analysis is based on the 39 states for which data were available in all three years.
SOURCE: (1992 and 2001 data) Silverberg et al. (2004); (2010 data) Secondary State Director Survey Fiscal Data, 2009; and National Center of Education Statistics (NCES), Common Core of Local Education Agency Universe Survey: School Year 2007–08.

An analysis of the 39 states for which data were available for FY 1992, FY 2001, and FY 2010 revealed changes of only a few points in the percentage of districts receiving Title I funds during this period. From 64 to 68 percent of districts with secondary schools were allocated funds in each of the three years.

The requirement that all grant recipients offer one or more POS to obtain funding does not seem to have adversely affected local CTE program administration and implementation. On a 1 to 5 rating scale, with 1 being a "very negative impact" and 5 a "very positive impact,"

[46] Because responses to some question items were less than 85 percent, results should be interpreted with caution.

LEA survey respondents rated the impact of adopting or developing POS at just over 3, indicating that these policies had no or a slightly positive impact on their administration and implementation of CTE programs.[47]

In FY 2010, about 95 percent of *Perkins IV* subgrantees were in LEAs with a highest grade of 12, which received about 97 percent of the funds allocated. LEAs in which grade 8 was the highest grade offered accounted for about 4 percent of subgrantees, but received just 1 percent of funds (Exhibit 2.16).

Exhibit 2.16.
Percentage of local secondary *Perkins* Title I allocations, by highest grade offered and type of LEA: FY 2010

Highest grade and LEA type	Number of grantees	Percentage of grantees	Percentage of funds
Highest grade offered			
Grade 8	432	4	1
Grade 12	9,205	95	97
Other grades or not classified	91	1	2
Type of LEA			
Local school district	9,520	98	94
Regional education services agency	138	1	5
Other[a]	70	1	4

Exhibit reads: The highest grade offered by 432 of the LEAs that received a Title I grant in FY 2010 was grade 8. This type of LEA represented 4 percent of all grantees and received 1 percent of the funds allocated.
[a] Other includes administrative centers, institutions providing services to individuals with special needs, and charter school districts.
NOTE: Analysis includes data for 9,728 LEAs in 49 states and the District of Columbia (excludes the 39 LEAs that received an allocation in FY 2010 but for which no NCES ID number or match was found).
SOURCE: Secondary State Director Surveys Fiscal Data, 2009.

Virtually all of the LEAs awarded funds were local school districts (98 percent). Regional education services agencies, which include Boards of Cooperative Educational Services, vocational school districts, and area CTE centers, also received *Perkins* Title I funds. Although these types of LEAs accounted for roughly 1 percent of the LEAs allocated funds, they received just over 5 percent of the funds allocated.

Beginning with *Perkins II* (FY 1991), Congress mandated that 1.25 percent of the total *Perkins* appropriation be set aside for programs serving Native Americans and Alaska Natives, including schools funded by the Bureau of Indian Affairs (BIA).[48] Since *Perkins III*, BIA-

[47] Secondary State Director Survey, 2009. Requirement to adopt at least one statewide POS to obtain funds, 3.46 (SE .026); Requirement to develop at least one POS to obtain funds, 3.39 (SE .025).
[48] Sec. 111(a)(1).

funded secondary schools have been ineligible to receive funds directly through this set-aside; these institutions are eligible, however, for formula-allocated Title I funds. Four states in the 2000–01 and 2008–09 program years reported awarding state *Perkins* funds to BIA secondary schools, either independently or as part of consortia.[49]

Consortium provision

To ensure that grants are adequate to support CTE programs and meet *Perkins IV* requirements, an LEA must be eligible to receive at least $15,000 using the basic grant distribution formula. If an LEA's allocation does not meet this threshold, it may either join a consortium with one or more other LEAs, combining resources to meet the minimum allocation requirement, or seek a secondary consortia waiver allowing receipt of a grant less than $15,000.[50]

States may grant waivers to any LEA that is either located in a rural, sparsely populated area or is a public charter school offering secondary CTE programs, as long as the LEA can demonstrate that it is unable to join a consortium.[51] Similar numbers of secondary state directors reported issuing minimum local subgrantee waivers under *Perkins III* and *Perkins IV* (24 in the 2000–01 program year and 22 in the 2008–09 program year) (Exhibit 2.17).[52]

[49] Secondary State Director Survey, 2009. Because question items had response rates of less than 85 percent, results should be interpreted with caution.
[50] Sec. 131(d).
[51] Sec. 131(d). Both the 2001 and 2009 state director surveys listed three reasons for waiving the minimum allocation rule, including the inability to enter a consortium. Because inability to join a consortium is required of all waiver recipients, however, this section only reports two reasons for the LEA's inability to join a consortium: location and charter status.
[52] The 2008–09 data may underestimate waiver use, because three states reporting the use of waivers did not provide information on the number and types issued.

Exhibit 2.17.
Minimum allocation waiver use at the secondary level: Program years 2000–01 and 2008–09

Number and type of waivers	2000–01	2008–09[a]
Total number of waivers reported	**434**	**286**
Range (among states)	1–79	1–152
Number of states reporting waivers	24	22
Waiver type		
Sparsely populated area (number of waivers)	275	269
Number of states	**22**	**19**
Public charter school (number of waivers)	48	12
Number of states	1	2

Exhibit reads: In 2000–01, 24 states reported issuing 434 consortia waivers. Twenty-two states reported issuing a total of 275 waivers to LEAs located in sparsely populated areas.

[a] Three of the states reporting waivers in 2008–09 did not know the number and types of waivers received.

SOURCE: White et al. (2004); and Secondary State Director Survey, 2009.

In both years, states gave the largest number of waivers to LEAs located in sparsely populated (rural) areas that precluded them from joining a consortium. A total of 19 states granted such waivers in the 2008–09 program year, with 16 states issuing waivers to 10 or fewer LEAs.[53] In contrast, one predominantly rural state granted 152 waivers, one to every LEA in the state. States were less likely to take advantage of the waiver for public charter schools: only two states issued a total of 12 such waivers in 2008–09.

Rather than receiving a waiver, the majority of LEAs receiving grants of less than $15,000 joined consortia. In FY 2010, 32 of the 50 states that submitted fiscal data funded at least one consortium, and 22 states funded 10 or more (Exhibit 2.18).

Nationwide, about 5,570 LEAs received *Perkins* funds through 703 consortia, representing about 22 percent of the allocation amounts to secondary subgrantees reported by the 49 states for which FY 2010 data were available. The number of LEAs participating in consortia varied widely across states, with some states funding as few as two LEAs through consortia and others 500 or more. Although the legislation does not limit Title I consortia members to one education level, consortia members in the case study states with Title I consortia were all at the secondary level.

Grants for all participating subgrantees within a consortium are combined, and members must agree on how to allocate the aggregated resources to support CTE services across the consortium. One state director noted that LEAs had largely ignored this requirement in the past and reallocated funds to consortium members to be spent individually. Under *Perkins*

[53] Data not shown.

IV, however, consortia members within this state are meeting this requirement. Another state-level administrator reported that, in an effort to encourage collaboration, the state had imposed a requirement that LEAs could form a consortium only if they joined with a regional education services unit or community college. As a result, federal funds were more likely to be invested in creating high-quality CTE programs, rather than used as a revenue stream for LEAs to make equipment purchases. Another state administrator reported that the state's consortia facilitate disseminating information and aid in organizing and providing professional development.

Exhibit 2.18.
Number of secondary Title I consortia allocations, number of LEAs participating in consortia, and average consortia allocation amount, by state: FY 2010

State	Total number of consortia grants	Total number of LEAs participating in consortia	Average consortia grant (amount)
Alabama	2	6	84,300
Alaska	0	0	0
Arizona	0	0	0
Arkansas	16	179	218,700
California	20	102	101,800
Colorado	14	108	50,900
Connecticut	6	28	63,300
Delaware	n/a	n/a	n/a
District of Columbia	0	0	0
Florida	0	0	0
Georgia	0	0	0
Hawaii	0	0	0
Idaho	18	69	43,800
Illinois	52	483	303,300
Indiana	48	291	418,900
Iowa	49	327	51,500
Kansas	18	191	69,500
Kentucky	5	12	23,700
Louisiana	0	0	0
Maine	0	0	0
Maryland	0	0	0
Massachusetts	2	11	147,000
Michigan	24	523	679,800
Minnesota	26	337	240,200
Mississippi	20	57	110,600
Missouri	60	418	187,400
Montana	0	0	0
Nebraska	15	233	79,700
Nevada	0	0	0
New Hampshire	17	28	250,700
New Jersey	1	2	27,900
New Mexico	4	19	42,700
New York	0	0	0
North Carolina	0	0	0
North Dakota	26	151	46,900

See notes at end of table.

Exhibit 2.18.—cont.
Number of secondary Title I consortia allocations, number of LEAs participating in consortia, and average consortia allocation amount, by state: FY 2010

State	Number of consortia grants	Number of LEAs participating in consortia	Average consortia grant (amount)
Ohio	0	0	$0
Oklahoma	59	311	44,700
Oregon	15	142	201,700
Pennsylvania	72	462	255,800
Rhode Island	10	38	397,200
South Carolina	0	0	0
South Dakota	21	140	38,900
Tennessee	1	25	1,582,900
Texas	52	554	85,700
Utah	1	2	15,700
Vermont	0	0	0
Virginia	1	2	278,700
Washington	1	2	16,300
West Virginia	0	0	0
Wisconsin	30	317	134,300
Wyoming	0	0	0
Puerto Rico	n/a	n/a	n/a
Total	**706**	**5,570**	**n/a**

Exhibit reads: In FY 2010, Alabama had 2 Title I secondary consortia with a total of 6 LEA members, and the average allocation made to consortia in Alabama that year was $84,300.
n/a Data not available.
[a] Average grant is calculated among states awarding secondary Title I consortia grants.
SOURCE: Secondary State Director Surveys Fiscal Data, 2009.

Number and size of local allocations

Nationally, the number of LEA subgrantees differed little (by less than 1 percent) between *Perkins III* and *Perkins IV*, reflecting the consistency of the distribution formula across the two Acts. The 39 states for which multi-year data were available reported a total of 4,388 allocation amounts to individual LEAs and consortia in FY 2010, compared to 4,424 grants in FY 2001 and 4,232 in FY 1992 (Exhibit 2.19).

Exhibit 2.19.
Number and average amount of Title I local secondary allocations, fiscal years 1992, 2001, and 2010, and difference and percent change: FY 2001 through FY 2010

Number and amount of allocations	FY 1992	FY 2001	FY 2010	Difference from FY 2001 through FY 2010	Percent change from FY 2001 through FY 2010
Number of allocations	4,232	4,424	4,388	-36	-1
Amount (average allocation size)[a]					
Nominal dollars	76,238	101,813	112,934	11,121	11
Real dollars (2010)	118,629	125,505	112,934	-12,571	-10

Exhibit reads: There were 4,424 Title I secondary allocations in 2001 and 4,388 in FY 2010, a decrease of 36 grants or about 1 percent. In nominal dollars, the average allocation in FY 2001 was $101,813, and in 2010, $112,934, an increase of $11,121 or 11 percent.

[a] Current dollars are the actual amounts as they were allocated and reported in the given year. Real dollars have been adjusted for inflation.
NOTE: Calculations include the 39 states for which secondary local allocation data were available for all three years.
SOURCE: Silverberg et al. (2004); NACTE Secondary State Director Survey Fiscal Data, 2009; and Real dollar calculations: Bureau of Labor Statistics, Inflation Calculator, http://data.bls.gov/cgi-bin/cpicalc.pl (accessed January 20, 2011).

The average LEA allocation increased by roughly one-third between *Perkins II* and *Perkins III*. As documented in the previous national assessment, this increase is likely due to the confluence of several factors, including the increase in appropriations between *Perkins II* and *Perkins III* and a change in the proportion of resources distributed to local providers (Silverberg et al. 2004). In keeping with past trends, the average allocation amount also increased between *Perkins III* and *IV*, climbing from $101,813 in FY 2001 to $112,934 in FY 2010. In addition to the factors noted above, the increase in the average allocation may reflect additional Title I resources in states that consolidated Title I and II (Tech Prep) funds. This increase represents a nominal gain of about $11,121, but in real 2010 dollars the average allocation declined by more than $12,000 between these years.

In FY 2001 and FY 2010, the average *Perkins IV* LEA allocation varied widely by state, and ranged from $2,562,592 to $17,097 in FY 2010 (Exhibit 2.20).[54] Among the 42 states for which FY 2001 and FY 2010 data were available, 30 reported an increase in the average LEA allocation, and 12 reported a decrease. Variations in both the size of the average allocation across states and the average allocation within states over time can be attributed to changes in the proportion of funds allocated to the secondary and postsecondary levels, the number of LEA applicants, the proportion of LEAs in consortia, relative LEA service area population and poverty levels, and average LEA size.

[54] In some states, allocation amounts for 2010 are estimates based on state formula calculations. Actual grant amounts disbursed to recipients may vary.

Exhibit 2.20.
Average, maximum, and minimum Title I secondary local allocation amounts awarded and direction of average allocation amount change, by state: FY 2001 and FY 2010

State	Average allocation amount		Change from	Maximum allocation		Minimum allocation	
	FY 2001	FY 2010	FY 2001	FY 2001	FY 2010	FY 2001	FY 2010
National[a]	**$101,813**	**$112,934**	**+**	**$13,526,258**	**$13,700,000**	**$582**	**$157**
Alabama	75,837	85,413	+	1,211,668	1,195,365	8,159	15,534
Alaska	66,078	56,574	–	1,102,628	953,409	15,000	15,000
Arizona	120,961	158,091	+	2,730,984	3,480,298	1,150	1,581
Arkansas	87,356	106,196	+	497,306	623,111	15,379	17,651
California	118,929	122,976	+	7,632,316	7,023,392	2,400	1,891
Colorado	75,131	84,624	+	811,763	933,633	3,934	1,119
Connecticut	77,709	79,346	+	1,048,221	776,539	15,000	13,643
Delaware	n/a	n/a	n/a	n/a	n/a	n/a	n/a
District of Columbia	n/a	600,000	n/a	n/a	2,528,015	n/a	54,161
Florida	324,189	421,469	+	3,969,864	4,414,487	13,030	14,030
Georgia	72,072	97,409	+	818,653	1,042,007	8,701	2,831
Hawaii[b]	2,285,140	2,562,592	+	2,285,140	2,562,592	2,285,140	2,562,592
Idaho	62,024	62,190	+	355,505	370,807	1,687	4,058
Illinois	354,369	56,590	–	8,511,898	8,246,886	31,392	382
Indiana	n/a	418,916	n/a	n/a	1,211,526	n/a	51,866
Iowa	n/a	60,978	n/a	n/a	476,836	n/a	6,428
Kansas	71,443	44,663	–	650,327	712,416	5,879	819
Kentucky	48,499	49,060	+	1,084,916	1,284,610	2,702	1,988
Louisiana	149,794	142,170	–	1,469,956	776,767	16,014	12,245
Maine	75,943	88,336	+	173,441	221,635	27,900	8,367
Maryland	356,424	387,762	+	2,735,562	2,105,583	30,546	35,583
Massachusetts	n/a	156,502	n/a	n/a	1,740,285	n/a	14,327
Michigan	n/a	832,825	n/a	n/a	4,505,403	n/a	95,807
Minnesota	104,482	240,150	+	1,045,389	741,180	15,001	36,962
Mississippi	48,372	53,701	+	473,279	989,002	4,896	4,922
Missouri	151,026	183,308	+	1,563,874	1,521,581	3,222	3,282
Montana	26,224	17,097	–	656,347	280,412	1,000	1,000
Nebraska	79,984	98,607	+	894,496	926,719	15,235	16,167
Nevada	225,457	297,722	+	2,181,208	3,390,042	2,912	2,039
New Hampshire	136,751	250,701	+	514,526	772,281	45,228	28,418
New Jersey	112,699	46,459	–	982,291	923,120	2,550	3,776
New Mexico	117,303	102,683	–	810,549	976,348	22,777	21,722
New York	558,769	431,781	–	13,526,258	13,700,000	73,257	21,528
North Carolina	n/a	176,172	n/a	n/a	1,681,133	n/a	11,788

See notes at end of table.

Exhibit 2.20.—cont.
Average, maximum, and minimum Title I secondary local allocation amounts awarded and direction of average allocation amount change, by state: FY 2001 and FY 2010

State	Average grant amount		Change from	Maximum grant		Minimum grant	
	FY 2001	FY 2010	FY 2001	FY 2001	FY 2010	FY 2001	FY 2010
North Dakota	$50,279	$62,391	+	$209,796	$244,408	$5,547	$14,712
Ohio	322,241	332,428	+	2,667,048	2,340,533	46,833	42,768
Oklahoma	78,113	58,283	–	994,299	1,149,840	3,986	1,165
Oregon	n/a	158,727	n/a	n/a	649,175	n/a	1,499
Pennsylvania	213,181	263,031	+	5,704,966	6,558,290	19,543	11,332
Rhode Island	n/a	397,188	n/a	n/a	1,247,770	n/a	104,240
South Carolina	128,254	157,825	+	933,272	1,085,453	13,588	16,537
South Dakota	28,605	43,389	+	146,032	223,481	886	3,115
Tennessee	139,909	151,613	+	3,086,573	3,013,420	11,744	8,267
Texas	41,164	137,116	+	3,104,501	3,798,821	1,500	1,597
Utah	688,846	188,152	–	2,418,246	1,066,222	225,604	11,360
Vermont	166,944	159,369	–	290,948	370,720	12,843	39,000
Virginia	137,260	140,565	+	1,420,159	1,607,901	5,640	5,039
Washington	34,955	32,866	–	543,439	501,723	582	157
West Virginia	90,367	90,904	+	505,548	510,617	8,779	11,995
Wisconsin	92,334	110,510	+	2,212,247	2,156,789	5,151	17,170
Wyoming	47,060	51,564	+	332,601	362,856	2,496	4,075
Puerto Rico	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Exhibit reads: In Alabama, the average Title I secondary allocation was $75,837 in FY 2001 and $85,413 in FY 2010. The maximum and minimum allocations for this state in FY 2010 were $1,195,365 and $15,534, respectively.
n/a Not available or missing data.
+ Average allocation size increased from FY 2001 through FY 2009.
– Average allocation size decreased from FY 2001 through FY 2009.
a National average reflects the trend calculations in Exhibit 2.19.
b Hawaii has just one school district that receives all of the state's Title I Perkins funds allocated to the secondary level.
NOTE: Allotment amounts for FY 2010 for some states are estimates based on formula calculations. Actual allocations may vary according to consortia memberships. Amounts may also include carry over funds, which are unspent local funds from the previous year that are reallocated by formula.
SOURCE: Silverberg et al. (2004); and Secondary State Director Survey Fiscal Data, 2009.

Allocations by LEA poverty level, location, and size

Several aspects of the legislation target *Perkins* resources to specific groups of students and types of LEAs. As in previous legislation, *Perkins IV* has a compensatory emphasis. As outlined earlier, *Perkins IV* allocates 70 percent of secondary funds according to the relative number of low-income individuals in a community and the remaining amount according to the relative percentage of residents aged 5–17. Through the reserve allocation, states also have some discretion to direct additional resources to rural and sparsely populated areas and to areas with high numbers or high percentages of CTE students. The analyses presented

here provide an overview of how the various allocation criteria distributed funds by LEA poverty level, size, and location.[55]

LEA poverty level

In both FY 2001 and FY 2010, LEAs received an average of about $40 per secondary student (Exhibit 2.21). This average differed across low-, medium-, and high-poverty LEAs in FY 1992, FY 2001, and FY 2010.

In high-poverty LEAs, the funding level per secondary student was $53 in both FY 2001 and FY 2010, a higher level of funding than in medium- and low-poverty LEAs in both years. High-poverty LEAs did receive a lower proportion of *Perkins* funds in FY 2010 than in FY 2001 (36 vs. 42 percent), but they represented about the same proportion of subgrantees (28 percent). These patterns may reflect demographic shifts and changes in the mix of poverty levels among the districts applying for *Perkins* funds and the distribution of reserve funds, which states may have allocated in ways that disproportionately benefit high-poverty LEAs on a per student basis.

Exhibit 2.21.

Average *Perkins* Title I allocations per secondary student and distributions of funds and local subgrantees, by LEA poverty level: Fiscal years 1992, 2001, and 2010

	FY 1992	FY 2001			FY 2010		
LEA poverty level[a]	*Perkins* dollar amount per secondary student	*Perkins* dollar amount per secondary student	Percent of funds received by grantees	Percent of grantees	*Perkins* dollar amount per secondary student	Percent of funds received by grantees	Percent of grantees
High-poverty	$51	$53	42	28	$53	36	28
Medium-poverty	28	32	42	56	37	51	55
Low-poverty	32	41	16	16	25	13	18
All LEAs	32	40			39		

Exhibit reads: In FY 2001, high-poverty LEAs received an average of $53 in *Perkins* funding per secondary student. These types of LEAs received 42 percent of all local secondary Title I funds at the secondary level, and they accounted for about 28 percent of the secondary Title I grantees.

[a] Poverty levels are based on quartiles determined by the percentage of students within a district eligible for free or reduced-priced lunches. For FY 1992 and FY 2001: Low = 9 percent or less, Medium = 10 to 49 percent, High = 50 percent or more. For FY 2009: Low = 25 percent or less, Medium = 26 to 50 percent, High = 59 percent or more.

NOTE: Calculations are based on the 29 states for which trend data are available. The 2 percent of LEAs for which CCD enrollment numbers are unavailable are excluded; these include BOCES in New York and joint vocational school districts in Ohio. The unit of analysis is a secondary student (grades 9–12) because most take at least one vocational education course. Therefore, the *Perkins* dollar amounts in this table indicate the amount of federal money that is calculated per potential participant in secondary vocational education. Detail may not sum to 100 percent because of rounding.

SOURCE: Silverberg et al. (2004); Secondary State Director Survey Fiscal Data, 2009; and National Center for Education Statistics (NCES) Common Core of Data (CCD) Elementary/Secondary School Universe Survey: School Year 2007–08.

[55] The trend analyses reported in this section are based on the 29 states for which data were available for FY 1992, FY 2001, and 2010. Data for the 49 states (and the District of Columbia) for which data are available in 2010 are included in the exhibits, but not discussed in the text.

LEA location

In both FY 2001 and FY 2010, more than half of LEA subgrantees were located in rural areas (Exhibit 2.22). Because of their relatively small enrollments, however, these LEAs received less than one-fourth of Title I secondary funds (about 24 and 21 percent of funds in FY 2001 and FY 2010, respectively). By contrast, urban districts accounted for about 7 percent of subgrantees in both years, but they received about 38 and 32 percent of *Perkins* funds in FY 2001 and FY 2010, respectively.

Exhibit 2.22.

Average *Perkins* Title I allocations per secondary student and distribution of funds and local subgrantees, by LEA locale: Fiscal years 1992, 2001, and 2010

	FY 1992	FY 2001			FY 2010		
LEA locale[a]	*Perkins* dollar amount per secondary student	*Perkins* dollar amount per secondary student	Percent of funds received by grantees	Percent of grantees	*Perkins* dollar amount per secondary student	Percent of funds received by grantees	Percent of grantees
Urban	$43	$50	38	8	$45	32	7
Suburban	24	30	38	33	32	47	40
Rural	39	54	24	59	53	21	54
All LEAs	32	40			39		

Exhibit reads: In FY 2001, urban LEAs received an average of $50 per secondary student in *Perkins* funds. These types of LEAs received about 38 percent of *Perkins* Title I local funds granted at the secondary level and accounted for 8 percent of all secondary grantees.

[a] The CCD classifies LEA locales as either an LEA that primarily serves a central city of a Metropolitan Statistical Area (MSA); an LEA that serves an MSA but not its central city (suburban); or an LEA that does not serve an MSA (rural). Since 2005–06 was the last year this classification scheme was used, the 2009 data were analyzed using CCD LEA-level data from that year.

NOTE: Calculations are based on the 29 states for which data were available in all three years and in which more than 80 percent of grantees in a state had an NCES ID. The 2 percent of LEAs for which CCD enrollment numbers are unavailable are excluded in FY 2010; these include BOCES in New York and joint vocational school districts in Ohio. The unit of analysis is a secondary student (grades 9–12) because most take at least one vocational education course. Therefore, the *Perkins* dollar amounts in this table indicate the amount of federal money that is calculated per potential participant in secondary vocational education. Detail may not sum to totals because of rounding.

SOURCE: Silverberg et al. (2004); Secondary State Director Survey Fiscal Data, 2009; National Center for Education Statistics (NCES) Common Core of Data (CCD) Local Education Agency Universe Survey: School Year 2005–06; and NCES CCD Elementary/Secondary School Universe Survey: School Year 2007–08.

As in FY 2001, *Perkins* funds in FY 2010 disproportionately benefited rural and urban LEAs on a per student basis. These LEAs received an average of $53 and $45 per secondary pupil, respectively. By contrast, per pupil funding in suburban LEAs was $32. The relatively higher levels of per pupil funding for rural LEAs in FY 2001, compared with FY 1992, resulted from the introduction of the reserve fund in *Perkins III*, which was intended partly to increase assistance for rural CTE programs (Silverberg et al. 2004). This policy continues to have a salutary effect on rural funding levels under *Perkins IV*.

LEA size

Medium-sized LEAs had the largest proportion of subgrantees in FY 2010 (42 percent), but LEAs enrolling 3,000 or more students received the largest proportion of funds (84 percent). LEAs enrolling fewer than 500 students received a small proportion of overall *Perkins* funds (2 percent), but they accounted for 25 percent of all subgrantees (Exhibit 2.23).

Exhibit 2.23.

Average *Perkins* Title I allocations per secondary student and distribution of funds and local subgrantees, by subgrantee size: Fiscal years 1992, 2001, and 2010

	FY 1992	FY 2001			FY 2010		
LEA size	*Perkins* dollar amount per secondary student	*Perkins* dollar amount per secondary student	Percent of funds received by subgrantees	Percent of subgrantees	*Perkins* dollar amount per secondary student	Percent of funds received by subgrantees	Percent of subgrantees
Large (3,000 or more students)	$32	$37	79	34	$38	84	32
Medium (500 to 2,999 students)	32	53	18	45	45	15	42
Small (less than 500 students)	37	88	3	21	50	2	25
All school districts	32	40			38		

Exhibit reads: In FY 2001, large LEAs received an average of $37 per secondary student in *Perkins* funds. These types of LEAs received about 79 percent of *Perkins* Title I local funds granted at the secondary level and accounted for about 34 percent of all secondary subgrantees.
NOTE: Calculations are based on the 29 states for which data were available in all three years and in which more than 80 percent of subgrantees in a state had an NCES ID. The 2 percent of LEAs for which CCD enrollment numbers are unavailable are excluded in FY 2010; these include BOCES in New York and joint vocational school districts in Ohio. The unit of analysis is a secondary student (grades 9–12) because most take at least one vocational education course. Therefore, the *Perkins* dollar amounts in this table indicate the amount of federal money that is calculated per potential participant in secondary vocational education. Detail may not sum to totals because of rounding.
SOURCE: Silverberg et al. (2004); Secondary State Director Survey Fiscal Data, 2009; NCES Common Core of Data (CCD) Local Education Agency Universe Survey: School Year 2007–08; and NCES CCD Elementary/Secondary School Universe Survey: School Year 2007–08.

On a per secondary student basis, however, allocations to small districts were equivalent to an average of $50 per student in FY 2010, or about 32 percent more than the average $38 that large districts received. Funding levels per secondary student in FY 2010 were smaller in small- and medium-sized LEAs than they were in FY 2001; for example, small districts were allocated $88 per student in FY 2001 and $50 per student in FY 2010. Per student allocations in large LEAs were about the same across the two years.

Use of secondary funds at the local level

Guidelines for the use of funds at the local level are divided into 9 required and 20 permissive uses. All of the eight required uses in *Perkins III* were maintained in *Perkins IV*, with only some textual changes made to the legislation. These changes added additional detail or specificity, but they did not change the substance of the required use. For example, specifications such as the "effective use of scientifically based research and data to improve instruction" were added to the requirement to provide professional development to faculty, administrators, and counselors. Mention of "Tech Prep" was removed from the requirement to link secondary and postsecondary CTE programs, and a requirement to offer POS was added. The only new required use in *Perkins IV* was to provide activities to prepare special populations enrolled in CTE programs for high-skill, high-wage, or high-demand occupations leading to self-sufficiency (Exhibit 2.24).[56]

Fifteen of the 20 permissive local uses of *Perkins IV* funds also had parallels in *Perkins III*, although several uses acquired new language or specifications.[57] The changes include providing work-related experiences to teachers and faculty as well as students, and addressing the integration of academic and CTE education in CTE teacher preparation programs. *Perkins IV* also added six new permissive uses, including support for entrepreneurship education, career-themed learning communities, training programs in automotive technologies, and pooling funds with one or more eligible recipients for innovative initiatives.

[56] Sec. 135(b).
[57] Sec. 135(c).

Exhibit 2.24.
Summary of required uses of local funds: *Perkins III* and *IV*

Required uses of local funds	*Perkins III*	*Perkins IV*
Strengthen academic and career and technical skills of CTE students through the integration of academics with CTE programs through a coherent sequence of courses, such a career and technical POS described in the state plan, to ensure learning in core academic subjects as defined by ESEA, and CTE subjects.*	√	√
Provide students with strong experience in and understanding of all aspects of an industry, including work-based learning experiences.*	√	√
Develop, improve or expand the use of technology in CTE.*	√	√
Professional development consistent with the state plan to secondary and postsecondary teachers, faculty, administrators, and career guidance and academic counselors who are involved in integrated CTE programs.*	√	√
Evaluations of vocational and technical education programs being carried out with Perkins funds, including an assessment of how the needs of special populations are being met.	√	√
Initiate, improve, expand and modernize quality vocational and technical education programs, including relevant technology.*	√	√
Provide services that are of sufficient size, scope and quality to be effective.	√	√
Link secondary and postsecondary CTE programs, including by offering the relevant elements of not less than one career and technical program of study described in the state plan.*	√	√
Activities to prepare special populations, including single parents and displaced homemakers who are enrolled in CTE programs, for high-skill, high-wage or high-demand occupations that will lead to self-sufficiency.		√

Exhibit reads: *Perkins III* had 8 required uses for local funds. Six of these had changes in language, section details, or both in *Perkins IV,* which also added one required use.
* Focus of activity was the same in *Perkins III* and *IV,* but language, section details, or both changed.
NOTE: For full description of required local uses, see Perkins IV , Sec. 135(b).
SOURCE: *Perkins IV* , Sec. 135(b).

According to local directors, the most common permissive uses were leasing, purchasing, upgrading, or adapting equipment (70 percent of LEAs) and providing career guidance and academic counseling (68 percent) (Exhibit 2.25).[58] More than half of LEAs (58 percent) devoted funds to support the implementation of POS. Less than one-fifth of LEAs, by contrast, offered continuing education or job referral services (13 percent) or the newly permitted entrepreneurship education and training (18 percent). Districts are generally unable to provide information on the percentage or amount of funds spent on various uses because funding sources may be combined and few states collect these data (Klein 2001).

[58] LEA Survey, 2009. All comparisons of the IHE and LEA survey data were tested for statistical significance using the Student's *t*-statistic, and all differences cited are statistically significant at the $p < .05$ level.

Exhibit 2.25.
Percentage of local secondary grant recipients who reported using Title I funds for permissive uses: Program year 2008–09

Permissive use	Percentage of LEAs
Leasing, purchasing, upgrading, or adapting equipment	70
Providing career guidance and academic counseling	68
Implementing CTE programs of study (POS)	58
Promoting work-related experiences for students	56
Providing programs for special populations	53
Assisting CTE student organizations	43
Supporting nontraditional training and activities	39
Involving business and labor in designing, implementing, and evaluating CTE programs covered by the Act	37
Developing new CTE courses	36
Supporting teacher preparation programs	35
Promoting industry experiences for teachers	35
Improving accountability data collection and reporting	30
Offering mentoring and related support services	28
Providing training programs in automotive technologies	23
Entrepreneurship education and training	18
Offering continuing education or job referral services	13
Other[a]	4

Exhibit reads: In program year 2008–09, 70 percent of LEAs reported using *Perkins* funds for leasing, purchasing, upgrading, or adapting equipment.

[a] "Other" includes CTE teacher training and professional development, career academies, integration of academics, literacy, technology, career software, industry exams, and inquiry-based learning.

NOTE: Estimates were weighted to reflect population values.

SOURCE: LEA Survey, 2009.

Case study evidence indicates that within-district allocations were made chiefly by the local director on the basis of programmatic priorities and perceived need and the formality of the funding allocation process varied by district. In some districts, allocation decisions were informed by meetings and discussions with faculty members, whereas others used a written application process requiring programs to document how funds would be used.

In the survey and case study visits, local directors reported equipment purchases, particularly for software associated with specific fields such as business and computer-aided design, as their most common use of the funds. To support POS, sites reported using funds for professional development for faculty (including conference attendance) and consultants to assist with POS development, articulation agreements with postsecondary institutions, and industry certifications. Other uses included salaries for counselors, data specialists, or faculty;

sending students to conferences and other professional events; and industry certification exam fees for students.

CTE is often more costly to provide than other types of instruction, chiefly because CTE classes tend to be smaller due to instructional and safety concerns, and salary and benefits costs are accordingly higher. Specialized equipment and faculty training also contribute to CTE program costs (Klein 2001). Case study evidence suggests that local *Perkins* funds assist with the equipment and training purchases needed for program innovation. Citing the *Perkins* requirement that funds should supplement, and not supplant, non-federal CTE funds, several local directors and faculty reported using *Perkins* funds to keep their programs up-to-date and in compliance with evolving industry standards. [59] Several directors noted that for some programs, *Perkins* funds were the only resources available for these purposes. One director explained, "…we do use *Perkins* money to develop new programs, to buy the equipment…that's the only way we've ever had in the past to keep up with changes in technology because we have no other funds in [this state]."

Postsecondary Title I Local Allocations

As at the secondary level, nonreserve Title I funds are allotted on the basis of a statutory formula. In contrast to the secondary formula, however, which is based on population and poverty measures unrelated to CTE enrollments, the postsecondary formula includes a measure of CTE enrollment. States also are permitted to use alternative methods for distributing *Perkins IV* funds through the special rule for minimum allocation and the waiver for more equitable distribution.

Allocation criteria

The statutory formula allocates funds to eligible IHEs based on the subgrantee's relative share of Pell Grant and BIA assistance recipients enrolled in CTE programs.[60] As at the secondary level, states can use an alternative formula if it more effectively targets funds to economically disadvantaged individuals.[61] In FY 2001, 11 states received a formula waiver for more equitable distribution at the postsecondary level (Silverberg et al. 2004), and 9 states did so in FY 2010.[62]

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[59] Sec. 311(a)
[60] Sec. 135(a).
[61] Sec. 132(a)
[62] FY 2010 information on formula waivers was gathered from *Perkins* 2008–2013 5-year state plans archived at U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal *Perkins* Database System and State Consolidated Annual Report Data System.

Funds can also be allocated on a competitive basis or through an alternative method if a state allocates 15 percent or less of local Title I funds to the secondary or postsecondary levels.[63] Although no state used the special rule for minimal allocation at the secondary level in FY 2010, according to federal data on *Perkins* allocations, seven states used this option at the postsecondary level.[64]

States have different rationales for choosing to allocate less than 15 percent to the postsecondary level. In one case study, the director reported that though the state recognizes the importance of postsecondary CTE, it opted to continue past practice by using a competitive grant process that the state had pioneered. The means of allocating funds varied. For example, one state reported using a formula that targeted adult programs, and another allocated one-half on the basis of the legislated formula, and the other half using a formula based exclusively on local poverty levels.

The postsecondary allocation process is similar to that used at the secondary level. Each year, state agencies issue an application that IHEs seeking federal funds must complete and submit. To apply, IHEs must develop a local plan for CTE programs that describes how resources will be used to address the required activities detailed in *Perkins IV* and the state plan.

Findings from the state postsecondary director survey indicated that states approved nearly all IHE grant applications submitted for the 2008–09 program year. Specifically, among the 47 states responding, all but two of 1,179 applications submitted in FY 2009 were approved, either as originally submitted or after they were revised and resubmitted. This disapproval rate was similar to that reported in FY 2001, when three states rejected one or more IHE applications (Silverberg et al. 2004).

The two state directors who reported rejecting a local application indicated that the rejections were for reasons including failure to submit accountability data previously, poor past performance, low-quality programs, or an inability to meet the $50,000 minimum allocation threshold.

Percentage and types of IHEs awarded funds

Postsecondary grant recipients must be public or private nonprofit IHEs providing no less than a two-year program of instruction that can be credited toward a bachelor's degree, tribally controlled colleges and universities, or nonprofit educational institutions (including

[63] Sec. 133(a).

[64] FY 2010 information on the special rule for minimal allocations was gathered from *Perkins* 2008–2013 5-year state plans and *Perkins* FY 2010 state budgets archived at U.S. Department of Education, Office of Vocational and Adult Education, 2011, Internal *Perkins* Data Base System and State Consolidated Annual Report Data System.

LEAs and area CTE centers) that offer certificate or apprenticeship programs at the post-secondary level.[65] While participation is open to a range of institution types, the majority of postsecondary subgrantees were public two-year colleges in FY 2010 (Exhibit 2.26).

Exhibit 2.26.
Percentage distributions of postsecondary Title I subgrantees and funds, by education level and higher education subgrantee type: FY 2010

Institution and program type	Percentage of subgrantees	Percentage of *Perkins* Title I postsecondary funds
Total funds	**100**	**100**
Programs for adults in non-IHE settings[a]	**14**	**4**
Institutions of higher education	**86**	**96**
All institutions of higher education subgrantees	**100**	**100**
Administrative units[b]	2	9
Public four-year	10	9
Private nonprofit four-year	1	0
Public two-year	83	80
Private nonprofit two-year	1	1
Public less-than-two-year	3	1

Exhibit reads: Programs for adults in non-IHE settings accounted for about 14 percent of Title I local postsecondary subgrantees in FY 2010 and received 4 percent of Title I local funds.

[a] The majority of these subgrantees are area career and technical education centers that also serve secondary students, such as BOCES in New York.

[b] Administrative units are offices for multi-campus college systems.

NOTE: Calculations are based on the 50 states that submitted FY 2010 fiscal data.

SOURCE: Postsecondary State Director Survey Fiscal Data, 2009; and NCES, Integrated Postsecondary Education Data System (IPEDS),

Local allocation data revealed that about 14 percent of subgrantees were adult programs in secondary institutions, and 86 percent were postsecondary institutions. Adult education programs offered through secondary institutions accounted for about 4 percent of the funds allocated.[66] The remaining 96 percent of funds went to IHEs.

Public two-year institutions (community colleges) were the largest proportion of postsecondary institution subgrantees (83 percent), followed by public four-year institutions (10 percent). These IHEs accounted for about 92 percent of all Title I postsecondary subgrantees. The remaining 8 percent of subgrantees were a mix of administrative units, public less-than-two-year institutions, and for-profit institutions, among others. More than four-fifths

[65] Sec. 3(22).

[66] Adult programs offer life-long learning opportunities in career and technical fields for adults in preparation for the workplace or postsecondary programs.

(87 percent) of all public two-year IHEs received a grant (Exhibit 2.27). In contrast, the proportion of public four-year IHEs among subgrantees was smaller, with about 20 percent of these types of institutions receiving grants.

Exhibit 2.27.
Number and percentage of public two- and four-year or above postsecondary institutions with Title I allocations: FY 2010

Institution type	Number of IHEs	Number receiving grants	Percent receiving grants
Public two-year	958	831	87
Public four-year and above	645	98	20

Exhibit reads: In FY 2010, 831 of 958 public two-year institutions received a *Perkins IV* grant, accounting for 87 percent of these grantees in this category.
NOTE: Public two- and four-year and above institutions accounted for 92.3 percent of Title I IHE subgrantees. Percentages are based on the 49 states for which FY 2010 data were available.
SOURCE: Postsecondary State Director Survey Fiscal Data, 2009; Snyder and Dillow (2011).

Consortium provision

To qualify for an individual *Perkins* grant, an IHE must have a minimum funding eligibility of at least $50,000, according to the basic grant distribution formula. Those unable to achieve this funding threshold may either participate in a consortium in which funds are combined for joint projects that serve all members, or seek a waiver to allow the consortium to fund programs that don't serve all members of the consortium. States have the option of granting a waiver to any IHE located in a rural, sparsely populated area, but only two states reported exercising this option in the 2008–09 program year, as compared to five states in 2000–01.[67]

In FY 2010, 10 of the 48 states (and the District of Columbia) for which local allocation data were available had from one to 26 postsecondary Title I consortia. Some 191 of the 1,197 postsecondary subgrantees (about 16 percent) were members of one of 78 postsecondary consortia reported in FY 2010. The number of institutions participating by state ranged from two to 50, with the average consortia allocation varying from $56,000 to $375,000.[68]

[67] Secondary and Postsecondary State Director Surveys, 2009.
[68] Survey of State Directors of Career and Technical Education Fiscal Data, 2010.

Number and size of local allocations

In FY 2010, 37 states allocated funds to 971 postsecondary Title I subgrantees. In FY 2001, the 38 reporting states reported a total of 1,065 allocations at the postsecondary level.[69] The average allocation amount increased from $285,645 in FY 2001 to $320,496 in FY 2010, an increase of about 12 percent in nominal terms and a decline of about 9 percent in real 2010 dollars (Exhibit 2.28).

Exhibit 2.28.
Number and average amount of Title I local postsecondary allocations in fiscal years 1992, 2001, and 2010, and difference and percent change: FY 2001 through FY 2010

Number and amount of allocations	FY 1992	FY 2001	FY 2010	Difference from FY 2001 through FY 2010	Percent change
Number of allocations	996	1,065	971	-94	-9
Average allocation size[a]					
Nominal dollars	$226,019	$285,645	$320,496	$34,851	12
Real dollars (2010)	351,282	351,703	320,496	-31,207	-9

Exhibit reads: There were 1,065 Title I postsecondary allocations in FY 2001 and 971 in FY 2010, a decrease of 94 or about 9 percent. In nominal dollars, the average allocation in FY 2001 was $285,645 and in FY 2010, $320,496, an increase of $34,851 or about 12 percent.

[a] Nominal dollars are the actual allocation amounts as they were allocated and reported in the given year. Real dollars have been adjusted for a measure of inflation.

NOTE: Calculations do not reflect consortia memberships. Calculations for 1992 and 2001 are based on the 38 states for which data were available in both years;FY 2010 calculations exclude one additional state for which data were not available in that year.

SOURCE: Postsecondary State Director Survey Fiscal Data, 2009; and Real dollar calculations: Bureau of Labor Statistics, Inflation Calculator, http://data.bls.gov/cgi-bin/cpicalc.pl (accessed January 21, 2011).

The average allocation increased in 29 states and declined in 12 states between FY 2001 and FY 2010 (Exhibit 2.29). Average allocation amounts in FY 2010 ranged from $42,881 to $769,047, although one state reported allocating all postsecondary Title I funds ($1,080,743) to one subgrantee. In FY 2010, IHE allocation amounts ranged from a maximum of $5,125,502 to a minimum of $223.

[69] Aggregation of 2001 data did not allow the state for which 2010 data are not available to be excluded in both years.

Exhibit 2.29.

Average, maximum, and minimum postsecondary allocation amounts in FY 2001 and FY 2010 and direction of average grant amount change, by state: FY 2001 through FY 2010

State	Average allocation			Maximum allocation		Minimum allocation	
	FY 2001	FY 2010	Change from FY 2001 through FY 2010	FY 2001	FY 2010	FY 2001	FY 2010
National[a]	**$285,645**	**$320,496**	+	**$4,832,430**	**$5,125,502**	**$1,025**	**$223**
Alabama	198,916	211,007	+	558,991	463,898	72,066	64,640
Alaska	127,330	121,666	–	184,275	196,646	93,439	10,000
Arizona	246,615	319,353	+	840,683	1,004,975	110,398	175,784
Arkansas	115,288	118,477	+	223,805	393,889	52,202	16,667
California	393,154	769,047	+	4,832,430	5,125,502	43,746	66,564
Colorado	348,454	420,891	+	885,294	1,179,655	75,354	93,053
Connecticut	123,711	133,454	+	184,175	242,490	72,783	34,241
Delaware	n/a	83,135	n/a	n/a	92,700	n/a	71,908
District of Columbia	n/a	717,360	n/a	n/a	717,360	n/a	717,360
Florida	384,061	426,364	+	3,787,602	3,931,771	51,977	1,259
Georgia	363,478	575,221	+	1,189,149	1,328,236	87,936	145,491
Hawaii	2,285,140	320,106	n/a	2,285,140	397,198	2,285,140	249,809
Idaho	316,451	329,284	+	572,433	616,268	162,861	211,768
Illinois	336,405	390,888	+	3,642,996	3,686,543	79,165	108,699
Indiana	n/a	377,542	n/a	n/a	1,019,371	n/a	21,538
Iowa	299,652	334,225	+	692,196	834,924	77,311	76,174
Kansas	151,331	155,075	+	405,891	339,003	51,690	25,435
Kentucky	235,850	345,976	+	559,516	755,921	95,847	84,458
Louisiana	167,455	n/a	n/a	1,616,381	n/a	52,803	n/a
Maine	1,973,707	339,104	n/a	1,973,707	611,727	1,973,707	154,418
Maryland	271,075	322,412	+	1,015,893	1,323,289	42,197	23,434
Massachusetts	266,556	193,744	–	492,892	533,471	64,079	3,003
Michigan	n/a	432,222	n/a	n/a	1,594,215	n/a	60,687
Minnesota	392,891	324,616	–	1,568,000	1,077,708	75,772	24,448
Mississippi	396,133	357,062	–	1,098,349	820,694	142,643	175,618
Missouri	290,978	124,204	–	1,316,712	1,298,762	60,579	307
Montana	111,996	135,241	+	204,180	264,270	54,061	65,916
Nebraska	400,833	414,920	+	747,358	946,970	152,803	36,168
Nevada	373,857	526,730	+	846,572	1,228,771	104,866	142,806
New Hampshire	193,044	1,080,743	+	291,782	1,080,743	30,669	1,080,743
New Jersey	209,413	238,284	+	606,229	950,533	1,025	223
New Mexico	274,703	225,902	–	1,464,811	1,296,213	63,448	50,235

See notes at end of table.

Exhibit 2.29.—cont.
Average, maximum, and minimum postsecondary allocation amounts in FY 2001 and FY 2010 and direction of average grant amount change, by state: FY 2001 through FY 2010

	Average allocation			Maximum allocation		Minimum allocation	
State	FY 2001	FY 2010	Change from FY 2001 through FY 2010	FY 2001	FY 2010	FY 2001	FY 2010
New York	$313,510	$354,799	+	$1,472,275	$1,705,641	$55,852	$54,161
North Carolina	n/a	177,717	n/a	n/a	728,659	n/a	53,741
North Dakota	127,839	120,588	–	328,162	230,847	1,352	31,438
Ohio	91,084	154,642	+	335,065	483,850	28,050	52,254
Oklahoma	125,427	42,881	–	292,354	259,148	48,852	3,847
Oregon	n/a	345,464	n/a	n/a	1,400,536	n/a	22,900
Pennsylvania	222,648	162,069	–	1,620,096	1,005,561	44,363	1,774
Rhode Island	n/a	87,615	n/a	n/a	350,919	n/a	50,000
South Carolina	158,481	370,520	+	351,224	891,997	45,972	73,932
South Dakota	393,251	325,659	–	669,646	671,416	23,713	91,528
Tennessee	70,645	68,810	–	201,300	146,086	26,600	50,000
Texas	538,625	526,601	–	2,199,000	2,470,525	54,000	50,000
Utah	284,340	290,068	+	1,115,319	1,467,295	8,000	10,830
Vermont	236,504	345,971	+	382,150	518,956	130,622	172,986
Virginia	137,630	140,206	+	418,944	572,252	50,000	50,000
Washington	297,578	360,535	+	1,360,944	1,258,209	65,310	132,873
West Virginia	173,505	229,673	+	355,116	424,590	95,181	94,654
Wisconsin	549,267	552,583	+	2,553,540	2,078,600	114,600	106,600
Wyoming	177,378	216,077	+	279,014	414,355	97,757	122,665

Exhibit reads: In FY 2010, the average Title I postsecondary local allocation in Alabama was $211,007, a increase (positive change) from the average allocation amount in FY 2001. The maximum allocation in Alabama that year was $463,898 and the minimum, $64,640.
n/a Data missing or not available, or data are not comparable across years.
+Average allocation size increased between FY 2001 and FY 2010.
– Average allocation size decreased between FY 2001 and FY 2010.
a The national average reflects the trend calculations in Exhibit 2.28.
NOTE: Allotment amounts for FY 2010 are estimates based on formula calculations. Actual grants may vary according to consortia memberships. Amounts may also include carry over funds, which are unspent local funds from the previous year that are reallocated by formula.
SOURCE: Silverberg et al. (2004); and Postsecondary State Director Survey Fiscal Data, 2009.

Use of funding at the local level

The required uses for Title I funds at the local level are the same for secondary and postsecondary education (see page 58).[70] The permissive uses apply to both levels as well, except for one new permissive use directed at the postsecondary level: developing and expanding post-

[70] Sec. 135(b).

secondary program offerings at times and in formats that are accessible for students, including working students, through the use of distance education.[71]

The most common permissive uses among postsecondary subgrantees in the 2008–09 program year were providing career guidance and academic counseling (81 percent), followed by leasing, purchasing, upgrading, or adapting equipment (76 percent) and providing programs for special populations (69 percent). Among the least common were creating small, personalized career-themed learning communities (11 percent), entrepreneurship education and training (14 percent), and supporting family and consumer science programs (15 percent) (Exhibit 2.30).

Case study interviews echoed the survey finding that career counseling and equipment expenses were the most common uses of Title I funds at the postsecondary level. Respondents noted that *Perkins* funds were used to support career advisor salaries and equipment upgrades for technology-dependent programs like healthcare. Among other uses noted by multiple postsecondary subgrantees were expenditures for data specialists, staff professional development, and CTE program marketing. Although marketing was noted as a use of funds at both secondary and postsecondary levels, postsecondary respondents described more extensive media campaigns that included advertising through print, radio, and other media.

As at the secondary level, case study evidence suggests that postsecondary *Perkins* funds help keep programs up-to-date and meet industry standards. One local director explained, "[Those funds are critical] to support the extra lab hours…, the instructional techs in the labs to help the students get what they need, the equipment purchases." Unlike at the secondary level, however, none of the postsecondary faculty or staff indicated that this was the only source of funds available for these purposes. Several local directors described combining *Perkins* funds with other sources, and two reported leveraging *Perkins* funds to attract funding from multiple academic units or outside sources, such as foundations, for large technology purchases such as computer lab upgrades and medical equipment.

[71] Sec. 135(c).

Exhibit 2.30.
Percentage of postsecondary subgrant recipients who reported using Title I funds for permissive uses: Program year 2008–09

Permissive use	Percentage of recipients
Providing career guidance and academic counseling	81
Leasing, purchasing, upgrading, or adapting equipment	76
Providing programs for special populations	69
Implementing CTE programs of study (POS)	61
Supporting nontraditional training and activities	61
Promoting work-related experiences for students	57
Offering mentoring and related support services	48
Developing new CTE courses	46
Involving business and labor in designing, implementing, and evaluating CTE programs covered by the Act	45
Promoting industry experiences for teachers	40
Providing training programs in automotive technologies	40
Improving accountability data collection and reporting	36
Supporting teacher preparation programs	32
Offering continuing education or job referral services	27
Offering programs for adults and school dropouts	26
Assisting CTE student organizations	23
Supporting family and consumer sciences programs	15
Entrepreneurship education and training	14
Creating small, personalized career-themed learning communities	11
Other[a]	6

Exhibit reads: In program year 2008–09, 81 percent of postsecondary grant recipients reported using Perkins funds for providing career guidance and academic counseling.

[a] "Other" includes faculty training and professional development, career academies, integrating academics and CTE, technology, salaries, supplies, materials, five-year planning, career software, student credentials and industry exams, and inquiry-based learning.

NOTE: Estimates were weighted to reflect population values.

SOURCE: IHE Survey, 2009.

Title II (Tech Prep)

Perkins II introduced Title II programs as part of the special projects section of the legislation (Title IIIE), and Congress successively reauthorized the program in 1998 and 2006.[72] Although Title II was retained in *Perkins IV*, Congress eliminated funding for this program in FY 2011. Beginning in FY 2012, states no longer received Title II resources. Before the funds for the program were discontinued, *Perkins IV* gave states the option to consolidate their Title II funds into their Title I basic grant. States that merged funds were exempt from reporting on the nine new accountability provisions and were no longer required to disaggregate Title II program students on the secondary and postsecondary core measures.

The education programs that Title II resources supported are generally known as Tech Prep programs. These programs are carried out under a formal articulation agreement between secondary and postsecondary subgrantees participating in a Tech Prep consortium.[73] A Tech Prep program combines at least two years of secondary education with at least two years of postsecondary education, with coursework offered in a coherent, nonduplicative sequence. Programs integrate academic and CTE instruction, offer work-based learning opportunities where appropriate and available, and must lead to technical skill proficiency, an industry-recognized credential, or a degree or certificate in a specific career field. Programs also should prepare students for employment in a high-skill, high-wage, or high-demand occupation or for further postsecondary education.

Title II (Tech Prep) Appropriations and Grants to States

In nominal terms, federal support for Title II rose by about $43 million (67 percent) between FY 1991 (*Perkins II)* and FY 1999 (*Perkins III*), but it declined from $106 million in FY 1999 (*Perkins III*) to about $105 million in FY 2007 (*Perkins IV*) (Exhibit 2.31). In real 2010 dollars, the purchasing power of Title II funds fell by about $28 million from FY 1999 to FY 2007, a decline of about 20 percent.

[72] Sec. 201(a).
[73] Sec. 203(c).

Exhibit 2.31.
Federal *Perkins* Title II appropriations in nominal and real 2010 dollars (in millions of dollars): Fiscal years 1991 (*Perkins II*), 1999 (*Perkins III*), and 2007 (*Perkins IV*)

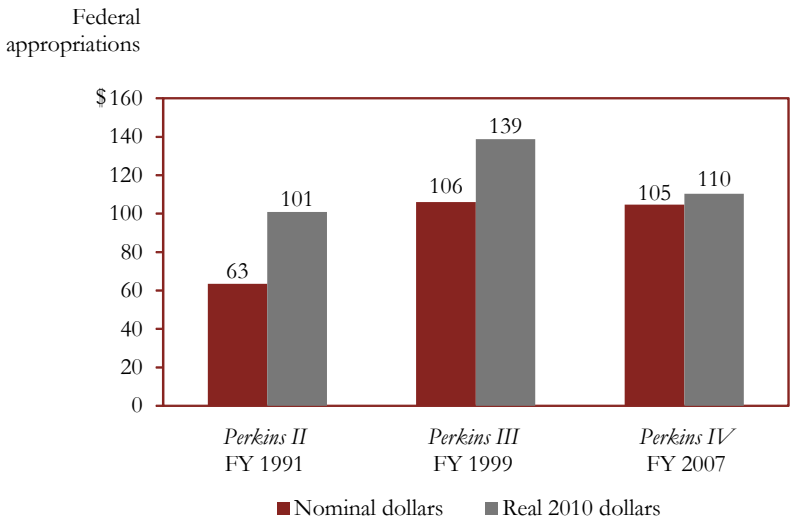

Exhibit reads: In nominal dollars, the federal appropriation for Perkins Tech Prep (Title II) programs was about $106 million in FY 1999 and $105 million in FY 2007. In real 2010 dollars, the federal appropriation was $110 million in FY 2007 and $139 million in FY 1999.
SOURCE: State Funding History Tables, FY 1980 to FY 2008, http://www2.ed.gov/about/overview/budget/history/index.html (accessed June 12, 2010); FY 2010 (to date): U.S. Department of Education Fiscal Year 2011 President's Request, http://www2.ed.gov/about/overview/budget/budget11/summary/appendix4.pdf (accessed June 12, 2010); and Real dollar calculations: Bureau of Labor Statistics, Inflation Calculator, http://data.bls.gov/cgi-bin/cpicalc.pl (accessed January 21, 2011).

The formula used to distribute Title I funds also determined the amount of a separate annual Title II allocation to all states. States seeking funds were required to submit an application to the Department as part of their state plan, describing how such programs would coordinate with other state activities. States opting to merge Title I and II funding had to notify the government of their consolidation plans, after which they could manage Title II funds as they would those allocated under Title I. Title II grants to states in FY 2009 ranged from a maximum of about $11 million to a minimum of $54,653 (Exhibit 2.32).

Reflecting the decline in federal Title II appropriations, grants to all states declined between FY 2001 and FY 2009. Some 19 of the 53 state grantees experienced losses of just one-tenth of 1 percent, but the grants declined by more than 5 percent for 15 state grantees.

Exhibit 2.32.
Federal Title II allocation amounts to states, fiscal years 1992, 2001, and 2009, and percent change, by state: FY 2001 through FY 2009

State	FY 1992	FY 2001	FY 2009	Percent change from FY 2001 through FY 2009
Alabama	$1,808,501	$1,995,785	$1,994,293	0
Alaska	160,609	336,753	250,163	-26
Arizona	1,448,578	1,987,848	1,880,272	-5
Arkansas	1,004,895	1,186,934	1,186,047	0
California	9,357,339	11,895,013	11,251,825	-5
Colorado	1,119,563	1,420,073	1,393,615	-2
Connecticut	880,622	869,581	868,931	0
Delaware	217,099	440,480	229,550	-48
District of Columbia	179,938	321,892	134,677	-58
Florida	4,063,397	5,075,903	4,815,873	-5
Georgia	2,616,728	3,102,535	3,074,414	-1
Hawaii	358,614	530,000	411,510	-22
Idaho	435,623	652,082	623,977	-4
Illinois	3,665,308	4,054,595	4,049,330	0
Indiana	2,228,749	2,465,494	2,463,651	0
Iowa	1,042,639	1,245,235	1,244,304	0
Kansas	874,276	1,120,100	1,065,569	-5
Kentucky	1,626,968	1,863,661	1,862,269	0
Louisiana	1,879,665	2,190,094	2,188,457	0
Maine	459,176	530,000	525,512	-1
Maryland	1,343,891	1,575,660	1,540,547	-2
Massachusetts	1,704,461	1,658,556	1,648,213	-1
Michigan	3,395,318	3,768,685	3,641,767	-3
Minnesota	1,475,885	1,736,576	1,735,278	0
Mississippi	1,209,134	1,390,909	1,389,869	0
Missouri	1,863,805	2,217,159	2,177,836	-2
Montana	317,518	519,374	428,023	-18
Nebraska	578,707	709,518	708,988	0
Nevada	379,529	576,717	527,487	-9
New Hampshire	328,238	530,000	376,159	-29
New Jersey	2,068,361	2,192,627	2,187,235	0
New Mexico	644,953	843,258	833,848	-1
New York	5,153,396	5,246,770	5,242,848	0
North Carolina	2,785,654	2,995,591	2,993,352	0
North Dakota	269,429	376,267	313,151	-17
Ohio	4,069,951	4,449,520	4,446,194	0

See notes at end of table.

Exhibit 2.32.—cont.
Federal Title II allocation amounts to states, fiscal years 1992, 2001, and 2009, and percent change, by state: FY 2001 through FY 2009

State	FY 1992	FY 2001	FY 2009	Percent change from FY 2001 through FY 2009
Oklahoma	$1,307,304	$1,587,998	$1,569,862	-1
Oregon	1,014,963	1,299,575	1,290,703	-1
Pennsylvania	4,071,449	4,238,522	4,235,353	0
Rhode Island	354,695	530,000	338,543	-36
South Carolina	1,593,356	1,738,505	1,730,085	-1
South Dakota	282,514	426,704	352,942	-17
Tennessee	2,037,127	2,233,311	2,231,641	0
Texas	6,992,837	8,495,203	8,391,458	-1
Utah	818,698	1,226,873	1,195,557	-3
Vermont	214,951	352,887	237,188	-33
Virginia	2,104,071	2,445,828	2,417,795	-1
Washington	1,628,578	2,091,644	2,036,850	-3
West Virginia	783,267	877,270	876,614	0
Wisconsin	1,805,496	2,128,276	2,105,227	-1
Wyoming	182,117	280,263	233,729	-17
Puerto Rico	1,742,268	1,921,202	1,919,766	0
Virgin Islands	49,792	54,694	54,653	0
Total	$90,000,000	$106,000,000	$102,923,000	-3

Exhibit reads: In FY 2001, the Tech Prep allocation amount for Alabama was $1,995,785, and $1,994,293 in FY 2009, a decline of .1 percent.
SOURCE: U.S. Department of Education, Office of the Deputy Secretary, Budget Service. State Funding History Tables by Program, http://www.ed.gov/about/overview/budget/history/index.html?src=rt (accessed June 16, 2010); and http://www2.ed.gov/about/overview/budget/statetables/11stbyprogram.pdf (2009 data, accessed February 9, 2011).

Consolidation of Title I and II funds

Until FY 2012 under *Perkins IV*, states could choose whether to consolidate their Title I and II funds each year. During the first year of *Perkins IV*, several states maintained separate funding for Title II and then merged funds in later years, and the fiscal and case study data did not suggest that any state ever reversed the decision.

As of FY 2010, a total of 27 states (including Puerto Rico) opted to merge their Title II funds with their Title I allocation. [74] Only one state, Alabama, opted for a partial consolida-

[74] States that consolidated Title I and II funds are shown in Exhibit 2.35, which is discussed in a later section.

tion and merged 60 percent of its funding with its Title I grant, with remaining funds distributed among Tech Prep consortia on a competitive basis.

Secondary and postsecondary state directors provided a variety of reasons for their decisions to consolidate Title I and II funds (see Chapter 3, Exhibit 3.31). The most common reason at the secondary level, chosen by 23 of the 27 secondary directors responding, was the desire to incorporate Tech Prep education programs into all CTE programs, followed by the similarity between Tech Prep and programs of study (18) and to avoid the data burden associated with collecting new Title II measures (15). Responses from postsecondary directors were similar, although fewer cited a desire to incorporate Tech Prep into all CTE programs (18 out of 27 responses), which tied with data burden as the most common response. Case study evidence indicated that concerns about consolidating funds included the possible loss of funds to the secondary or postsecondary level and the sustainability of existing Tech Prep programs if dedicated funding were discontinued.

The state director survey also asked directors from states that had not consolidated funds whether they planned to consolidate during the next two years. Of the 24 responses from secondary state directors, none reported plans to consolidate by 2011–12.[75] Case study evidence indicates that consolidation decisions involve administrators beyond those directly involved with CTE, including chancellor's offices and state boards of education.

Title II local allocations

As noted earlier, states maintaining separate Title II funds award grants to Tech Prep consortia. Consortia must consist of a secondary LEA, intermediate education agency, area CTE center, BIA-funded school, and a nonprofit or proprietary postsecondary institution offering a two-year associate's degree or apprenticeship program.[76] Grants may be distributed competitively or according to a formula determined by the state agency.

Among the states or territories that had maintained separate funding as of program year 2008–09, nine states allocated by formula, nine states through a competitive grant process, and another five states used both or other approaches (Exhibit 2.33). State formulas vary from simple to complex. For example, South Dakota allocated its Title II funds equally across each of its four consortia (South Dakota Board of Education 2008), while Missouri used a three-part formula that provided a base amount of $105,000 to each of the 12 consortia in the state, with remaining funds split 40 percent based on the percentage of Tech Prep enrollment (maximum of $50,000 per consortium) and 60 percent based on each consortium's pro rata share of statewide enrollment (Missouri Department of Elementary and Secondary Education 2008).

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[75] The secondary-level responses are highlighted because only 19 postsecondary directors responded.
[76] Sec. 204(a)(1).

Exhibit 2.33.
Among states allocating Title II (Tech Prep) funds, number using various methods to award consortia grants: Program years 2000–01 and 2008–09

	Number of states	
Method used	**2000–01[a]**	**2008–09[b]**
By formula	21	9
Through a competitive process	14	9
Through a combination of formula and competition	6	4
Other	5	1
No response	0	2

Exhibit reads: In 2000–01, 21 states allocated their Tech Prep funds by using a formula.

[a] N=46 states.

[b] N=25 states.

SOURCE: Silverberg et al. (2004); and Secondary and Postsecondary State Director Surveys, 2009

As a result of states' consolidation of their Title I and II funds, the number of allocations to Tech Prep consortia reported declined by about half (53 percent) between FY 2001 and FY 2010, falling from 738 to 349 (Exhibit 2.34). In real 2010 dollars, the average allocation amount declined by about $7,000 from FY 2001 to FY 2010, changing from $136,779 to $144,031.

Exhibit 2.34.
Number and average amounts of Title II consortia allocations: Fiscal years 1994, 1996, 2001, and 2010

	FY 1994	FY 1996	FY 2001	FY 2010
Number of grants awarded	953	1,029	738	349
Average consortium grant amount[a]				
Nominal dollars	$117,273	$100,148	$111,089	$144,031
Real dollars (2010)	172,551	139,183	136,779	144,031

Exhibit reads: In FY 2001, 738 Title II grants were awarded. The average grant amount was $111,089 in nominal dollars and $136,779 in 2010 real dollars.

[a] Nominal dollars are the actual grant amounts as they were allocated and reported in the given year. Real dollars have been adjusted for a measure of inflation.

FY 1994 and FY 1996: N=50 states.

FY 2001: N=40 states.

FY 2010: N=23 of the 25 states that maintained separate Title I and Title II funds in 2009-10.

SOURCE: Silverberg et al. (2004); and Secondary and Postsecondary State Director Surveys Fiscal Data, 2009. Real dollar calculations: Bureau of Labor Statistics, Inflation Calculator, http://data.bls.gov/cgi-bin/cpicalc.pl (accessed January 21, 2011).

Allocation amounts ranged from a maximum of $986,636 to a minimum of $16,667 in FY 2010. Among the 21 states for which the average allocation amount is available in both years, the amount increased in 13 states and declined in 8 (Exhibit 2.35).

Exhibit 2.35.

Average Title II local allocation amounts and direction of average amount change, FY 2001 through FY 2010, and maximum and minimum allocations awarded, by state: FY 2010

State	Average allocation		Change from FY 2001 through FY 2010	FY 2010	
	FY 2001	FY 2010		Maximum	Minimum
National[a]	**$111,089**	**$144,031**	+	**$968,636**	**$45,000**
Alabama[b]	77,193	50,000	–	50,000	50,000
Alaska	118,250	266,786	+	266,786	266,786
Arizona	112,901	168,351	+	292,000	112,000
Arkansas	96,219	*	n/a	n/a	n/a
California	117,647	324,125	+	580,001	150,000
Colorado	27,524	*	n/a	n/a	n/a
Connecticut	73,727	*	n/a	n/a	n/a
Delaware	n/a	**	n/a	n/a	n/a
District of Columbia	n/a	*	n/a	n/a	n/a
Florida	172,218	*	n/a	n/a	n/a
Georgia	n/a	*	n/a	n/a	n/a
Hawaii	530,000	*	n/a	n/a	n/a
Idaho	103,395	*	n/a	n/a	n/a
Illinois	91,140	101,300	+	495,168	47,362
Indiana	n/a	**	n/a	n/a	n/a
Iowa	66,413	79,292	+	115,724	65,822
Kansas	n/a	*	n/a	n/a	n/a
Kentucky	37,393	*	n/a	n/a	n/a
Louisiana	149,213	*	n/a	n/a	n/a
Maine	n/a	*	n/a	n/a	n/a
Maryland	64,368	*	n/a	n/a	n/a
Massachusetts	131,302	117,170	–	186,338	64,764
Michigan	n/a	145,825	n/a	348,066	49,694
Minnesota	53,200	*	n/a	n/a	n/a
Mississippi	123,906	102,936	–	102,936	102,936
Missouri	190,258	146,710	–	265,611	114,309
Montana	102,880	428,023	+	428,023	428,023

See notes at end of table.

Exhibit 2.35.—cont.
Average Title II local allocation amounts and direction of average amount change, FY 2001 through FY 2010, and maximum and minimum allocations awarded, by state: FY 2010

State	Average allocation		Change from FY 2001 through FY 2010	FY 2010	
	FY 2001	FY 2010		Maximum	Minimum
Nebraska	n/a	*	n/a	n/a	n/a
Nevada	$138,054	*	n/a	n/a	n/a
New Hampshire	100,000	$112,000	+	$112,000	$112,000
New Jersey	99,813	*	n/a	n/a	n/a
New Mexico	118,164	396,078	+	443,608	348,548
New York	191,442	390,496	+	937,475	92,062
North Carolina	n/a	87,077	n/a	197,000	50,000
North Dakota	$55,153	*	n/a	n/a	n/a
Ohio	156,548	176,301	+	365,708	114,231
Oklahoma	69,600	51,429	–	65,000	45,000
Oregon	n/a	*	n/a	n/a	n/a
Pennsylvania	255,860	**	n/a	n/a	n/a
Rhode Island	n/a	*	n/a	n/a	n/a
South Carolina	172,739	*	n/a	n/a	n/a
South Dakota	94,715	76,986	–	76,986	76,986
Tennessee	115,007	*	n/a	n/a	n/a
Texas	297,522	319,722	+	968,636	218,013
Utah	134,479	*	n/a	n/a	n/a
Vermont	56,410	*	n/a	n/a	n/a
Virginia	89,652	102,079	+	191,658	95,829
Washington	86,466	91,733	+	141,409	74,166
West Virginia	97,313	92,333	–	100,000	84,000
Wisconsin	127,899	124,985	–	173,528	88,632
Wyoming	27,159	*	n/a	n/a	n/a

Exhibit reads: The average Title II local allocation amount was $111,089 in FY 2001 and $144,031 in FY 2010, an increase (positive change) from FY 2001 to FY 2010. The maximum and minimum allocation amounts awarded in FY 2010 were $968,636 and $45,000, respectively.

* Consolidated funds by FY 2010 (Source: U.S. Department of Education).

** Did not consolidate funds by program year 2008–09, but Tech Prep allocation data at the consortia level are not available.

n/a Data missing or not applicable, or data are not comparable across years.

+Average allocation amount increased between FY 2001 and FY 2010.

– Average allocation amount decreased between FY 2001 and FY 2010.

[a] The national average allocation is the average of the average allocation for all states for which data are available in each year.

[b] Alabama partially consolidated and merged 70 percent of Title II funds with Title I funds.

SOURCE: Silverberg et al. (2004); and Secondary and Postsecondary State Director Surveys Fiscal Data, 2009.

Case study information indicated that consortia used Title II funds for several purposes related to Tech Prep programs. The funds were used for personnel to assist with articulation agreement negotiations and to support meetings between secondary and postsecondary administrators and faculty. Local administrators also said that some funds were used for program websites and for the compilation of student data for federal reporting purposes. Several local administrators also emphasized the similarities between Tech Prep programs and POS, noting that some Tech Prep funds were being used to support the development and implementation of POS.

Chapter 3. Accountability

Building upon accountability requirements introduced in earlier *Perkins* legislation, the *Carl D. Perkins Career and Technical Education Act of 2006* (*Perkins IV*) continues to hold states and local career and technical education (CTE) providers responsible for collecting and reporting data about the performance of the *Perkins* grant program. As in prior legislation, *Perkins IV* offers states considerable flexibility in determining how to collect and report accountability data but asks for improved data quality in return. The U.S. Department of Education (the Department) is supporting this higher standard by offering guidance to assist state and local efforts to report valid, reliable, and comparable performance data.

The analyses in this chapter seek to answer the following research questions:

- How are states and local subgrantees implementing *Perkins IV* accountability requirements?
- What challenges are states and local subgrantees facing, and how are these challenges being resolved?
- Are states and local subgrantees setting and meeting performance targets, and what is happening when targets are not met?
- How are data used to promote program improvement and student success?

This chapter describes the evolution of accountability under prior *Perkins* legislation; changes introduced in *Perkins IV*; and progress by the Department, states, and local subgrantees in designing and implementing the new accountability framework. It also explores efforts to increase the validity, reliability, and comparability of reported data, and the challenges federal, state, and local staff face in ensuring the accuracy of performance data. Finally, it investigates how states and local subgrantees are setting performance goals, meeting performance targets, and using data to improve programs and student outcomes.

This chapter draws on information from multiple qualitative and quantitative sources. Results of the state director, local education agency (LEA), and institution of higher education (IHE) surveys offered insights into how states and local providers ensure data validity and reliability, set and meet performance goals, and use performance results to improve programs and student outcomes. Case studies in six states and 18 school districts and institutions provided in-depth information regarding these issues. Extant data sources supported the original data collected for the study, and included relevant literature as well as the De-

partment's nonregulatory guidance; annual reports submitted to Congress regarding *Perkins* performance; and findings from Department-sponsored technical assistance activities, such as Data Quality Institutes (DQIs) and customized technical assistance for individual states.[1] Each source contributed to a greater understanding of the accountability framework and how states and local subgrantees are implementing the requirements. More information about these data sources and the study methodology is available in Appendix A.

Key Findings

The following observations emerged from this analysis of states' implementation of *Perkins* accountability provisions and are discussed in greater depth in this chapter.

1. *Most states and local subgrantees are working to improve the quality of their* Perkins IV *accountability systems.*

States and local providers have continued to develop and refine the systems they use to collect and report *Perkins* performance data. Most states (49 secondary, 44 postsecondary) have adopted more than one strategy to improve the quality, validity, and reliability of locally reported data. Common strategies included providing technical assistance or guidance on collecting and editing data, performing electronic error checking, and conducting desk audits of local data. LEAs and IHEs rely primarily on state measure guidance to promote validity and reliability. States and local subgrantees also continued to refine the data systems they use to collect and report data through initiatives such as introducing common student identifiers across education levels and connecting *Perkins* data systems with other education data systems. The Department is supporting these efforts by offering multiple avenues to obtain technical assistance, as well as providing nonregulatory guidance designed to promote valid, reliable, and comparable reporting across states.

2. Perkins IV *and the Department's nonregulatory guidance offer states flexibility in how they interpret accountability requirements, contributing to variation in data collection and reporting practices across states.*

Changes to the accountability framework in *Perkins IV*—such as the addition of separate indicators for postsecondary—coupled with the Department's guidance have refined expectations for data collection and reporting. The guidance and legislation both offer states flexibility in determining what indicators to use and how to define population and performance measures. Although many states at least consulted the nonregulatory guidance for one or more population and measure definitions, only nine states used the nonregulatory guid-

[1] Many of these sources and documents are available on the Department-sponsored *Perkins Collaborative Resource Network* website (http://cte.ed.gov).

ance verbatim when defining all of their secondary populations and performance measures, and only five states did the same for every postsecondary population and performance measure. The flexibility inherent in the legislation and nonregulatory guidance may reduce the Department's ability to aggregate data at the national level.

3. *Capacity and infrastructure influence how states and local subgrantees approach data collection and reporting.*

States and local subgrantees offer CTE programs within different governance, resource, and infrastructure systems. Issues such as access to necessary data, timing, cost, capacity of student information systems, and legal interpretations of federal privacy laws continue to affect the ability of some states and local providers to implement *Perkins* accountability requirements. The postsecondary placement indicator is an example of the challenges some states may face: while providers are required to report whether students are employed, in the military, or enrolled in an apprenticeship program after leaving their institution, a few states did not have the legal authority to access state employment databases to obtain students' labor market outcomes. These states may have relied upon surveys or interviews to gather students' self-reported labor market outcomes. More than 30 postsecondary state directors indicated the cost of matching student records with other state or national databases had at least some impact on their ability to report results for this indicator. These and other differences contribute to variations in how states report *Perkins IV* performance results and may result in less data comparability.

4. *States have implemented performance requirements for locals, although the effect of these requirements has yet to be fully measured.*

Many state directors reported that their states had existing policies that required subgrantees to implement a local improvement plan if they failed to meet targets on one or more core indicators (47 secondary, 38 postsecondary). Several states also had policies for restricting or eliminating local subgrantees' flexibility in spending *Perkins* funds (30 secondary, 22 postsecondary), although very few had policies to reduce or eliminate local subgrantee funding (11 secondary, 9 postsecondary). Sixty-five percent of LEA directors and 78 percent of IHE directors reported that their state would require a program improvement plan if a local subgrantee failed to meet one or more targets. About half of local directors indicated that negotiating local targets would have no impact on their administration and implementation of CTE programs, and about one-quarter thought it would have a somewhat to very positive impact. Among those LEAs and IHEs that negotiated performance targets, most experienced little to no difficulty during their negotiations with the state. More than half of local directors (61 percent of LEAs and 67 percent of IHEs) also reported that introducing sanctions would have no impact on local CTE administration and implementation, while very

few (15 percent of LEA and 11 percent of IHE directors) said it would have a somewhat to very positive impact.[2]

5. *States and subgrantees use data to identify programs in need of improvement and provide technical assistance.*

States, LEAs, and IHEs have made efforts to use data to improve program and student outcomes. More than half of states provided local subgrantees with statewide averages of performance results (40 secondary, 29 postsecondary), and many shared performance results for individual LEAs and IHEs (35 secondary, 30 postsecondary). Most state directors reported using *Perkins* accountability data to identify programs in need of improvement. While most states also used *Perkins* data to provide targeted technical assistance (45 secondary, 40 postsecondary), only about one-third of local subgrantees indicated that their state had a policy of providing professional development for staff in underperforming programs. About half of local subgrantees used *Perkins* data quite a bit or to a great extent to identify programs that need improvement (49 percent of LEAs and 47 percent of IHEs) or make program funding decisions (49 percent of LEAs and 48 percent of IHEs).

The Accountability Framework

The *Carl D. Perkins Vocational and Applied Technology Education Act of 1990* (*Perkins II*) laid the foundation for the accountability framework in use today. *Perkins II* required states to develop a system of performance standards and measures of learning and competency gains—including attainment of basic and advanced academic skills—and at least one measure of performance, such as job or skill attainment, retention in or completion of secondary school, or placement into employment or further training. Statewide systems also had to encourage services for targeted populations and outline procedures for using existing methods and resources developed under other federal programs (*Perkins II* Sec. 115).

Perkins II allowed states to choose which competency indicators and performance measures to incorporate into their accountability systems, without any requirement that the selected measures or methods be consistent across states. The legislation also did not require states to submit the results of their measures to the Department or any other federal agency. *Perkins II* called for the secretary of education to submit a report within four years that included a description of the status of each state's system of standards and measures; an assessment of the

[2] The surveys did not provide further insight into local subgrantees' reasons for reporting that sanctions would have no effect or a positive effect. It is possible, however, that the timing of the survey played a part. Local directors responded to the survey in late 2009, at the same time they were submitting the first full year of *Perkins IV* data. They had not yet had extensive experience with new state policies regarding sanctions for failing to meet negotiated targets.

validity, reliability, and predictive capacity of the measures; and an evaluation of how comparable the standards and measures were across states.

The *Carl D. Perkins Vocational and Applied Technology Education Act of 1998* (*Perkins III*) built upon *Perkins II* by outlining a single set of four outcome indicators for both secondary and postsecondary students. The legislation required states to set performance targets for each indicator and report progress in meeting those targets for all students, including special populations.[3] *Perkins III* permitted states to develop their own methods for reporting results and offered them the option of reporting on existing state performance indicators as long as they were aligned with those in the legislation. According to the Department:

> [W]hile this statutory flexibility has enabled states to meet their individual CTE program needs, it has produced dramatic inconsistencies among states in how student populations are defined and has enabled many states to use less valid and reliable measures, particularly for academic attainment and technical skills attainment. As a result, the Department has been unable to make comparisons of student performance across states or track the performance of students over time (U.S. Department of Education 2010c, p. 9).

New Provisions in Perkins IV

Departing from earlier legislation, *Perkins IV* outlines separate sets of core indicators for secondary and postsecondary students, modifies the list of special populations, and introduces nine performance measures for Tech Prep (Exhibit 3.1). The legislation also incorporates secondary accountability indicators from the *Elementary and Secondary Education Act (ESEA).*[4] *Perkins IV* requires data and indicators to be valid and reliable and extends the expectations for reporting and continuous improvement to the local level. LEAs and IHEs must now negotiate performance targets for each indicator with the state and are responsible for meeting those targets.

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[3] *Perkins III* special populations included individuals with disabilities; individuals from economically disadvantaged families, including foster children; individuals preparing for nontraditional training and employment; single parents, including single pregnant women; displaced homemakers; and individuals with other barriers to educational achievement, including individuals with limited English proficiency (Sec. 3(23)).

[4] Although *Perkins IV* introduces the programs of study (POS) concept, it does not include any indicators or specific accountability requirements related to POS.

Exhibit 3.1.
Core indicators for *Perkins III* and *Perkins IV*

Perkins III	*Perkins IV*	
Secondary and Postsecondary	**Secondary**	**Postsecondary**
Academic and technical skill attainment: Student attainment of challenging State established academic, and vocational and technical, skill proficiencies.	**Academic attainment:** Student attainment of challenging academic content standards and student academic achievement standards, as adopted by the State in for *ESEA* and measured by the State determined proficient levels on the academic assessments under *ESEA*.	**Technical skill attainment:** Student attainment of challenging career and technical skill proficiencies, including student achievement on technical assessments that are aligned with industry-recognized standards, if available and appropriate.
	Technical skill attainment: Student attainment of career and technical skill proficiencies, including student achievement on technical assessments that are aligned with industry-recognized standards, if available and appropriate.	
Completion: Student attainment of a secondary school diploma or its recognized equivalent, a proficiency credential in conjunction with a diploma, or a postsecondary degree or credential.	**Completion:** Student rates of attainment of secondary school diploma; General Educational Development (GED); and proficiency credential, certificate, or degree, in conjunction with a secondary school diploma (if such credential, certificate, or degree is offered by the State in conjunction with a secondary school diploma).	**Completion:** Student attainment of an industry-recognized credential, a certificate, or a degree.
	Graduation rate: Student graduation rates as described in *ESEA*.	
Placement and retention: Placement in, retention in, and completion of, postsecondary education or advanced training, placement in military service, or placement or retention in employment.	**Placement:** Student placement in postsecondary education or advanced training, in military service, or in employment.	**Retention or transfer**: Student retention in postsecondary education or transfer to a baccalaureate degree program.
		Placement: Student placement in military service or apprenticeship programs or placement or retention in employment, including placement in high skill, high wage, or high demand occupations or professions.
Nontraditional participation and completion: Student participation in and completion of vocational and technical education programs that lead to nontraditional training and employment.	**Nontraditional participation and completion:** Student participation in and completion of career and technical education programs that lead to non-traditional fields.	**Nontraditional participation and completion:** Student participation in, and completion of, career and technical education programs that lead to employment in nontraditional fields.

Exhibit reads: *Perkins IV* outlines a separate set of core indicators for secondary and postsecondary students and incorporates secondary accountability measures from *ESEA*.
SOURCE: The *Carl D. Perkins Vocational and Applied Technology Education Act of 1998* and the *Carl D. Perkins Career and Technical Education Act of 2006*.

To adjust to these new requirements, states had the option of submitting a one-year transition plan for 2007–08, the first program year covered by *Perkins IV*. For the transition year, the Department required states to submit results only for the secondary *ESEA*-aligned indicators: academic attainment and graduation rate (Justesen 2007b). States already had established reporting processes for the *ESEA* indicators and therefore only had to develop a secondary concentrator definition to allow them to identify the subset of all students to include in the indicator results for *Perkins* reporting.[5]

The Department asked states to collaborate with their local CTE communities during the transition year to develop and submit plans for the remaining five program years of *Perkins IV*. States' five-year plans included measure definitions for every population and indicator, and states began reporting results for all secondary and postsecondary core indicators in 2008–09. States must update their five-year plans annually and may request approval for changes to indicator definitions and performance targets at that time. States set future performance targets in the first, third, and fifth years of *Perkins IV*.[6]

Validity and Reliability

A report from the Office of Management and Budget (OMB) identified a significant flaw in *Perkins III* accountability: the lack of comparable performance information across states (Office of Management and Budget n.d.). OMB rated the *Perkins III* program "Ineffective," noting that the "validity and reliability of program performance data are limited" (Office of Management and Budget n.d.).[7] *Perkins III* offered states the flexibility to define their own methodology for collecting and reporting indicator data, which resulted, according to OMB, in a variety of measurement approaches that "do not share a common standard for validity and reliability and do not allow for aggregation."[8]

References to valid and reliable data and indicators in *Perkins IV* emphasize the importance of data quality and set a higher expectation for performance reporting. The legislation does not specify, however, how indicators should be defined and reported, nor does it specify stand-

[5] "Concentrators" are CTE students who meet a state-defined threshold for CTE coursetaking. Concentrators represent the cohort of students considered in most of the performance measures under *Perkins IV*. For more details, refer to the discussion of concentrators in the section Student Populations (p. 103).
[6] See the Performance section (p. 148) for a detailed discussion of performance targets.
[7] OMB used the Program Assessment Rating Tool (PART) to assess *Perkins*. PART uses a standard set of 25 questions relating to program performance and management. More information about PART is available at www.ExpectMore.gov.
[8] http://www.whitehouse.gov/omb/expectmore/summary/10000212.2002.html (May 28, 2010).

ards for validity and reliability.[9] As a result, *Perkins IV* does not fully address a core challenge for *Perkins* accountability: the flexibility afforded states in defining their own indicators may create challenges in aggregating data at the national level (U.S. Government Accountability Office 2009; U.S. Department of Education 2010c). States also may use different standards for validity and reliability, as noted by OMB (n.d.) in its assessment of *Perkins III*. Despite these challenges to obtaining comparable data, the Department, states, and local subgrantees employ a variety of strategies to promote data quality, validity, and reliability.

Department data quality initiatives

Following the reauthorization of *Perkins IV* in 2006, states and local providers needed time and assistance to modify their data systems and develop measurement approaches to meet the new requirements. Recognizing this, the Department took a staged approach to implementation and provided multiple technical assistance opportunities to states as they made changes to their accountability systems.

Nonregulatory guidance

In March 2007, the Department released nonregulatory guidance that outlines preferred population and measurement definitions for the secondary and postsecondary core indicators (Justesen 2007a). This guidance is designed to promote valid, reliable, and comparable reporting across states (U.S. Department of Education 2010c).

Respondents in several case study states expressed appreciation for the guidance and its definitions of populations and performance measures. According to one state administrator, "I think that the nonregulatory guidance at this point has been helpful. I think the spirit continues to grow among the states to work closely to adopt or interpret it as best we can." Another said, "I'm a firm believer that the more we can get at common definitions [or] common procedures across the country, the better off career tech's going to be in general."

At the same time, respondents valued the flexibility in *Perkins IV* that allows them to develop their own definitions for populations and indicators based on data sources, reporting capacity, and program delivery structures. A state administrator noted that, "We met with our LEA partners and one of the guiding principles during those discussions was we didn't want a measure that was only important for the *Perkins* law. … We wanted to have relevance to our institutions … within the parameters of what was required from the law."

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[9] The National Center for Education Statistics in the U.S. Department of Education, Institute of Education Sciences, defines the terms *validity* and *reliability* in its *Statistical Standards Program* (U.S. Department of Education 2002). Validity is defined as "[T]he extent to which a test or set of operations measures what it is supposed to measure. Validity refers to the appropriateness of inferences from test scores or other forms of assessment." Reliability is defined as "[T]he degree to which test scores for a group of test takers are consistent over repeated applications of a measurement procedure and hence are inferred to be dependable and repeatable for an individual test taker."

Internal capacity, legal barriers, and resource issues, however, pose obstacles to some states' ability to collect and report data, particularly for the placement and technical skill attainment indicators (U.S. Department of Education 2010c; U.S. Government Accountability Office 2009). Further, like *Perkins IV*, the guidance provides flexibility and includes terminology that could be interpreted differently by states. For each indicator, fewer than half of all states used the population and measure definitions outlined in the guidance.[10] Although the measure definitions that states used may be valid and reliable, they may create difficulties in aggregating information across states. In addition, even when the text of a state's population or measure definition matches the nonregulatory guidance, there may be underlying differences in how the state collects and reports data in comparison to other states using the same definition. These and other issues are discussed in depth in the Indicators, Populations, and Measures section (see p. 98).

Technical assistance

To help states transition to and implement *Perkins IV*, the Department offers technical assistance opportunities in several forms, including Department-sponsored events and working groups, individual state assistance, and a website. The Department invites state CTE directors and administrators to participate in national and regional Data Quality Institutes (DQIs), which are designed to disseminate information about *Perkins* reauthorization, assist states in developing their performance measurement systems, and promote comparable data collection and reporting. DQIs focus on implementing the accountability framework, giving states an opportunity to consult with the Department, data and accountability experts, and each other about promising practices.

The Department also convenes periodic conference calls to discuss issues associated with the accountability requirements. The Next Steps Work Group (NSWG) is open to staff in all eligible agencies and focuses on accountability topics identified by the states and the Department. Quarterly webinars for state directors provide an opportunity for the Department to share information regularly with state administrators. The *Perkins Collaborative Resource Network*, a website sponsored by the Department, offers states an online resource for information about *Perkins* accountability (http://cte.ed.gov).

The Department has assigned a Regional Accountability Specialist (RAS) to each state. The RAS assists states in implementing *Perkins* program and accountability requirements, preparing and submitting state plans and plan updates, and negotiating performance targets. The Department also conducts on-site monitoring visits to support states in aligning their policies with federal regulations. In addition, since 2005, more than 20 states have applied for and received customized technical assistance through a project at the Department.[11] This

[10] For more detailed information about states' use of the nonregulatory guidance, see pages 103 and 104.
[11] Several states have applied for and received customized technical assistance more than once.

Department-sponsored initiative provides consultation to individual states to help them develop their population and measurement definitions and ensure that their state data systems meet the new reporting requirements.

State and local data quality initiatives

Study findings indicate that administrators and staff in states, IHEs, and LEAs recognize the importance of the *Perkins IV* accountability requirements and are working diligently to ensure that data meet congressional expectations for validity and reliability.

Data collection

The six case study states are making progress in establishing statewide standards and strategies for collecting high-quality data. While they varied in their approaches and capacity, administrators in each state appeared to understand the accountability requirements and the importance of collecting valid and reliable data.

Two of the six states had data systems that integrated *Perkins* data with information about other education programs. Three more planned to develop comprehensive data systems in the future. A state administrator in one of these states observed that "a lot of *Perkins* reporting and accountability issues will go away and data will get much better" once the state has a longitudinal data system. This administrator also noted some of the challenges in implementing such a system:

> The state's working right now on a database, if we can ever get all our postsecondary [institutions] to cooperate with us. Every student [who] goes to public school in [this state] has a state ID number—not the Social [Security number], but an assigned unique number. If we can just get . . . all the different postsecondary institutions to agree [that] everybody uses the same number, then we can simply follow those students.

Local administrators in another case study state relied on software to organize and report data. As one administrator explained, the "software generates the numbers and grabs the student data," but this required substantial set-up, which included "Making the information from our student information system available to the software, marking the courses that are . . . CTE courses, and marking the graduates—the twelfth-graders who actually graduated because we're doing this a year in arrears." Another local administrator in the same state employed an administrative assistant to assemble performance data and enter it by hand into the state online data collection system.

While all six states used some level of technology to make data collection easier and more efficient, as well as to improve quality, only one case study state possessed a student-level data system capable of showing student outcomes over time and across educational sectors and

into the workforce. According to the state director, "We're able, with all of our longitudinal data, to hone in on how our students are doing, how our programs are doing, how individual programs are doing, so that they're very accountable."

Some local administrators highlighted steps being taken by their states to collect high-quality data. According to a director of an area CTE center, "Definitions and measures are getting better at the state level. We have common definitions now, which are the best part. In the past, it seemed that rules would change every year because somebody would redefine what the definitions were."

There were, however, some problems noted. In one state, local administrators felt the state did not communicate clearly about accountability requirements. In another state, a local staff person said, "It would have helped if there had been some consistency in what our definitions were. . . . There wasn't as much collaboration between systems as we should have had earlier on and now the definitions have pretty much been mandated to us." In the same state, an LEA representative claimed that the state decided to base its definitions on data that are readily available—and not on "what the feds are really looking for or what would have to change in order to get accurate data."

Quality control measures

All states implemented at least one quality control measure to ensure that locally reported data are valid and reliable, and many adopted multiple strategies (49 secondary, 44 postsecondary) (Exhibit 3.2). The most common approaches were technical assistance or guidelines on collecting and editing data (45 secondary, 40 postsecondary) and comparing current year results to prior year reports (42 secondary, 40 postsecondary).

Exhibit 3.2.
Number of states according to their adoption of quality control measures to ensure validity and reliability of local data, by education level

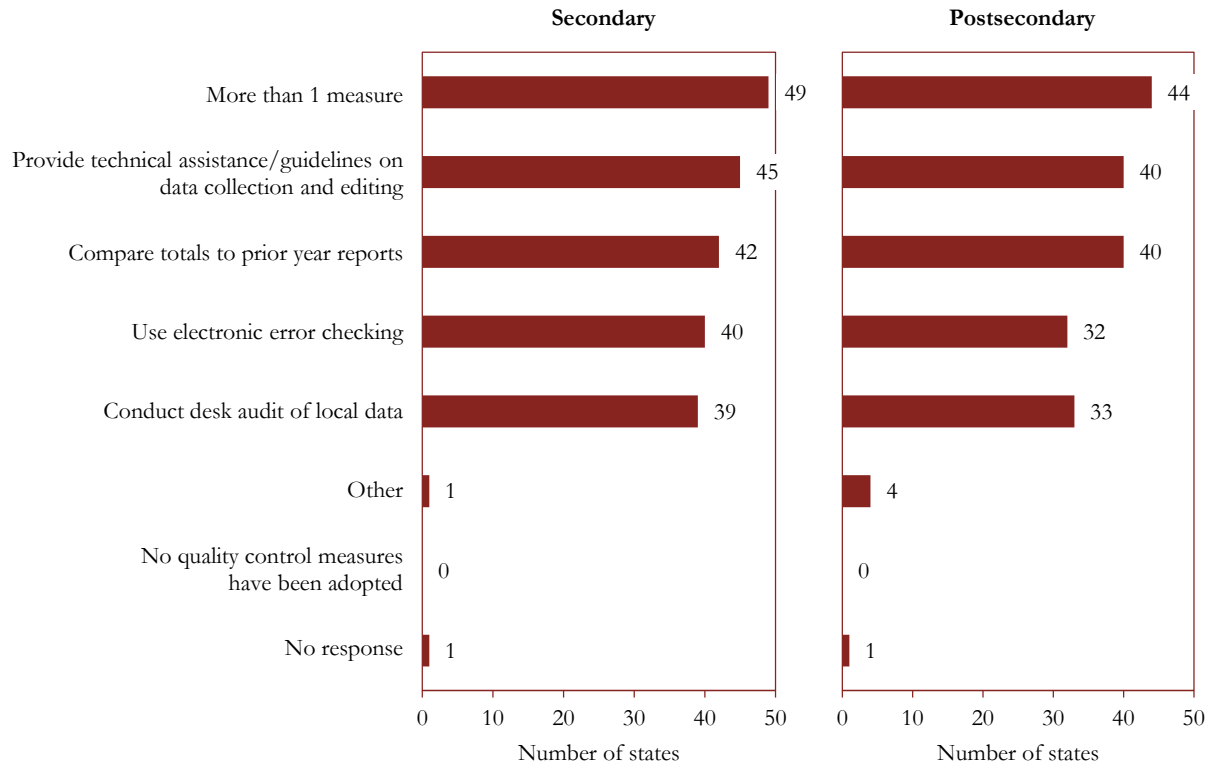

Exhibit reads: Secondary and postsecondary state directors adopted multiple quality control measures, including technical assistance or guidelines on collecting and editing data (45 secondary, 40 postsecondary) and comparing current year results to prior year reports.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

LEAs and IHEs relied upon state measure guidance to promote validity and reliability (73 percent of LEAs and 78 percent of IHEs) (Exhibit 3.3).[12] Spot-checks by instructors and administrators were another common option for subgrantees at both LEAs and IHEs. Nine percent of LEA directors and 8 percent of IHE directors did not use or did not know if they had used quality control measures.

[12] All comparisons of the IHE and LEA survey data were tested for statistical significance using the Student's *t*-statistic, and all differences cited are statistically significant at the $p < .05$ level.

Exhibit 3.3.
Percentage of LEAs and IHEs according to steps taken to ensure validity and reliability of data

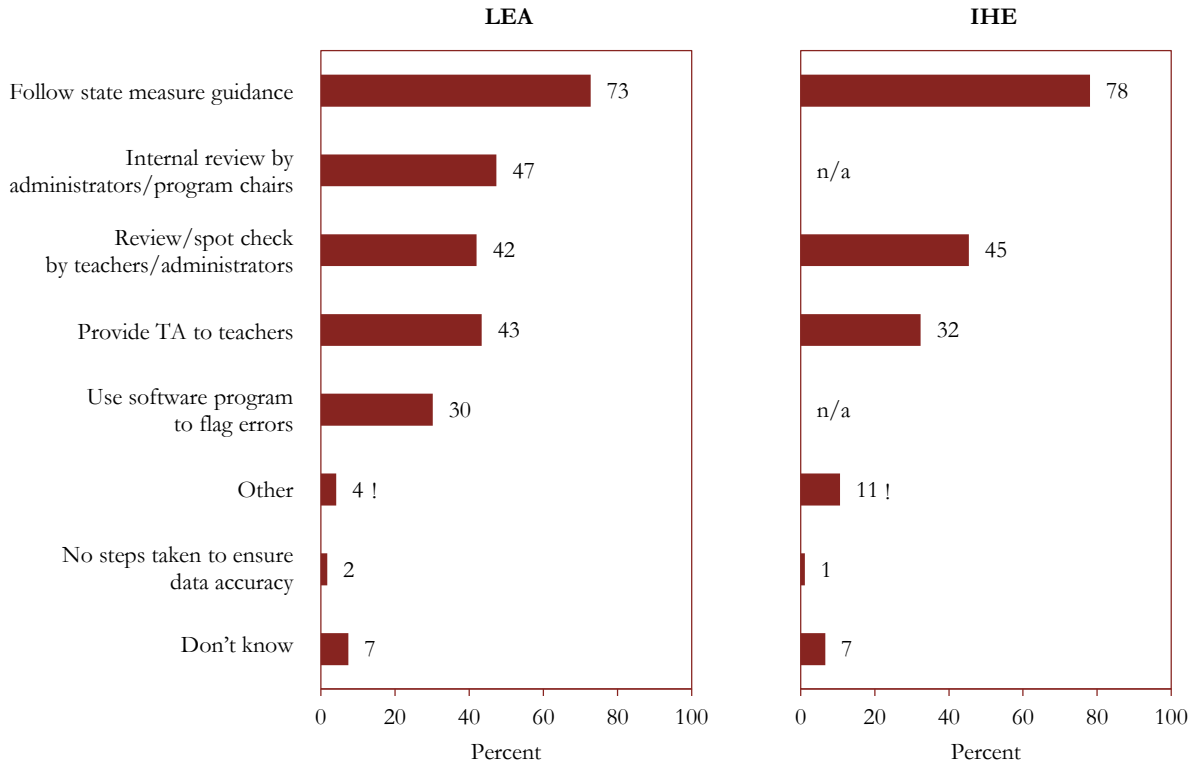

Exhibit reads: LEAs and IHEs overwhelmingly relied upon state measure guidance to promote validity and reliability (73 percent LEA, 78 percent IHE).
n/a = Not asked.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

In one case study state, a large district reported hiring a part-time team to review the data for quality. The local director explained, "We bring in a team of business teachers and other teachers who have done this before; they go school-by-school and student-by-student to determine if these data are correct."

Technical assistance

To support the efforts of LEAs and IHEs to improve both data quality and performance, states offered multiple technical assistance opportunities in 2008–09. Nearly all states provided more than one technical assistance opportunity (48 secondary, 43 postsecondary) (Exhibit 3.4). Only one state reported that it did not provide any technical assistance to its secondary subgrantees.

Exhibit 3.4.
Number of states according to types of technical assistance provided to local subgrantees in 2008–09, by education level

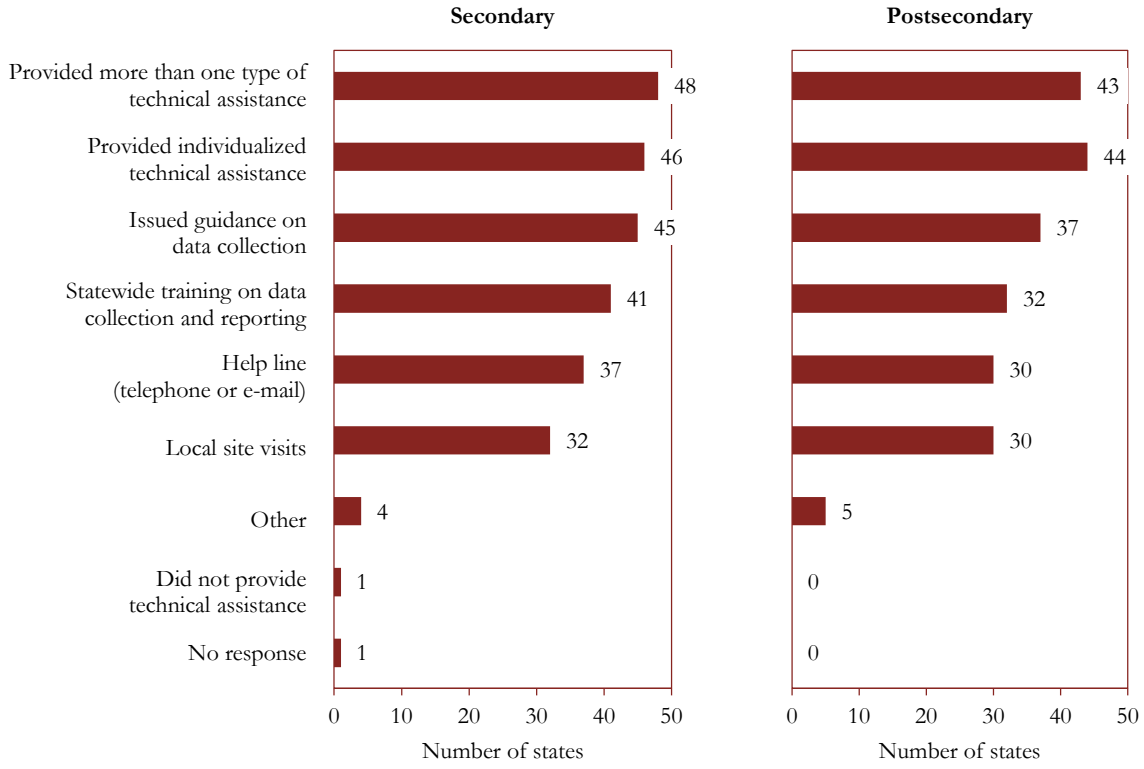

Exhibit reads: Nearly all states provided more than one technical assistance opportunity (48 secondary, 43 postsecondary). Only one state reported that it did not provide any technical assistance to its secondary subgrantees.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Administrators in each of the six case study states reported providing technical assistance, most frequently citing workshops or written guidance. Most also offered assistance via e-mail or phone, and several local administrators noted they had used this form of technical assistance.

In one state, state staff reported that they have five full-time help desk attendants who respond to "questions associated with data uploads, data connections, and data validation," and four regional trainers who "work with school districts all year long." These staff provide technical assistance for several federal programs in addition to *Perkins IV*. In addition, the state hosts an annual conference focused on data quality, where approximately 700 local providers attend general and program-specific sessions. A local administrator in this state, however, expressed concern about the state's technical assistance initiatives: "What's difficult for me is that our state doesn't have a really good data warehouse and a good, current func-

tional database for me to pull from. … It's the most dysfunctional system I've ever witnessed, and I've worked in six states. … The help desk is now dial-a-prayer; there's nobody there to ask for help."

In another state, administrators shared their perspectives on data quality initiatives:

> Technical assistance workshops were probably the big ah-ha. We've been mentioning these measures since we first learned about *Perkins IV*. … It really didn't become real until we had this information out and really got to do some of the more personal discussions. We've [done] presentations. … We've had [the information] published on our website for them. … We've distributed it along with the [negotiated state performance levels].

Another administrator described how the state assisted local subgrantees who miscoded or miscounted students. "We would go one by one, record by record, with the school districts…to see where they were. That's technical assistance down to the fine grains of sand, and it's an excellent opportunity for them to see the importance of accurate coding."

In a state where workshops are the key tool for technical assistance, a state administrator explained, "We do an August conference that is aligned around all of the *Perkins* accountabilities, assessment development using data to inform instruction, and integrated academics. Then we sponsor regional or other statewide pieces throughout the year to reinforce some of those things." An IHE administrator in this state, however, said that "the main thing they've done is sat in several meetings and worked with us around the definitions and performance measures to make sure they're sensible, that we understand them, and that we can work with them. Other than that, there's been very little advance on the technical front."

Confidence in data accuracy and completeness

Most of the secondary state directors were at least somewhat confident that the data reported for the indicators accurately reflect local performance (Exhibit 3.5). LEA respondents had the least confidence in the accuracy of General Educational Development (GED) and state-recognized equivalent data (Exhibit 3.6) and some did not know about the accuracy of each of these two types of data, which could be due in part to some states not offering these secondary completion options. Postsecondary state directors and IHE directors appeared to have at least some confidence in the data for most of the indicators, and 47 percent of postsecondary local directors were very confident in the accuracy of the data reported for completion of industry-recognized credentials, certificates, and degrees (Exhibit 3.7 and Exhibit 3.8).

Exhibit 3.5.
Number and percentage of state directors according to how confident they were that secondary LEA data accurately reflect local performance

(5–point scale from Not confident to Very Confident)

	Number						Percent		
Core indicators	Very confident (5)	Less than very confident (2 - 4)	Not confident (1)	Don't know	Not applicable/ No response	Total	At least some confidence (2 - 5)	No confidence (1)	Total
Academic attainment	26	23	0	1	1	51	100	0	100
Technical skill attainment	17	29	2	2	1	51	96	4	100
Completion									
Diploma	32	17	1	0	1	51	98	2	100
GED	14	9	3	2	23	51	88	12	100
State-recognized equivalent	6	6	2	2	35	51	86	14	100
Proficiency credential/ certificate/degree	10	14	2	1	24	51	92	8	100
Graduation rate	25	20	2	1	3	51	96	4	100
Placement									
Postsecondary education/training	8	37	3	1	2	51	94	6	100
Military	9	30	6	1	5	51	87	13	100
Employment	10	32	5	1	3	51	89	11	100
Nontraditional participation	20	28	1	0	2	51	98	2	100
Nontraditional completion	19	29	1	0	2	51	98	2	100

Exhibit reads: Most secondary state directors were at least somewhat confident that the data reported for the indicators accurately reflect local performance.

NOTE: For the secondary completion measure, states responded "Not applicable" for GED (22 states), state-recognized equivalent (34), and proficiency credential/certificate/degree (23). Some states did not offer these types of awards or may not have had access to GED data. For more information, see the discussion of this measure on p. 122. The percentage calculations exclude "Don't know" and "Not applicable/No response."

SOURCE: Secondary State Director Survey, 2009.

Exhibit 3.6.
Percentage of LEA directors according to how confident they were that secondary data accurately measure local performance

(5-point scale from Not confident to Very confident)

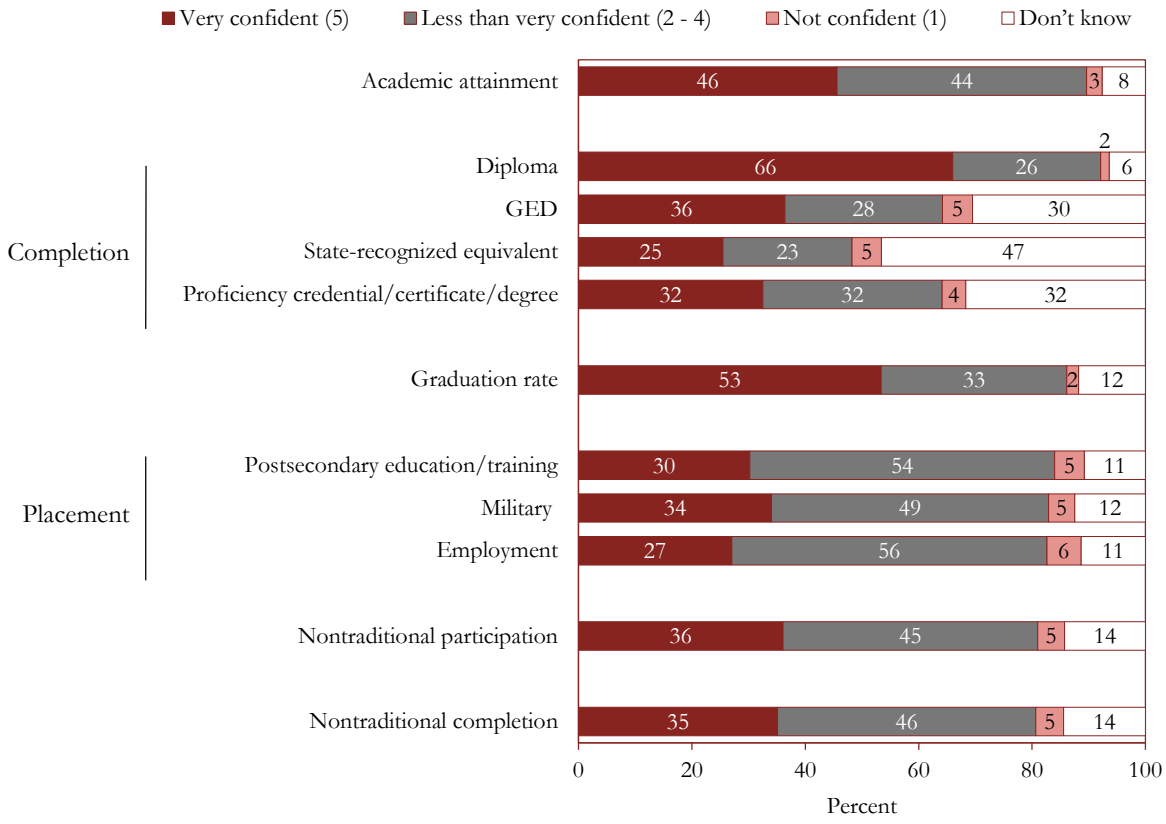

Exhibit reads: About half of LEAs were very confident in the accuracy of academic attainment and graduation rate data.
NOTE: Estimates were weighted to reflect population values. For the secondary completion measure, 30 percent of LEAs responded "Don't know" for GED; 47 percent responded "Don't know" for state-recognized equivalent; and 32 percent responded "Don't know" for proficiency credential/certificate/degree. Not all providers offered these types of awards, and some may not have had access to GED data. For more information, see the discussion of this measure on p. 122.
SOURCE: LEA Survey, 2009.

Exhibit 3.7.
Number and percentage of state directors according to how confident they were that postsecondary IHE data accurately reflect local performance

(5–point scale from Not confident to Very Confident)

	Number						Percent		
Core indicators	Very confident (5)	Less than very confident (2 - 4)	Not confident (1)	Don't know	Not applicable/ No response	Total	At least some confidence (2 - 5)	No confidence (1)	Total
Technical skill attainment	15	28	3	0	2	48	93	7	100
Completion	17	28	1	0	2	48	98	2	100
Retention or transfer									
Retention	21	25	0	0	2	48	100	0	100
Transfer to BA program	15	26	3	0	4	48	93	7	100
Placement									
Military	10	24	6	1	7	48	85	15	100
Apprenticeship	9	20	8	1	10	48	78	22	100
Employment	14	29	3	0	2	48	93	7	100
Nontraditional participation	20	25	2	0	1	48	96	4	100
Nontraditional completion	21	23	3	0	1	48	94	6	100

Exhibit reads: Most postsecondary state directors were at least somewhat confident that the data reported for the indicators accurately reflect local performance.

NOTE: For the postsecondary placement measure, some states responded "Not applicable" for military (7) and apprenticeship (10). Some states may not have had access to information about these placements. For more information, see the discussion of this measure on p. 129. Percentage calculations exclude "Don't know" and "Not applicable/No response."

SOURCE: Postsecondary State Director Survey, 2009.

Exhibit 3.8.
Percentage of IHE directors according to how confident they were that postsecondary data accurately measure local performance

(5-point scale from Not confident to Very confident)

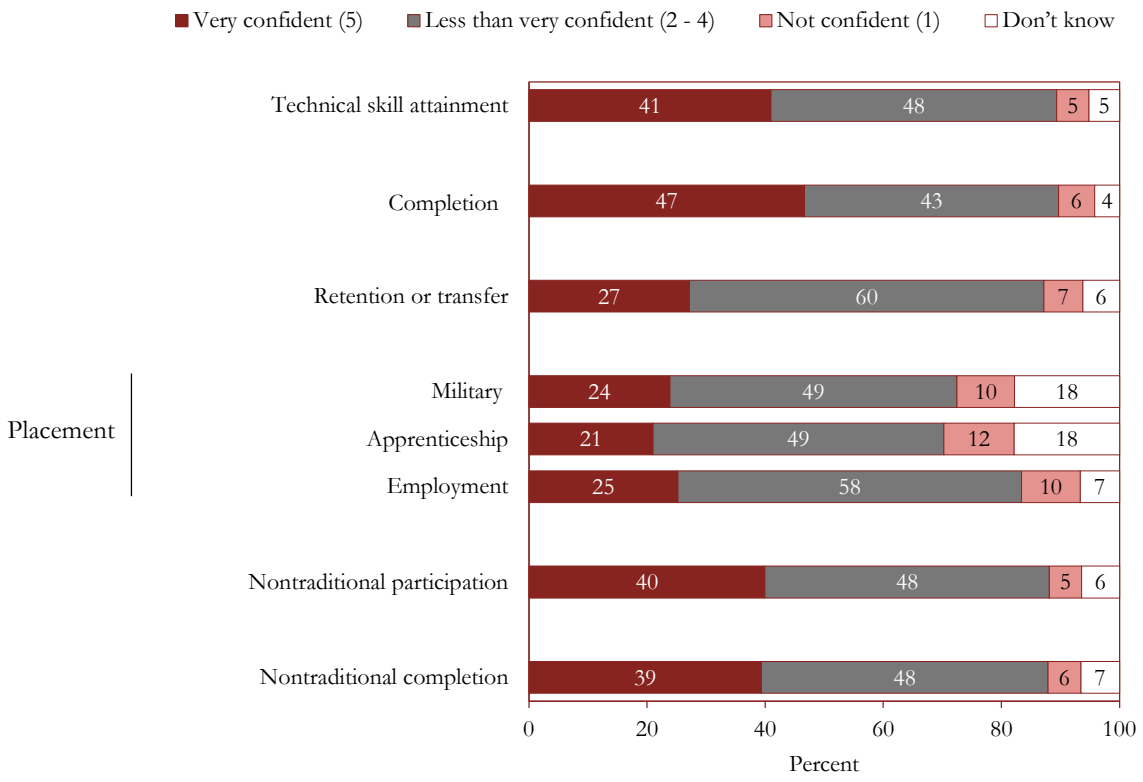

Exhibit reads: Forty-seven percent of IHE directors were very confident that data reported for the completion of industry-recognized credentials, certificates, and degrees accurately represented local performance.
NOTE: Estimates were weighted to reflect population values. For the postsecondary placement measure, 18 percent of IHEs responded "Don't know" for both military and apprenticeship. Some institutions may not have had access to information about these types of placement. For more information, see the discussion of this measure on p. 129.
SOURCE: IHE Survey, 2009.

According to interviews with state and local administrators in the case study states, confidence in the data varied. In one state, where CTE data are included in a consolidated electronic data submission, the state extracted a report and sent it to each district for validation. A state administrator reported finding mistakes in local provider data: "Now that we're releasing local performance indicators to school districts, we've found that a lot of our school districts misidentified their students, miscoded in the area of graduation rate. Sometimes … one student can really make or break a school district, so we've been working with our districts to help them understand how to identify and code their students."

In another state, where providers used some 20 different data systems, an administrator raised concerns about consistency: "There's no electronic upload, because every high school has a different data system. We collect all of our secondary core indicators through a separate online data collection system, and all the LEAs have to hand-enter all that data on enrollments." In response to a Department inquiry about the validity and reliability of the state's data, the administrator reported, "Our answer was [they're] about as valid and reliable as we can get, because [they're] the only data we have."

A community college administrator reported issues with data consistency between the state and local levels. As the administrator explained, "We just last year finally got to the point where we saw what the state was aggregating. There's a mismatch between what we know on our campuses for completion rates and what the state is saying our completion rates are. We're trying to figure out how they are pulling those data. The data are messy at this point."

A local director in one state had no confidence in the validity and reliability of technical skill attainment data. He stated that he "just provided a number above the state target," and he guessed that most of his peers in other local agencies had done the same. He also expressed concern about data analysis at the state level, although he had confidence in the data submitted by local subgrantees: "We submit electronically. [The data are] manipulated behind closed doors, and [they come] back out different from what was submitted. . . . You could just look at the data and see that they weren't right, didn't add up. They were clearly bogus, didn't pass the smell test." He acknowledged recent improvements, however, stating that the state director "has done an awful lot of work on getting higher quality data."

Indicators, Populations, and Measures

Perkins IV outlines six secondary and five postsecondary **core indicators**. The Department's nonregulatory guidance outlines two **student populations** for each sector as well as eight secondary and six postsecondary **performance measures** aligned with the *Perkins* core indicators (Exhibit 3.9). The guidance offers more specificity for each indicator by splitting some indicators into multiple measures (such as academic attainment) and provides direction for states in determining their measurement approaches. Discussion of the individual measures in this section explores how states are implementing the core indicators, populations, and performance measures.

Exhibit 3.9.
Perkins IV core indicators and performance measures from the Department's nonregulatory guidance

Core indicators	Performance measures
Secondary	
Academic attainment	1S1: Academic attainment—Reading/Language Arts 1S2: Academic attainment—Mathematics
Technical skill attainment	2S1: Technical skill attainment
Completion	3S1: Secondary school completion
Graduation rate	4S1: Graduation rate
Placement	5S1: Placement
Nontraditional participation and completion	6S1: Nontraditional participation 6S2: Nontraditional completion
Postsecondary	
Technical skill attainment	1P1: Technical skill attainment
Completion	2P1: Credential, certificate, or degree[13]
Retention or transfer	3P1: Retention or transfer
Placement	4P1: Placement
Nontraditional participation and completion	5P1: Nontraditional participation 5P2: Nontraditional completion

Exhibit reads: *Perkins IV* outlines six secondary and five postsecondary core indicators. The Department's nonregulatory guidance describes eight secondary and six postsecondary performance measures that align with the *Perkins* indicators.
SOURCE: The *Carl D. Perkins Career and Technical Education Act of 2006*; Justesen (2007a).

The survey results suggest that most states employ population and measure definitions that blend nonregulatory guidance with state-developed approaches (Exhibit 3.10 and Exhibit 3.11). Although the methodologies that states use may result in valid and reliable data within states, variability in how states define their populations and measures reduces the possibility of validly aggregating data at the national level.

[13] For the purposes of this report, postsecondary performance measure 2P1, "Credential, certificate, or degree" is referred to as "Completion."

In 20 states, secondary state directors reported that they consulted the guidance when defining each secondary population and measure,[14] while those in nine states reported using the guidance verbatim for every secondary population and measure definition (Exhibit 3.10). Every state reported that they consulted the guidance or used it verbatim for at least one secondary population or measure.

Exhibit 3.10.
Number of states according to the extent to which they used the nonregulatory guidance to craft secondary population and performance measure definitions

	Secondary				
Populations and performance measures	**Used verbatim**	**Consulted**	**Did not use**	**Don't know**	**Total**
Populations					
CTE participants	18	30	3	0	51
CTE concentrators	14	35	2	0	51
Use of guidance for both populations	**14**	**30**	**2**	**0**	
Measures					
Academic attainment (1S1, 1S2)	24	27	0	0	51
Technical skill attainment (2S1)	17	32	1	1	51
Secondary school completion (3S1)	20	30	1	0	51
Graduation rate (4S1)	23	27	1	0	51
Placement (5S1)	20	30	1	0	51
Nontraditional participation (6S1)	22	27	2	0	51
Nontraditional completion (6S2)	20	29	2	0	51
Use of guidance for all measures	**14**	**21**	**0**	**0**	
Use of guidance for every population and measure	**9**	**20**	**0**	**0**	

Exhibit reads: Twenty states consulted the guidance when defining secondary populations and measures, while nine used the guidance verbatim for every secondary population and measure definition. Every state consulted or used the guidance verbatim for at least one secondary population or measure definition.
SOURCE: Secondary State Director Survey, 2009.

[14] The survey did not specify the level of consultation, which potentially could vary from changing a few words to considering the guidance without using it.

Among the 48 states represented in the postsecondary survey results, 14 consulted the guidance for every population and measure, although only five states used the guidance verbatim for every postsecondary population and measure (Exhibit 3.11). All states consulted or used the guidance verbatim for at least one postsecondary population or measure definition.

Exhibit 3.11.
Number of states according to the extent to which they used the nonregulatory guidance to craft postsecondary populations and performance measure definitions

	Postsecondary				
Populations and performance measures	**Used verbatim**	**Consulted**	**Did not use**	**Don't know**	**Total**
Populations					
CTE participants	21	25	1	1	48
CTE concentrators	13	33	1	1	48
Use of guidance for both populations	**13**	**25**	**1**	**0**	
Measures					
Technical skill attainment (1P1)	14	29	5	0	48
Completion (2P1)	19	28	1	0	48
Retention or transfer (3P1)	21	26	1	0	48
Placement (4P1)	22	26	0	0	48
Nontraditional participation (5P1)	28	19	1	0	48
Nontraditional completion (5P2)	26	21	1	0	48
Use of guidance for all measures	**12**	**16**	**0**	**0**	
Use of guidance for every population and measure	**5**	**14**	**0**	**0**	

Exhibit reads: Fourteen states consulted the guidance for every postsecondary population and measure, although only five used it verbatim for every population and measure definition. All states consulted or used the guidance verbatim for at least one postsecondary population or measure definition.
SOURCE: Postsecondary State Director Survey, 2009.

Case study states: Perspectives on nonregulatory guidance

During the case study visits, interviewers spoke with state administrators regarding their views of the nonregulatory guidance and whether they thought the Department should release regulations for the *Perkins* accountability requirements.

On the current nonregulatory guidance: "I didn't use the nonregulatory guidance. I went to [our eligible agency] for my guidance at every level, every step. The negotiations for all of our core indicators were done collaboratively between us and our [eligible agency]. I took a look at their nonregulatory guidance, but that's pretty much what I did with it, because there really wasn't much there, to be honest with you."

"I don't know how helpful it was. To me, it seemed like the nonregulatory guidance was really structured off the Data Quality Institutes. The problem with that was that there were many small states there who had an equal voice. . . .I guess I would rather have the nonregulatory guidance than not have it, but there are issues with it. I have asked OVAE 'What's the question you want answered?' and they can't tell me. The only problem with the core indicators is that I don't think they measure the right things. I think some of the core indicators are just giving Congress data, but they're not necessarily giving them worthwhile data, anything they can really use."

On releasing regulations: "Yes and no. Yes, in the spirit of trying to create a common comparative approach, but no, because it typically would mean that it doesn't come with funds to help implement systems that would get us there."

"OVAE should have at least nonregulatory guidance in order for there to be some consistency across the states. Without such guidance, it leaves each state on its own to interpret the legislation and to decide on how it wants to build its measures. However, the guidance should not be developed in a vacuum. OVAE should convene a committee of state directors to work with them in developing the guidance."

"I think detailed guidance is better, since federal regulations are often not appropriate for shared-time systems in career and technical education."

"The reason I don't want regulatory guidance is the nonregulatory guidance I don't agree with. So I don't want it to be regulation. If I've got the same kind of regulations that I have as nonregulatory guidance. . . heaven help us."

Student Populations

For *Perkins IV*, the Department defined two student populations—CTE participants and CTE concentrators—for both secondary and postsecondary education. The legislation also requires states to report disaggregated results for seven secondary and six postsecondary special populations.

Participants and concentrators

Generally, participants are students who receive at least a minimal level of CTE instruction, and concentrators are students who participate more extensively in CTE coursework (Exhibit 3.12).

Exhibit 3.12.
Nonregulatory guidance: Secondary and postsecondary populations

Secondary populations	
CTE participant	A secondary student who has earned one (1) or more credits in any career and technical education (CTE) program area.
CTE concentrator	A secondary student who has earned three (3) or more credits in a single CTE program area (e.g., health care or business services), or two (2) credits in a single CTE program area, but only in those program areas where 2 credit sequences at the secondary level are recognized by the State and/or its local eligible recipients.
Postsecondary/Adult populations[a]	
CTE participant	A postsecondary/adult student who has earned one (1) or more credits in any CTE program area.
CTE concentrator	A postsecondary/adult student who: (1) completes at least 12 academic or CTE credits within a single program area sequence that is comprised of 12 or more academic and technical credits and terminates in the award of an industry- recognized credential, a certificate, or a degree; or (2) completes a short-term CTE program sequence of less than 12 credit units that terminates in an industry- recognized credential, a certificate, or a degree.

Exhibit reads: According to the Department's nonregulatory guidance, participants are students who receive at least a minimal level of CTE instruction, and concentrators are students who participate more extensively in CTE.
[a] *Perkins IV* does not refer to an "adult" population for accountability reporting; however, the Department's nonregulatory guidance uses the language "postsecondary/adult" in the population definitions. Several states offer adult CTE programs outside their community and technical colleges. For 2007–08, six states—Florida, Louisiana, Ohio, Oklahoma, Rhode Island, and Tennessee—negotiated separate performance targets and reported separate data for their adult programs (U.S. Department of Education 2010c). The remainder of this chapter will refer only to "postsecondary."
SOURCE: Justesen (2007a).

The Department requires states to report on the number of participants served in aggregate, as well as disaggregated by special population. Concentrators are the cohort of students evaluated in every secondary and postsecondary performance measure. The only exception is the nontraditional participation measure (6S1 for secondary, 5P1 for postsecondary), which assesses the outcomes of participants instead of concentrators.

The Department developed and disseminated the nonregulatory guidance to promote validity, reliability, and comparability in state and local performance data (U.S. Department of Education 2010c). To achieve comparability, evaluations of student outcomes should apply similar performance measure definitions to similar cohorts of students—in this case, concentrators. Only 14 secondary and 13 postsecondary state directors, however, reported using the concentrator definition verbatim from the nonregulatory guidance (Exhibit 3.10 and Exhibit 3.11), suggesting that definitions of concentrators, and therefore concentrator cohorts, may vary across states.

In its 2007–08 *Report to Congress on State Performance*, the Department noted similar concerns. The specific issue was reporting on students at different points along their educational path: some states include students relatively new to CTE, while other states report on students who are close to completing, or have completed, their CTE programs. As the Department observed, there can be no expectation that students at such different stages in their programs would have similar levels of attainment, making comparisons of these different groups invalid (U.S. Department of Education 2010c).

The case studies revealed that at least three states continue to designate a student "completer" population at one or both secondary and postsecondary levels.[15] In *Perkins III*, some states used the completer population to identify students who actually complete a CTE program or graduate. Because the nonregulatory guidance does not mention this population, these states' use of completers—instead of concentrators—as the student cohort evaluated in some indicators will reduce comparability.

Besides these differences in concentrator definitions, states and local subgrantees also vary in how they determine which students are concentrators. The decision to identify a student as a participant or concentrator is made at the local level in some states, while others make that determination for all students at the state level. According to survey responses, 26 percent of LEA directors and 34 percent of IHE directors reported that their state identified concentrators using a state-level database (Exhibit 3.13). The most common method for both LEAs (57 percent) and IHEs (60 percent) was having local administrators use local data systems to identify concentrators.

[15] One case study state provided oral definitions of CTE completers, but the definitions are not included in its *Perkins* five-year plan.

Exhibit 3.13.
Percentage of LEAs and IHEs that used various methods to identify concentrators

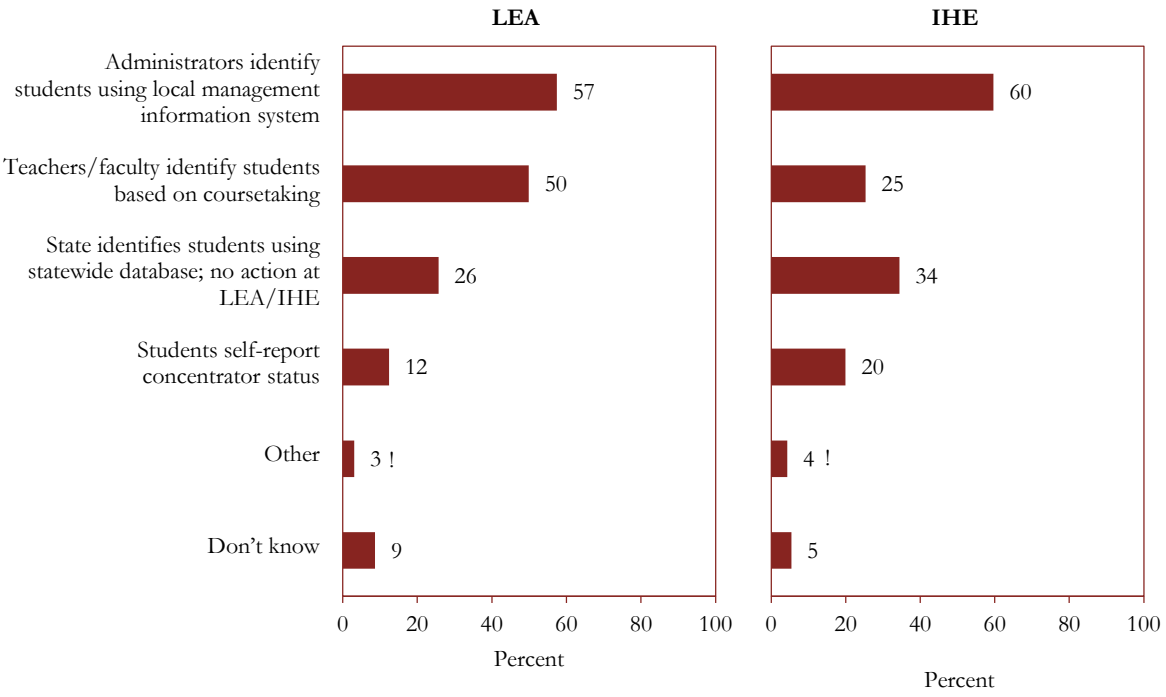

Exhibit reads: In more than half of LEAs and IHEs, local administrators use local data systems to identify concentrators.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Given that so few states used the nonregulatory guidance verbatim to define a concentrator, coupled with the varied methods used to identify concentrators, it is probable that concentrator cohorts differ across states. Some of the administrators interviewed during the case studies explained their reasons for developing different definitions, several of which related to variations in how they administer programs. One said, "We couldn't just take the concentrator at the 12-credit level. We have completers at 10-credit levels, so we had to fit things like that into how our system works." In another state, a secondary administrator offered, "We didn't use [the Department's] recommended definitions because we don't use Carnegie units; it was easier for us to use hours."

The following sections offer a few additional reasons for states' use of a definition other than that provided in the nonregulatory guidance, including timeframe, data system capacity, and challenges linking students to CTE programs.

Clarity of timeframe

In the nonregulatory guidance, the concentrator definition does not indicate a timeframe during which students must earn CTE credit or be enrolled in CTE coursework to qualify as a concentrator. It is therefore unclear if states are looking only at students enrolled in the current reporting year[16] to identify concentrators, or if they are including students who reached the concentrator threshold in prior years, regardless of those students' current enrollment.

Among the six case study states, for example, two states used the nonregulatory guidance verbatim to define a secondary concentrator. The definition designated a secondary concentrator as a student "who has earned" a specific threshold of credits in a single CTE program area, but it did not specify when those credits should be earned or that the student be enrolled in a CTE course during the reporting year (Exhibit 3.12). A third state used a slightly different definition, but still based it on credits earned, not current enrollment. These states, therefore, may have included students in their concentrator cohorts who achieved concentrator status in previous years, but who were not concentrators in the reporting year (e.g., a student who achieved concentrator status in grade 11, who was not enrolled in CTE in grade 12, but was included in the performance outcomes in that reporting year).

Another state referred to students "who have enrolled" in CTE, although it did not appear to require current enrollment. The last two states required students to be currently enrolled in addition to having completed a threshold number of hours or proportion of a program sequence. These states likely did not include students who achieved concentrator status in a previous year, unless they were enrolled in the reporting year. While each of these approaches may offer states valuable information about their students, they result in dissimilar concentrator cohorts across states.

Data system capacity

Data system capacity varies among states, affecting the ability of some states to identify student populations and in which, if any, CTE program a student is enrolled. A small number of states did not have the ability to monitor students through grade 12 (9 secondary) or over time (14 postsecondary) (Exhibit 3.14), suggesting that they were unable to review prior year records to see if a student had accumulated the credits or courses needed to reach the concentrator threshold.

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[16] The reporting year is the program year ending on June 30 prior to the December 31 Consolidated Annual Report (CAR) submission deadline. For the December 2010 CAR submission, the reporting year was 2009–10 (July 1, 2009, through June 30, 2010).

Exhibit 3.14.
Number of states with the ability to monitor individual students with *Perkins* database, by education level

Education level	Yes	No	Don't know	No response	Total
Secondary: Monitor individual students through grade 12	40	9	1	1	51
Postsecondary: Monitor individual students over time	28	14	5	1	48

Exhibit reads: A small number of state directors reported that they did not have the ability to monitor students through grade 12 (9 secondary) or over time (14 postsecondary).
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Another complicating factor arises from postsecondary students enrolling in multiple institutions to get the courses they need. According to a 2006 report, among undergraduate students who entered postsecondary education shortly after leaving high school, nearly 60 percent attended more than one institution (Adelman 2006). Without a state system with the capacity to track individual students across institutions, match coursetaking records, and identify programs at the state level, a student taking elements of a CTE program at different institutions may be considered a participant at the individual institutions, but might in fact be a concentrator when viewed across institutions.

Linking students to CTE programs

Even states with data systems that can track students over time may encounter challenges in trying to determine if students are enrolled in a CTE program, and if so, which program. Programs sometimes include similar coursework or build upon one another. An example is health-related coursework, which could apply to multiple programs such as Dental Assistant, Certified Nursing Assistant, Licensed Practical Nurse, and Registered Nurse, among others. Programs also may offer students some flexibility in the order of courses they take. States noted the nonlinear nature of postsecondary coursework during the 2005 Data Quality Institute, suggesting that some states may find it difficult to determine the program in which a student is enrolled (Data Quality Institute 2006a).

At the postsecondary level, there are additional challenges to determining what program or goal a student is pursuing. Students enroll in community and technical colleges for a variety of reasons, including seeking a degree or certificate, improving basic literacy and numeracy skills, developing career-related skills, pursuing personal enrichment (Bailey, Leinbach, and Jenkins 2006), and "sampling" college (Adelman 2005). Colleges vary in their approaches to capturing student "intent" (i.e., students' reasons for attending and the educational path they intend to pursue). Some institutions ask students to self-report their intent upon enrollment (Offenstein and Shulock 2009), but may not require students to declare a specific program or major. Students who change their plans after initially reporting their intent may not update

their information over time, and the institution may be unaware of the change until the student applies for a degree or certificate. A 2006 report from the Community College Research Center (Bailey, Leinbach, and Jenkins 2006) suggested that, while there was a relationship between students' primary reasons for enrolling and student outcomes:

> A student's stated primary reason for enrolling did not preclude achievement of other objectives. Many students who stated that their primary reason was "job skills" or "personal enrichment" still earned a certificate or degree or transferred, suggesting that many of them sought to attain the non-degree goals by earning postsecondary credentials, not necessarily just by taking a limited number of courses (p. 9).

For states that rely on student intent to determine what program a student is in, the self-reported intent information captured when a student enrolls may be transferred to the state data system, but it still could be inaccurate for some students. States raised this issue during the June 2005 DQI, noting that it is difficult to evaluate the accuracy of student intent across institutions and states (Data Quality Institute 2006a).

Special populations

Perkins IV requires states to report performance data about several special populations, including individuals with disabilities; individuals from economically disadvantaged families, including foster children; individuals preparing for nontraditional fields; single parents, including single pregnant women; displaced homemakers; and individuals with limited English proficiency (Sec. 3(29)). *Perkins IV* also requires each eligible secondary recipient to report indicator data annually, disaggregated by the categories of students listed in *ESEA* Sec. 1111(h)(1)(C)(i). While most of the *ESEA* categories are identical to the *Perkins IV* special populations, *ESEA* also includes "migrant status."

Most secondary and postsecondary state directors had at least some confidence in the accuracy and completeness of the special population data reported by local subgrantees (Exhibit 3.15). Secondary state directors were most confident in the data for students with disabilities and least confident in the data reported for single parents and single pregnant women. For postsecondary education, state directors had the greatest confidence in the accuracy and completeness of data reported for economically disadvantaged and foster children and students preparing for nontraditional fields. Postsecondary state directors were less confident in the data reported for students with disabilities than their secondary peers.

Exhibit 3.15.
Number and percentage of state directors according to how confident they were in the accuracy and completeness of special populations data reported by local subgrantees, by education level

(5–point scale from Not confident to Very Confident)

	Number						Percent		
Special populations	Very confident (5)	Less than very confident (2 - 4)	Not confident (1)	Don't know	Not applicable/ No response	Total	At least some confidence (2 - 5)	No confidence (1)	Total
Secondary									
Students with disabilities	30	19	1	0	1	51	98	2	100
Economically disadvantaged, foster children	24	24	2	0	1	51	96	4	100
Students preparing for nontraditional fields	21	25	2	2	1	51	96	4	100
Single parents, single pregnant women	10	27	9	2	3	51	80	20	100
Displaced homemakers	7	19	5	1	19	51	84	16	100
Students with limited English proficiency	23	25	2	0	1	51	96	4	100
Migrant students	12	25	6	1	7	51	86	14	100
Postsecondary									
Students with disabilities	14	25	7	0	2	48	85	15	100
Economically disadvantaged, foster children	12	28	6	0	2	48	87	13	100
Students preparing for nontraditional fields	18	22	6	0	2	48	87	13	100
Single parents, single pregnant women	5	32	8	1	2	48	82	18	100
Displaced homemakers	5	28	12	1	2	48	73	27	100
Students with limited English proficiency	14	23	7	0	4	48	84	16	100

Exhibit reads: Secondary state directors were most confident in the special populations data for students with disabilities (49). Postsecondary state directors had the greatest confidence in the accuracy and completeness of data for economically disadvantaged/foster children (40) and students preparing for nontraditional fields (40).
NOTE: Percentage calculations exclude "Don't know," and "Not applicable/No response."
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Most LEA and IHE directors had at least some confidence in the accuracy of data they reported for any special population (Exhibit 3.16). About 30 percent of LEA respondents did not know if the data reported for displaced homemakers were accurate, although this may be due to the smaller numbers of displaced homemakers served by secondary institutions. About one-quarter indicated they did not know if the data for migrant students were accurate.

Exhibit 3.16.
Percentage of LEA and IHE directors according to how confident they were in the accuracy of the data reported for special populations

(5–point scale from Not confident to Very Confident)

	LEA					IHE				
Special populations	Very confident (5)	Less than very confident (2 - 4)	Not confident (1)	Don't know	Total	Very confident (5)	Less than very confident (2 - 4)	Not confident (1)	Don't know	Total
Students with disabilities	53	38	2	6	100	33	54	6	6	100
Economically disadvantaged, foster children	48	42	2	7	100	32	55	7	6	100
Students preparing for nontraditional fields	35	51	4	10	100	34	55	6	6	100
Single parents, single pregnant women	33	43	7	17	100	23	56	12	9	100
Displaced homemakers	24	37	10	29	100	22	54	14	10	100
Students with limited English proficiency	46	38	3	13	100	27	58	8	8	100
Migrant students	36	36	4	23	100	n/a	n/a	n/a	n/a	n/a

Exhibit reads: Among secondary local directors, 53 percent were very confident in the accuracy of data reported for students with disabilities, while only 33 percent of postsecondary local directors reported the same. Less than 35 percent of IHE directors were very confident about the accuracy of any special population data.
n/a Not available.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Case study respondents at the state and local levels reported efforts to collect special populations data, while indicating some concern about obtaining valid and reliable data for all special population categories. A postsecondary administrator said that "special populations data are usually collected through self-reporting. For the most part, I think they're valid, but I think no one understands what a displaced homemaker is." Another respondent noted that an individual's status as part of a special population may change: "Because you can be [in one of] those [categories] one semester and not another semester, [the IHEs] have to ask those [questions] every semester."

A secondary district administrator related problems obtaining reliable information about some special populations: "Foster care . . . those are hard data to get . . . unless you just ask the student. [They're] not reported.. . . Pregnant teen? . . . And how do you ask that in a class?" In a local postsecondary institution that collects some special populations data through student self-report, an administrator said, "any student who self-identifies in a category is easy to track," acknowledging at the same time that students with disabilities "may not self-identify because they don't want to share; they may not self-identify because they don't know."

Reporting special populations data for postsecondary students: NRCCTE report

Findings from a study conducted for the National Research Center for Career and Technical Education (NRCCTE) shed additional light on how some states report special populations data for postsecondary students (Kotamraju, Richards, Wun, and Klein 2010). The 12 states participating in the study noted several issues affecting their ability to collect and report data on special populations, including uncertainty around collecting certain types of student information. NRCCTE study findings suggest that there may be variability in how states report postsecondary data on special populations.

Students with disabilities: Some study states mentioned reluctance on the part of institutions to share information about student disabilities as a challenge to collecting these data. Other states questioned whether students should be identified through a documented disability or by self-report.

Economically disadvantaged students: Pell Grant receipt was the most common method study states used to identify economically disadvantaged students. States noted that this approach did not capture students who chose not to apply for financial aid or who did not qualify for federal aid because they were enrolled less than half-time. Several, but not all, states sought additional data to identify economically disadvantaged students, including data from the Bureau of Indian Affairs and public assistance programs as well as foster child status.

Students with limited English proficiency (LEP): Some study states categorized students as LEP if they had ever taken an English as a Second Language (ESL) class, while others looked only at ESL coursetaking in the reporting year. Some states based LEP status on whether students spoke a language other than English at home, and still others relied on assessments to identify LEP students. As indicated in the report: “States agreed that if policymakers provided greater clarity on this definition, they would likely be able to adapt their individual data collection and reporting to be more comparable across states” (Kotamraju et al. 2010, p.12).

Displaced homemakers and single parents: The states did not all ask students if they were parenting or whether they were displaced homemakers. The study mentioned tracking individuals entering from programs targeted to displaced homemakers or single parents, but indicated that most study states did not have reliable methods to collect this information or did not have such programs.

Core Indicators and Performance Measures

States must report their performance and progress toward negotiated targets for each core indicator, both in the aggregate and disaggregated by special populations. This section discusses each core indicator in depth.

Academic attainment

Perkins IV includes academic attainment as an indicator only for secondary education, eliminating it for postsecondary education.[17] The Department's nonregulatory guidance splits the secondary indicator into two separate measures: reading/language arts and mathematics (Exhibit 3.17).

Exhibit 3.17.
Nonregulatory guidance: Academic attainment

Secondary

1S1: Academic attainment—Reading/Language Arts	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school **reading/language arts** assessment administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (*ESEA*) as amended by the *No Child Left Behind Act* based on the scores that were included in the State's computation of adequate yearly progress (AYP) and who, in the reporting year, left secondary education. **Denominator:** Number of CTE concentrators who took the *ESEA* assessments in **reading/language arts** whose scores were included in the State's computation of AYP and who, in the reporting year, left secondary education.
1S2: Academic attainment—Mathematics	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school **mathematics** assessment administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (*ESEA*) as amended by the *No Child Left Behind Act* based on the scores that were included in the State's computation of AYP and who, in the reporting year, left secondary education. **Denominator:** Number of CTE concentrators who took the *ESEA* assessments in **mathematics** whose scores were included in the State's computation of AYP and who, in the reporting year, left secondary education.

Exhibit reads: The Department's nonregulatory guidance splits the secondary academic attainment indicator into two separate measures: reading/language arts and mathematics.
SOURCE: Justesen (2007a).

States appear to have confidence in the accuracy and completeness of the data reported by local providers for academic attainment. Among secondary state directors, 26 were very confident that the data accurately reflect performance, and none reported no confidence in the data (Exhibit 3.5). LEA directors appear similarly confident, with only 3 percent reporting no confidence at all and 46 percent reporting that they were very confident in the accuracy of their academic attainment data (Exhibit 3.6).

Some states and local subgrantees registered uncertainty regarding this indicator, however, with 23 state directors and 44 percent of LEA directors responding that they had some con-

[17] According to a report from the June 2005 DQI, states were in nearly unanimous agreement that academic skill attainment should be removed from the postsecondary core indicators, contending that CTE programs have different purposes and outcomes at the secondary and postsecondary levels, and the results of the indicator are duplicated in other measures, such as completion and placement (Data Quality Institute 2006a).

fidence but were less than very confident about the data reported for the measures. There are several reasons that directors might question the accuracy and completeness of their data, some of which also may affect comparability of data across states. These include the timing of assessments, identifying concentrators who have left education, and applying the *ESEA* methodology to a subset of students, which are discussed below.

Timing of assessments

While some students take the tests in 9th or 10th grade, others are assessed in 11th or 12th grade. As of 2007–08, according to the Center on Education Policy, 18 states offered their *ESEA* assessment in 10th grade and 14 offered it in 11th grade. The remaining states did not specify when assessments were offered (2) or reported assessing students over multiple years, ranging from 9th to 12th grade, depending on the subject (16) (Center on Education Policy 2010).

The decision to alter the construct of this indicator to match the *ESEA* reporting methodology may indicate an interest in understanding the effect of CTE coursework on students, particularly whether students in CTE programs fare better or worse than all students on statewide assessments. For students who begin CTE coursework in 11th or 12th grade, however, the *ESEA* assessment may occur before they have much, if any, exposure to CTE. According to an administrator in one case study state,

> In our state, we give an exit exam in the 10th grade . . . and the majority of students who enroll in CTE don't even do so until their junior year. In some LEAs, that could go against kids. Why would I enroll a low-performing student in CTE when I know two years from now you're going to look at that measure and hold it against me? It really is a nonsensical measure.

In another state, an administrator explained,

> The assessment is administered in October of the 11th grade and measures end-of-10th-grade learning, but the students typically begin their CTE core enrollment at the beginning of grade 11. So the regional CTE centers are held accountable for those scores when that learning occurred before they even enrolled in the centers. Use of the [*ESEA*] measurement is not measuring academic gain; it only measures differences in successive cohorts of students.

Identifying concentrators who leave

The nonregulatory guidance calls for states to assess students at the time they leave secondary education. Students leave high school at different times and for different reasons, however. Some students graduate after four years, while others graduate early or late. Still others leave without graduating because they are transferring to another school or dropping out al-

together. States that follow the guidance must be able to differentiate among these different types of student departures to determine which students are "leavers" in order to report academic attainment accurately.

States also must be able to match concentrators who leave in a reporting year with their assessment results, regardless of whether the students took the assessment that year. In addition, some students may leave without taking the statewide assessment. Depending on when an assessment is offered, some students may graduate or leave high school in a different year than the one in which they took the exam. For example, the 32 states that offered their 2007–08 *ESEA* assessments in the 10th or 11th grade must match the assessment results from prior years to records for CTE concentrators graduating at the end of 12th grade. States that reported being unable to monitor students through the 12th grade may face challenges in matching student concentrator records with assessment records from prior years.

Applying the ESEA *methodology*

There is a small body of evidence indicating that some states may be having difficulty ensuring that the methodology used to calculate academic attainment for *ESEA* is accurately applied for *Perkins IV* accountability (U.S. Government Accountability Office 2009; Richards 2009; Richards and Schoelkopf 2008). States with a *Perkins* data collection system that is separate from other state secondary data systems must replicate the *ESEA* computation used to calculate results for all students when analyzing data only for CTE concentrators. The assumptions inherent in the "all students" methodology may pose challenges when applied to another data system with different assumptions, separate reporting requirements, and a subset of students.

Technical skill attainment

Perkins IV retains the technical skill attainment indicator for both the secondary and postsecondary levels and adds a requirement that technical skill proficiencies be aligned with industry-recognized standards, if available and appropriate. The legislation describes this core indicator as "Student attainment of challenging career and technical skill proficiencies, including student achievement on technical assessments, that are aligned with industry-recognized standards, if available and appropriate."

In addressing the new language, the Department's nonregulatory guidance focuses more closely on technical assessments than it does on skill proficiencies, asking states to report the number of concentrators who pass technical skill assessments (TSAs) aligned with industry-recognized standards, if available and appropriate (Exhibit 3.18).

Exhibit 3.18.
Nonregulatory guidance: Technical skill attainment

Secondary	
2S1: Technical skill attainment	**Numerator:** Number of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year. **Denominator:** Number of CTE concentrators who took the assessments during the reporting year.
Postsecondary	
1P1: Technical skill attainment	**Numerator:** Number of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year. **Denominator:** Number of CTE concentrators who took technical skill assessments during the reporting year.

Exhibit reads: The Department's nonregulatory guidance asks states to report the number of concentrators who pass technical skill assessments (TSAs) aligned with industry-recognized standards, if available and appropriate.
SOURCE: Justesen (2007a).

Seventeen secondary and 14 postsecondary state directors reported using the nonregulatory guidance verbatim for the technical skill attainment measure, while 32 secondary and 29 postsecondary directors reported consulting the guidance (Exhibit 3.10 and Exhibit 3.11), suggesting there is variation in how technical skill attainment data are collected and reported among states. The six case study states varied in their definitions as well. Only one used the nonregulatory guidance; the other five developed different measures for both the secondary and postsecondary levels.

While very few states indicated that they had no confidence in the accuracy of technical skill attainment data (Exhibit 3.5 and Exhibit 3.6), according to the U.S. Government Accountability Office (GAO), 38 states at the secondary level and 39 states at the postsecondary level faced great or very great challenges in collecting data on technical skill attainment (U.S. Government Accountability Office 2009). Some of those challenges may include allowable and available methods for collecting data, timing of measurement, cost of assessments, and access to data (U.S. Department of Education 2010c; Hilber and Sheets 2007; Stanley 2008; DeWitt 2008), and are discussed in more detail in the next sections.

Methods for measuring attainment

The study's survey results and a recent GAO report indicate that states are using multiple methods for assessing technical skill attainment (U.S. Government Accountability Office 2009). According to the survey results, most states indicated that at least some of their LEAs used industry-developed and employer-validated exams to assess students' technical skill attainment (Exhibit 3.19). While 10 secondary state directors reported that all their LEAs used program completion, 22 indicated that none of their LEAs used that approach. Of the post-

secondary state directors responding to the question, 39 indicated that at least some IHEs used state licensing and credentialing exams to assess postsecondary technical skill attainment. Only seven states reported that any IHEs used state-developed skill exams.

Exhibit 3.19.
Number and percentage of states according to the extent to which local subgrantees used various tools to assess technical skill attainment in 2008–09, by education level

	Number							Percent		
Assessment tools	All	Many	Some	None	Don't know	No response	Total	At least some	None	Total
Secondary										
Industry developed, employer validated exam	4	14	25	4	3	1	51	91	9	100
National licensing/credentialing exam	2	11	26	8	3	1	51	83	17	100
Commercially developed exam	3	8	26	10	3	1	51	79	21	100
State licensing/credentialing exam	2	11	24	10	3	1	51	79	21	100
Locally developed skill exam	5	3	17	19	6	1	51	57	43	100
CTE course or program completion	10	7	7	22	4	1	51	52	48	100
State developed skill exam	9	5	5	31	0	1	51	38	62	100
Grade point average	8	5	4	30	3	1	51	36	64	100
Postsecondary										
State licensing/credentialing exam	4	14	21	3	5	1	48	93	7	100
National licensing/credentialing exam	3	17	18	4	4	2	48	90	10	100
Industry developed, employer validated exam	0	12	24	7	4	1	48	84	16	100
Commercially developed exam	0	6	22	13	6	1	48	68	32	100
Institutionally developed skill exam	1	11	16	15	4	1	48	65	35	100
CTE course or program completion	11	7	8	19	2	1	48	58	42	100
Grade point average	12	4	7	21	3	1	48	52	48	100
State developed skill exam	1	3	3	38	1	2	48	16	84	100

Exhibit reads: Most secondary state directors indicated that at least some of the LEAs in their state used industry-developed, employer-validated exams to assess students' technical skill attainment (43). Thirty-nine postsecondary state directors indicated that at least some IHEs used state licensing and credentialing exams to assess postsecondary technical skill attainment.
NOTE: Percentage calculations exclude "Don't know" and "No response."
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

A postsecondary CTE administrator in one case study state advocated the use of grade point average (GPA) to document technical skill attainment: "We measure technical skill proficiencies through multiple demonstrations throughout the semester. Why would I take one test and say that one paper-and-pencil test is your level of proficiency? . . . We feel a grade of C or better in those courses is a strong indicator of technical skill attainment."

Among local subgrantees, 82 percent of LEAs and 87 percent of IHEs assessed technical skill attainment for at least some of their students by course or program completion, and 56 percent of LEAs and 63 percent of IHEs assessed all students using this method (Exhibit 3.20). State licensing and credentialing exams were used more frequently to assess at least some postsecondary students (84 percent) than secondary students (44 percent).

Exhibit 3.20.
Percentage of LEAs and IHEs according to the extent to which they used various methods to assess students' technical skill attainment in 2008–09

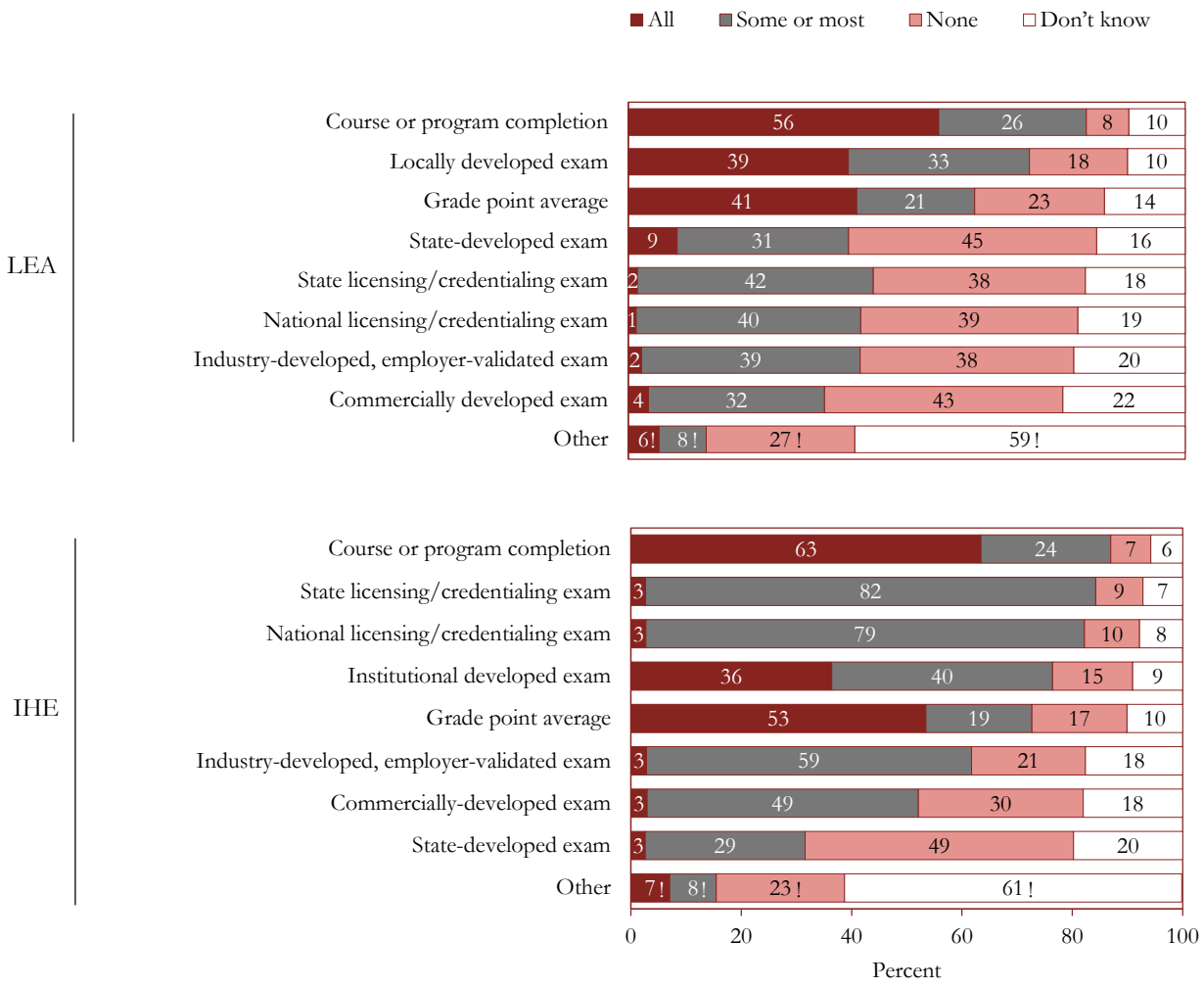

Exhibit reads: Eighty-two percent of LEAs and 87 percent of IHEs used course or program completion to assess at least some students' technical skill attainment.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values. Detail may not sum to totals because of rounding.
SOURCE: LEA and IHE Surveys, 2009.

Very few states had a system of state- or commercially developed assessments that would allow them to offer industry-aligned assessments for all their CTE programs (nine secondary, four postsecondary) (Exhibit 3.21). About half of secondary state directors reported having a state- or commercially developed assessment system that allowed them to cover a subset of programs, while only 15 postsecondary state directors reported the same. Several states were

in the process of designing or implementing a system (21 secondary, 18 postsecondary) or considering their development options (16 secondary, 14 postsecondary).

Exhibit 3.21.
Number of states according to progress made in developing technical skill assessments (TSAs), by education level

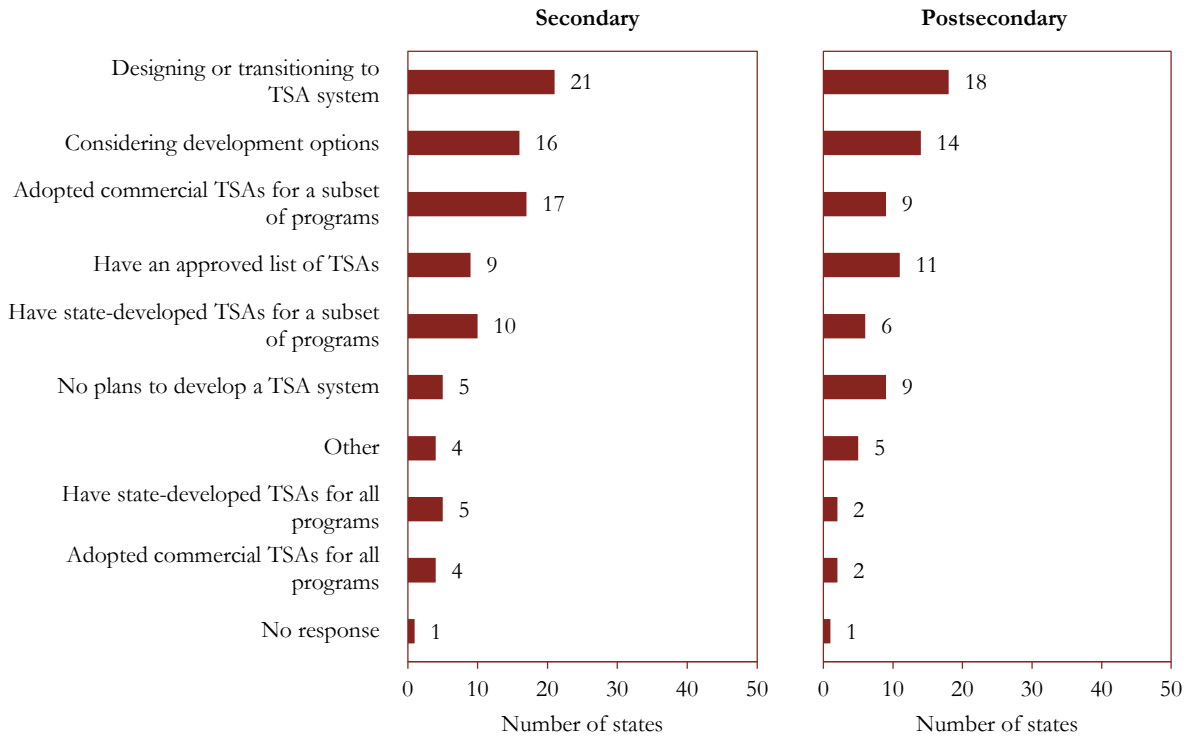

Exhibit reads: Only nine secondary and four postsecondary state directors had state- or commercially-developed assessments that would allow them to offer TSAs for all their CTE programs.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

In one case study state, LEAs had four different ways to measure technical skill attainment because, at the time of the site visit, the state was able to assess only 12 of the state's nearly 10,000 concentrators using an industry-based certification exam. According to a local provider, the state has a specific hierarchy: "The highest one is … by industry certification. The next down is third-party certification. … The third is whether they had a dual credit course for which they received credit. … The fourth and final option is what we call 'locally developed criteria.'"

Another state chose to assess all concentrators through some means and track the method of assessment. As a secondary administrator explained,

> We felt it was better to look at all concentrators and assess them on [whether they met] the gold standard as we defined it in our plan … or did they meet it based on the alternative measure, which is the teachers certifying that they achieved the competencies based on the curriculum frameworks provided to them. That was the only way we were able to look at all the concentrators rather than look [only] at the people who took an assessment.

Even the one case study state using the Department's guidance for secondary and postsecondary technical skill attainment noted limitations in its data: "We don't report assessment data to [the Department] for pathways where there is not an approved statewide assessment. That's just something … we're going to have to live with until we get valid assessments in all the programs. For the others, we try to push for proof of self-reported results. The validity has improved now that we've started doing monitoring visits."

When to measure attainment

Perkins IV and the nonregulatory guidance allow states flexibility in determining whether to assess student attainment at the end of a course, at the end of a program, or at the end of a program of study. Some states may choose to evaluate technical skill attainment on a formative basis—as students are learning—while others may assess it on a summative basis—once students have completed a CTE program (U.S. Government Accountability Office 2009).

The type of assessment may determine when students are assessed. For example, assessments through a third party or through licensing and certification agencies may be designed to measure attainment at the end of a program or when students are ready to enter the workforce. Other measurement approaches—such as state- or locally developed assessments, grades, student portfolios, or proficiency demonstrations—may offer the option of formative or summative assessments. If states are assessing students at different points along their educational path, the results could limit data comparability.

Cost

States cited cost as an impediment to offering technical skill assessments. According to the GAO, the cost of developing statewide assessments or acquiring third-party assessments can be prohibitive for some institutions and students who may need to pay for the assessment (U.S. Government Accountability Office 2009).

A director in one state claimed to know local subgrantees that chose not to accept *Perkins* funding, in part due to the requirement for technical skill assessments. According to him, "If they want this mountain of data and they want technical assessments, they need to pay for [them]. I know some people opted out of even applying for *Perkins*; they didn't think it was worth it." In another state, a director explained that using nationally recognized exams may

be cost-prohibitive for some LEAs, because they would have to pay the exam fees for their students.

Access to data

Challenges in accessing data may contribute to states' use of different types of assessments. While states have immediate access to results based on grades, student work, and assessments taken by students while in school, data for assessments offered through external licensing and certification organizations may not be immediately available because of timing and privacy reasons.

Some licensing boards offer assessments only a few times a year[18] or after students have obtained a threshold amount of work experience;[19] therefore, students may not complete the assessment process by the December CAR deadline. An administrator in one case study state identified the early childhood education field as particularly problematic because students "have five years after they get the degree to take the certification exam, and we don't even know if they do it or not." A local dean noted that "a lot of students take those [exams] after they graduate, so we may not be able to get those data or tie them to specific names. We could try to collect that afterward, but it would mean [we'd need] a staff person we don't have [now] calling the student."

Citing privacy concerns, some licensing and certification organizations may decline to share assessment information with anyone other than the student. States report considerable difficulty in obtaining student-level assessment records from many licensing and certification agencies, even from other state agencies, such as state nursing boards (Data Quality Institute 2006b; U.S. Government Accountability Office 2009).

One case study state administrator related, "I've tried to get [scores on] third-party tests [through administrative data matches], and [test administrators] won't do it; nobody does it." According to another, "That's a huge challenge. Once students graduate, they're not required to come back to tell their teachers 'I received my cosmetology license or my RN license' or whatever. So our school districts don't report on that—or only report on this handful of students [who] do come back to . . . show their certificates to their instructors." Another state administrator discussed the challenges in accessing data, "The board of nursing will give us that information, but it will cost a lot of money; we will get the information when we pay the $2,000 or $3,000."

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[18] For example, the American Association of Electrodiagnostic Technologists' (AAET) website indicates that the organization will offer three examination periods in 2011: March 5–19; June 4–18; and October 1–15.

[19] An example is the Automotive Service Excellence (ASE) certification. To earn an ASE certificate, students must pass an ASE test and have at least two years of relevant full-time hands-on work experience in the motor vehicle service industry (National Institute for Automotive Service Excellence 2010).

Completion

The definition of the secondary completion indicator in the nonregulatory guidance asks for the proportion of concentrators who earn a high school diploma, pass the GED tests, or obtain any equivalent diploma offered by a state (Exhibit 3.22). Postsecondary subgrantees report on students who earn a degree, certificate, or industry-recognized credential.

Exhibit 3.22.
Nonregulatory guidance: Completion

Secondary

3S1: Secondary school completion	**Numerator:** Number of CTE concentrators who earned a regular secondary school diploma, earned a General Education Development (GED) credential as a State-recognized equivalent to a regular high school diploma (if offered by the State) or other State-recognized equivalent (including recognized alternative standards for individuals with disabilities), or earned a proficiency credential, certificate, or degree, in conjunction with a secondary school diploma (if offered by the State) during the reporting year. **Denominator:** Number of CTE concentrators who left secondary education during the reporting year.

Postsecondary

2P1: Completion of credential, certificate, or degree	**Numerator:** Number of CTE concentrators who received an industry-recognized credential, a certificate, or a degree during the reporting year. **Denominator:** Number of CTE concentrators who left postsecondary education during the reporting year.

Exhibit reads: The nonregulatory guidance asks for the proportions of concentrators who earn a high school diploma, pass the GED tests, or obtain any equivalent diploma offered by a state for secondary completion. Postsecondary subgrantees report on students who earn a degree, certificate, or industry-recognized credential.
SOURCE: Justesen (2007a).

State approaches to these indicators appear to vary, possibly due in part to issues such as identifying concentrators who leave and access to data. Among secondary state directors, 49 had at least some confidence in their data on secondary student completion of a high school diploma, and 32 were very confident (Exhibit 3.5). Most secondary directors (35) did not know or indicated that state-recognized equivalent credentials did not apply to their state, and nearly half said the same for GED and proficiency credentials. Twenty states used the nonregulatory guidance verbatim for this secondary measure (Exhibit 3.10).

Postsecondary state directors had confidence in the data reported for this measure as well, with 45 indicating at least some confidence and 17 reporting that they were very confident (Exhibit 3.7). Nineteen states used the guidance verbatim when developing their postsecondary measures (Exhibit 3.11).

Identifying concentrators who leave

The completion measures consider concentrators who left secondary or postsecondary education during the reporting year; however, determining whether a student has left may pose

difficulties for both sectors. As previously discussed with respect to academic attainment, in order to identify leavers, local secondary schools and districts must distinguish among students who drop out, transfer to another school, or graduate.

In the postsecondary sector, in addition to students who graduate after completing a program, some leave without graduating but with adequate skills to obtain employment, and others transfer to another two- or four-year institution without earning a degree (Hagedorn, Cabrera, and Prather 2010–11). Still more take time off and return later, while some students leave and never return. Some students attend only a term or two each year, taking multiple years to complete a degree. Students do not have to inform their institution when or why they leave, so states must create a clear definition of a leaver and then distinguish those students from others.

Access to data

Some states may have difficulty obtaining information about secondary students who take GED tests. State secondary agencies may not administer the GED database and may not have ready access to the data (U.S. Government Accountability Office 2009; Richards and Schoelkopf 2008). According to the GAO, "About one-third of all states cited their ability to access accurate GED data as a great or very great challenge" (U.S. Government Accountability Office 2009).

States also may struggle to obtain certification and licensure data for both sectors. As noted with respect to technical skill attainment, the timing of some assessments does not align with *Perkins* reporting requirements, and privacy concerns may prevent external organizations from sharing information about student assessments with state education agencies or local subgrantees. If states are limited to assessing students who obtain an external license or certificate in the reporting year, the accomplishments of students passing those exams after the December CAR deadline will not be captured.

Some states can collect completion data for postsecondary students earning an external credential, such as a nursing certificate awarded by a state nursing board. Few states, however, can capture this information for all external credentials, and some do not include any external credentials when calculating postsecondary completion. Although states may be using the same written definition—and reporting information about attainment of credentials, certificates, and degrees—some states are not capturing as many kinds of completions as other states. Therefore, completions may be underestimated in results reported to the Department and the comparability of data may be limited.

Graduation rate

Congress added the secondary graduation rate indicator in *Perkins IV*, indicating that it should be aligned with graduation rates that states report for *ESEA* accountability. The Department clarified and refined the indicator definition in its nonregulatory guidance (Exhibit 3.23).

Exhibit 3.23.
Nonregulatory guidance: Graduation rate

Secondary

4S1: Graduation rate	**Numerator:** Number of CTE concentrators who, in the reporting year, were included as graduated in the State's computation of its graduation rate as described in Section 1111(b)(2)(C)(vi) of the *ESEA*. **Denominator:** Number of CTE concentrators who, in the reporting year, were included in the State's computation of its graduation rate as defined in the State's Consolidated Accountability Plan pursuant to Section 1111(b)(2)(C)(vi) of the *ESEA*.

Exhibit reads: The *Perkins IV* secondary graduation rate indicator is aligned with graduation rates that states report for *ESEA* accountability.
SOURCE: Justesen (2007a).

As with the academic attainment measure, some states may find it difficult to access data or use the methodology for calculating *ESEA* graduation rates when analyzing data for *Perkins* (Richards 2009; Richards and Schoelkopf 2008). Twenty-three states used the nonregulatory guidance verbatim for their measure definition, and 27 consulted the guidance (Exhibit 3.10). Only one state elected not to use the guidance to develop its definition for this measure. Among the six case study states, only one used a methodology different from that in the nonregulatory guidance.

Retention or transfer

For *Perkins III*, states reported student enrollment in postsecondary education, entrance into employment, and enlistment into the military under a single placement indicator. *Perkins IV* retains that same indicator for secondary education but creates two separate indicators for the postsecondary level (Sec. 113(b)(2)(B)).

- Retention in postsecondary education or transfer to a baccalaureate degree program.
- Placement in employment, the military, or an apprenticeship program.

The nonregulatory guidance clarifies the legislative language by specifying that "retained" students are those who remain enrolled in their original postsecondary institution, while "transfers" are students who enroll in a different two- or four-year postsecondary institution (Exhibit 3.24).

Exhibit 3.24.
Nonregulatory guidance: Retention or transfer

Postsecondary

3P1: Student retention or transfer	**Numerator:** Number of CTE concentrators who remained enrolled in their original postsecondary institution or transferred to another 2-or 4-year postsecondary institution during the reporting year and who were enrolled in postsecondary education in the fall of the previous reporting year. **Denominator:** Number of CTE concentrators who were enrolled in postsecondary education in the fall of the previous reporting year and who did not earn an industry-recognized credential, a certificate, or a degree in the previous reporting year.

Exhibit reads: The nonregulatory guidance clarifies the legislative language for the postsecondary retention or transfer indicator by specifying that "retained" students are those who remain enrolled in their original postsecondary institution, while "transfers" are those who enroll in a different two- or four-year postsecondary institution.
SOURCE: Justesen (2007a).

Twenty-one states used the nonregulatory guidance verbatim for retention or transfer, and only one state did not use the guidance when developing its measure definition (Exhibit 3.11). Among the six case study states, only one used the nonregulatory guidance as written. The other five states made alterations that appeared to go beyond minor wording changes to modifications that could result in data that are not comparable across states, although the methodology may be valid and reliable within a state.

For example, one state used most of the text of the nonregulatory guidance but looks at students enrolled in the entire previous year, not just the fall term, resulting in a larger cohort of concentrators to evaluate. Another state assesses CTE participants who enroll in other higher education institutions or who become concentrators during the course of the reporting year. This means the state is evaluating outcomes of participants rather than concentrators—a larger group of students with less exposure to CTE.

All state directors responding to the survey had at least some confidence in the accuracy of the retention or transfer data (Exhibit 3.7). Most state directors had less than a high degree of confidence, however, suggesting that questions may exist about how some data are obtained or reported. Only 27 percent of IHE directors indicated they were very confident in the accuracy of data for this measure, although 87 percent had at least some confidence (Exhibit 3.8).

Other research has noted that access to data, identifying concentrator cohorts, and timing may impede implementation of the measure (U.S. Government Accountability Office 2009; Richards and Schoelkopf 2008). These limitations may contribute to the disparities noted among state measure definitions and are explored in more depth in the following sections.

Access to data

Information about students who transfer or persist in the same institution may not be equally accessible to all states and local subgrantees. Nearly all local respondents in the case study states cited obstacles in tracking students from one education level to the next. According to one IHE administrator, "High schools want to know how their kids [do] when they get here, and we want to know what happens when they leave us, but we're still having a difficult time tracking them." Another postsecondary administrator agreed, "It really is the transitional data that are the hardest to get. Everybody knows [they're] necessary. It's a challenge [to get them] at just the local interagency level, and it's an incredible challenge statewide as well."

While matching student records across postsecondary institutions or education levels may pose a challenge for some states, obtaining data from out-of-state and private institutions is a barrier as well (U.S. Government Accountability Office 2009). The GAO cited cost as a challenge for states seeking to track students' enrollment.[20]

Concentrator cohorts

Unlike other measures, the retention or transfer measure in the nonregulatory guidance looks back in time to assess student progress. Rather than exploring what percentage of the reporting year concentrator cohort continues in education in the future, the measure determines "of those enrolled in the reporting year, what percentage was enrolled in the fall of last year." In addition, comparing the whole of the reporting year to the fall of the prior year does not take into account the coursetaking patterns of some postsecondary students, who may enroll part time or stop out and re-enroll in different terms during the year. A 2001 report found that 30 percent of the students included in the study's sample "stopped out," meaning they enrolled, did not enroll, and then enrolled again across a sequence of terms (Stratton, O'Toole, and Wetzel 2001).

Among the case study states, only two used a definition that looked at the current concentrator cohort enrollment sometime in the prior year. One had not yet finalized its measure at the time of the case study visits. The other three states appeared to evaluate the future retention or transfer outcomes of the reporting year concentrators. In one state, an administrator explained,

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[20] For example, states and IHEs that wish to acquire enrollment data from out-of-state and private institutions may rely on the National Student Clearinghouse (NSC), which charges a fee for membership. The NSC offers three options for membership in the NSC's *StudentTracker* service, which provides reports on the enrollment status of prospective, current, and former students: (1) pay an annual fee equal to enrollment times $.10, with a minimum annual fee of $300; (2) pay an annual fee of enrollment times $.05 ($150 minimum) by participating in two other free NSC services (*DegreeVerify* and *EnrollmentVerify*) or reporting additional data elements being added to the NSC database; or (3) participate in the two free NSC services, report the additional data elements, and enroll in *StudentTracker* for free (National Student Clearinghouse 2010).

> I don't like persistence because of the part-time status of the community college students. I followed one cohort. Were they there next year? No. They were in my leaver cohort. I had 80 percent of the students come back eventually over a three- or four-year period. Measuring persistence the way we're doing it, year-to-year persistence, is kind of a remnant from the four-year degree model. The median time to a two-year degree is seven semesters—and that's not contiguous semesters.

An administrator in one case study state mentioned that the state might change its definition for retention or transfer to follow future student outcomes and make the definition more useful for internal reporting. He advocated looking at how the concentrator cohort in the current year fared in terms of placement in the next fall term: "We could report [on the cohort] in a consistent way and still get at the same figures if we waited and looked at the transfer rate in September. For the 2009–10 cohort, you would look at the transfer rate in September 2010."

Evaluating student retention or transfer outcomes in this way could pose other challenges, however. For example:

- **Numerator:** Number of concentrators in the reporting year who did not earn a degree, certificate, or credential and who remained enrolled in their original postsecondary institution or transferred to another two- or four-year postsecondary institution at any time in the following reporting year.
- **Denominator:** Number of concentrators in the reporting year who did not earn a degree, certificate, or credential.

This sample approach first aligns the numerator and denominator by specifying that both include "concentrators who did not earn a degree, certificate, or credential." This approach also looks forward, rather than backward, in evaluating student outcomes. The method, however, raises an issue about when data are reported. In this example, if states identify a group of concentrators in a given reporting year, they must wait until the following reporting year has ended to determine if students persisted or transferred (Exhibit 3.25). Further, it may take time to obtain the data once the following year has ended. A state identifying its concentrator group in the 2009–10 academic year would have to wait to see if those students attended a postsecondary institution during the 2010–11 reporting year. Depending upon its source, the data may become available for analysis in summer or fall of 2011, which would allow results to be reported for the 2011 CAR.

Exhibit 3.25.
Timeline of *Perkins* data availability for placement indicator

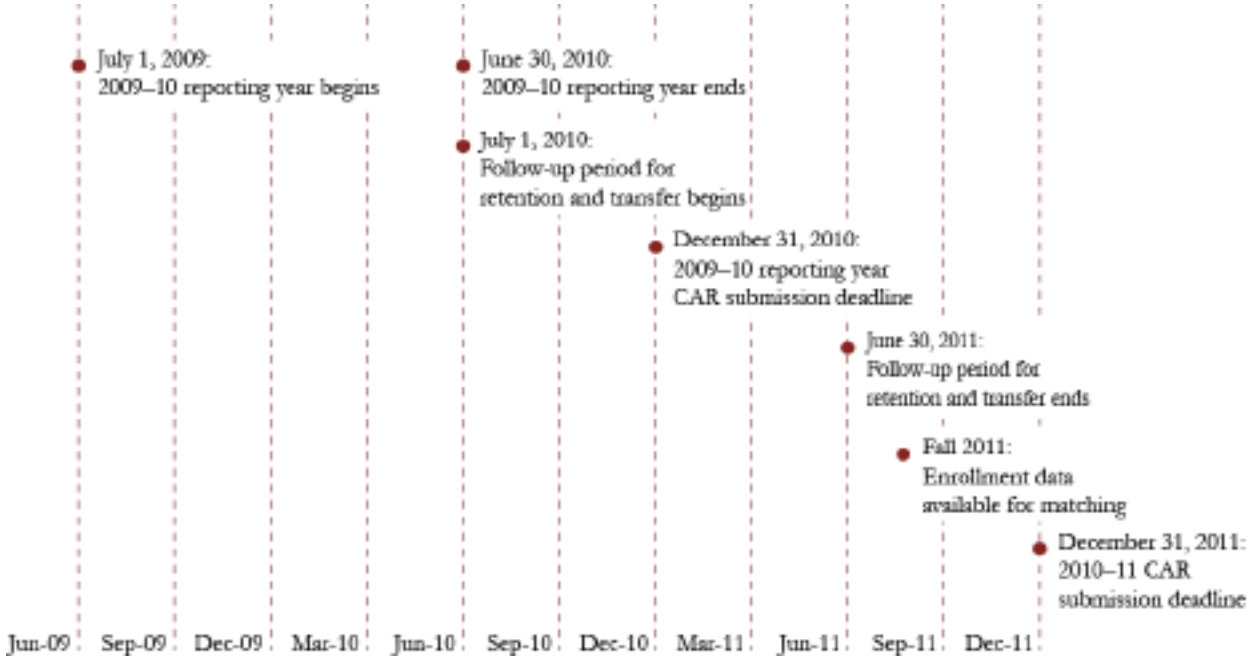

Exhibit reads: A state identifying its concentrator group in the 2009–10 academic year would determine which of those students attended a postsecondary institution during the 2010–11 reporting year. Depending upon their source, the data may become available for analysis in summer or fall 2011, and the state could report results for the 2011 CAR.

Reporting timelines

The issue of when to report performance results is not exclusive to the retention or transfer measure. Several other secondary and postsecondary measures pose challenges for states trying to obtain and report data six months after the end of the program year, including secondary and postsecondary technical skill attainment and placement and postsecondary completion. For all these measures, states must obtain data—such as subsequent enrollment, employment, and licensure or certification results—that may not be available in time to meet the CAR deadline.

States address the timing issue in a variety of ways, leading to even less comparability in the data reported to the Department. Some states may vary the year reported on the CAR by individual measure. For example, for the 2010 CAR submission, a state might report 2009–10 concentrator outcomes for a few measures and 2008–09 concentrator outcomes for the rest. Others may use the prior reporting year concentrator cohort for all measures. In that case, the state reports outcomes for 2008–09 concentrators for all measures in the December 2010 CAR submission. Four of the six case study states waited a year to report placement outcomes for postsecondary students, and five did the same for secondary placement.

Placement

Perkins IV asks states to report secondary student placement in postsecondary education or training, employment, or the military, and postsecondary student placement in military service, an apprenticeship program, or employment. The postsecondary placement indicator does not include enrollment or retention in postsecondary education, which are now addressed by the retention or transfer indicator. It includes a reference to high-skill, high-wage, or high-demand occupations that does not appear in the secondary placement indicator.

The Department's nonregulatory guidance clarifies the timeline for assessing student placement, indicating that states should evaluate student placement outcomes in the second quarter after the end of the program year (Exhibit 3.26). It does not, however, retain mention of high-skill, high-wage, or high-demand occupations for the postsecondary placement measure.

Exhibit 3.26.
Nonregulatory guidance: Placement

Secondary	
5S1: Placement	**Numerator:** Number of CTE concentrators who left secondary education and were placed in postsecondary education or advanced training, in the military service, or employment in the second quarter following the program year in which they left secondary education (i.e., unduplicated placement status for CTE concentrators who graduated by June 30, 2007 would be assessed between October 1, 2007 and December 31, 2007). **Denominator:** Number of CTE concentrators who left secondary education during the reporting year.
Postsecondary	
4P1: Placement	**Numerator:** Number of CTE concentrators who were placed or retained in employment, or placed in military service or apprenticeship programs in the 2nd quarter following the program year in which they left postsecondary education (i.e., unduplicated placement status for CTE concentrators who graduated by June 30, 2007 would be assessed between October 1, 2007 and December 31, 2007). **Denominator:** Number of CTE concentrators who left postsecondary education during the reporting year.

Exhibit reads: The Department's nonregulatory guidance indicates that states should evaluate student placement outcomes in the second quarter after the end of the program year.
SOURCE: Justesen (2007a).

Most secondary state directors had some confidence in the accuracy of local data reported for the placement measure, but few were very confident about postsecondary education and training data (8 states), military enlistment (9 states), and employment (10 states) (Exhibit 3.5). A small number of postsecondary directors had no confidence in the accuracy of military enlistment (6) and apprenticeship data (8) (Exhibit 3.7).

The six case study states each defined this measure differently for both the secondary and postsecondary levels, and none used the nonregulatory guidance as written. For example, one state evaluated placement outcomes for concentrators from the prior year rather than from the reporting year, which means it assessed placement outcomes for a different cohort of concentrators than those evaluated in some other performance measures. Another state included enrollment in postsecondary education or training as part of its postsecondary placement measure, even though those outcomes also were captured as part of the retention or transfer indicator.

The survey of state directors asked how access to data, cost, and other issues affected their ability to report placement information accurately. Among secondary state directors, 42 expressed at least some concern about the effect of response rates on the accuracy of results (Exhibit 3.27). Many also reported concerns about access to Social Security numbers (SSNs) (40) and the cost of following students who left secondary education (39). Only 11 secondary state directors indicated that the cost of record matching with other agencies had a great impact on the state's ability to report placement results, while 10 reported it had no impact. Forty-three postsecondary state directors indicated that collecting out-of-state employment data had some impact on the state's ability to report placement data, and 22 said it had a great impact (Exhibit 3.28). Additionally, most reported that collecting self-employment data had at least some impact on their ability to report placement outcomes.

Exhibit 3.27.
Number and percentage of secondary state directors according to the impact of the following issues on their state's ability to report placement data, by issue

(5–point scale from No impact to Great impact)

	Number						Percent			
Issue	Great impact (5)	More than no impact, less than great (2–4)	No impact (1)	Don't know	No response	Total	At least some impact	No impact	Don't know	Total
Cost										
Cost of follow-up studies of students who left	19	20	6	4	2	51	80	12	8	100
Cost of record matching with other agencies	11	23	10	6	1	51	68	20	12	100
General										
Getting an adequate response rate	15	27	3	4	2	51	86	6	8	100
Access to SSNs	33	7	5	5	1	51	80	10	10	100
Access to education data										
Collecting in-state 2-year public postsecondary data	12	26	8	4	1	51	76	16	8	100
Collecting in-state 4-year public postsecondary data	16	22	6	6	1	51	76	12	12	100
Collecting in-state private postsecondary data	15	18	6	11	1	51	66	12	22	100
Collecting out-of-state public or private postsecondary data	21	16	3	10	1	51	74	6	20	100
Access to employment data										
Collecting self-employment data	17	19	2	12	1	51	72	4	24	100
Collecting out-of-state employment data	24	15	2	9	1	51	78	4	18	100

Exhibit reads: Among secondary state directors, 42 expressed at least some concern about the effect of response rates on the accuracy of results. Many also reported concerns about access to Social Security numbers (SSNs) (40), the cost of following students who left secondary education (39), and collecting out-of-state employment data (39).
NOTE Percent calculations exclude "No response."
SOURCE: Secondary State Director Survey, 2009.

Exhibit 3.28.
Number and percentage of postsecondary state directors according to the impact of the following issues on their state's ability to report placement data, by issue

(5–point scale from No impact to Great impact)

	Number						Percent			
Issue	Great impact (5)	More than no impact, less than great (2 - 4)	No impact (1)	Don't know	No response	Total	At least some impact	No impact	Don't know	Total
Cost										
Cost of follow-up studies of students who left	14	19	7	6	2	48	72	15	13	100
Cost of record matching with other agencies	9	23	11	4	1	48	68	23	9	100
General										
Getting an adequate response rate	12	19	8	6	3	48	69	18	13	100
Access to SSNs	22	10	11	4	1	48	68	23	9	100
Access to education data										
Collecting in-state 2-year public postsecondary data	11	16	17	2	2	48	59	37	4	100
Collecting in-state 4-year public postsecondary data	13	14	17	3	1	48	57	36	6	100
Collecting in-state private postsecondary data	14	17	12	4	1	48	66	26	9	100
Collecting out-of-state public or private postsecondary data	21	17	6	3	1	48	81	13	6	100
Access to employment data										
Collecting self-employment data	14	25	1	7	1	48	83	2	15	100
Collecting out-of-state employment data	22	21	1	3	1	48	91	2	6	100

Exhibit reads: Forty-three postsecondary state directors indicated that collecting out-of-state employment data had some impact on the state's ability to report placement data, and 22 said it had a great impact. Most reported that collecting self-employment data had at least some impact on their ability to report placement outcomes (39).
NOTE: Percent calculations exclude "No response."
SOURCE: Postsecondary State Director Survey, 2009.

States varied considerably in how they defined their measures, which may make it difficult for the Department to report comparable national data. Study findings indicate that differences in student cohorts, difficulties and costs in accessing necessary data, variation in tracking methods, and inconsistent reporting timelines may diminish data comparability for this measure. These issues are discussed in more depth below.

Concentrator cohort

The nonregulatory guidance asks states to track placement outcomes for all concentrators who leave secondary or postsecondary education. As a result, the cohort evaluated in this measure includes concentrators who leave without graduating or earning a credential and those who never complete a CTE program, in addition to concentrators who do complete their programs and graduate or earn a postsecondary credential.

If the intent of the measure is to see if CTE students meeting the concentrator threshold continue in their education or find employment, this measure likely answers that question. If the intent is to determine if students learned the academic and technical skills necessary to obtain employment or continue their education, this measure may not offer the desired information, because it also assesses outcomes for students who did not complete a program or graduate and students who may have taken only a few courses.

States vary in how they interpret and apply the nonregulatory guidance when identifying the concentrators assessed in this measure. Some states include all concentrators who leave, while others include only those who complete a CTE program or earn a diploma or credential. For example, at the postsecondary level, two of the six case study states evaluated only graduates, rather than all concentrators who left. At the secondary level, two states included only high school graduates, and two others included only program completers in the measure. An administrator in one state explained, "It didn't seem appropriate to hold the state accountable for the performance [and placement] of people who had not completed the entire program."

Placement period

Students may leave their schools or institutions at any time during an academic year, not necessarily when the school year ends. By identifying the second quarter after the end of the program year as the period when placement is assessed, the measure combines outcomes for concentrators who have had different amounts of time to find and start a job. For example, a student who attends only in the fall term may have from January to October to be hired and begin work. A student who leaves a high school or postsecondary institution at the end of the spring term has less time (June to October) to do the same.

This study found variation among the placement periods used by the six case study states. For secondary education, two states considered secondary placement outcomes six months

after high school exit, while another looked at placement in the third quarter after exit. For postsecondary, one state reviewed all four quarters after the end of the year, and another looked at the third quarter after exit, rather than the second quarter after the end of the year.

The state that evaluated all four quarters questioned the wisdom of limiting the time frame for measurement of placement to a single quarter. An administrator said, "Given the instability of the employment data when we looked at the use of a single specific quarter—especially either October through December [as suggested in the nonregulatory guidance] or January through March, which are both high and low quarters for retail, agricultural, construction, and a variety of other occupational areas—we decided to use a more stable indicator."

Tracking methods

States employ two primary methods for tracking student placement outcomes: student surveys and administrative record matching. Some states obtain all their placement data through one method or the other, although some use both approaches (i.e., record matching for postsecondary enrollment and surveys for employment outcomes).

The majority of measure definitions from the six case study states did not specify the method used to collect placement data. The secondary measures for two states, however, indicated that one used surveys while another used both surveys and administrative record matching to collect secondary placement data. According to the GAO, 38 states used a survey administered by the state, school district, or a third party to track secondary placement outcomes, and 41 states used Unemployment Insurance (UI) wage record data (U.S. Government Accountability Office 2009).

SURVEYS

According to a report prepared for the Department, states use a wide variety of survey methods to collect data (Klein et al. 2006). Some conduct the survey by mail, phone, or online, and others ask local subgrantees to administer the surveys. In states where local providers collect the data, some states may develop standard surveys that their LEAs and IHEs implement, while others allow flexibility in the methodology. For example, local providers might have the option to call former students individually, administer a mail or telephone survey, talk with a student's family or friends, or conduct an exit interview before students leave.

Four of the case study states indicated they asked LEAs to collect secondary placement data. One asked local staff to complete a post-school survey that includes information about graduates who enter postsecondary education, employment, or military service. This state also asked each local provider to identify how they obtained the placement information.

Surveys may pose resource and validity challenges to some states. It can be expensive to develop, administer, and analyze telephone and mail surveys, and although online surveys may be less expensive, states or local subgrantees must still design, program, and monitor online surveys (RTI International and Academy for Educational Development 2003). Reaching students is an ongoing issue that can affect response rates, because their permanent addresses and phone numbers may change. Depending on whether a state or local provider collects student or parent e-mail addresses, there may be constraints in connecting students to online surveys. In the study surveys, 42 secondary state directors and 31 postsecondary state directors indicated that getting an adequate response rate had at least some impact on their ability to report placement data (Exhibit 3.27 and Exhibit 3.28).

One local administrator described his new approach to capturing placement data after generating a low response rate—about 30 percent—using mail surveys: "When they come back to get their senior yearbooks, my assistant sits there with the follow-up surveys. … [With] the yearbooks, we get about 95 percent. We also go into the senior English classes to ask them about the students who graduated last year."

In another state an IHE instructor said "it's pretty easy" to obtain placement information for former students: "We've got a small program, and students notify us or employers notify us." Another IHE administrator collaborates with the university system to track students into local baccalaureate institutions. She said, "We know that because of a local arrangement, not because there is a statewide system that provides that information."

ADMINISTRATIVE RECORD MATCHING

Matching student records with administrative enrollment and employment records maintained by other agencies is another way to follow students into further education and the workforce. Record matching can eliminate some of the costs associated with developing and implementing complex structures to collect survey data. Record matching also may be conducted more easily at the state level, if the capacity exists to do so, removing some of the burden on local subgrantees.

Some states will, however, need to pay other state or national agencies to provide records or perform matches, which can be costly.[21] According to survey results, 34 secondary and 32 postsecondary state directors said that costs for matching administrative records with other agencies had at least some impact on their reporting of placement data (Exhibit 3.27 and Exhibit 3.28).

Some states also face legal obstacles in obtaining the data required for the placement measure. Access to SSNs allows administrative record matching for employment and military en-

[21] The discussion on retention or transfer (see p. 126) includes information about the cost of accessing postsecondary data through the National Student Clearinghouse, for example.

listment, eliminating the self-report bias introduced by surveys. State legal interpretations, however, may prohibit some states from collecting SSNs or using them for this type of record matching. Although the survey did not ask states whether they had access to SSNs, it asked how access to SSNs affected their ability to report placement data. Thirty-three secondary and 22 postsecondary directors believed it had a great impact, and 40 secondary and 32 postsecondary directors believed it had at least some impact (Exhibit 3.27 and Exhibit 3.28).

Even states that have access to SSNs and are permitted to perform administrative record matching may find that SSNs are not a perfect student identifier. For example, a single SSN might be shared by several people; some people may prefer not to provide their SSNs; and institutions may not enter the information correctly. The data available through administrative records also may not offer all the information that can be captured through a survey. A teacher in one case study state shared a concern about administrative record matching: "We used to do call-ins three years after [the students] graduated. Now it's all driven off their Social Security numbers. We really don't get the same kind of data we used to get when we [did] individual call-ins to talk to students three years later to see what they're doing."

There are several national and state sources for administrative record matching, although some states may be prevented from using one or more of them by legal or financial constraints.

- **Unemployment Insurance (UI) wage records:** State UI wage record systems provide employment and wage information about privately employed individuals and those employed by state and local governments. UI systems do not include out-of-state employment, the self-employed, federal employees, workers paid solely by commission, and employees of small agricultural employers. Matches are conducted using SSNs.
- **Federal Employment Data Exchange System (FEDES):** FEDES contains records for those who enlist in the military or are employed in many branches of the federal government. FEDES uses information from the Office of Personnel Management; the Department of Defense, Defense Manpower Data Center; and the U.S. Postal Service (USPS) (The Jacob France Institute 2009). Matches are conducted using SSNs.
- **National Student Clearinghouse (NSC):** The NSC provides information about student enrollment in more than 3,300 U.S. postsecondary institutions—including private, public, nonprofit, and for-profit—and covers 92 percent of U.S. college students. Not all postsecondary institutions, and therefore students, are included in the NSC database. The NSC performs matches for secondary and postsecondary students using a matching key that includes elements such as

name, high school attended (for secondary), and birth date or graduation date (National Student Clearinghouse 2010).

- **State education databases:** Some states can match student records across K–12, two-year institutions, and four-year institutions within their states to track student enrollment. These databases do not, however, offer information about students who attend postsecondary institutions out of state. States may use a matching key such as that used by the NSC, an SSN, or a state student identifier.

Access to administrative records data

States with access to SSNs still may face hurdles in obtaining some types of administrative record data, particularly UI wage record and FEDES data. The *Family Educational Rights and Privacy Act* (*FERPA*) limits how education data may be used, and the *Perkins* requirement to follow students across time and circumstance is at odds with current *FERPA* interpretation and implementation.[22] State education agencies may share student data among themselves, but cannot relinquish direct control of the data, preventing them from sharing data with other noneducation state agencies (Hansen 2003). A few states have surmounted this obstacle by obtaining student permission to share their SSNs, by hiring a subcontractor—under direct control of the education agency—to match the education and employment data, or by bringing employment data into the education agency to do the record matching. One secondary administrator described engaging a contractor to perform administrative record matching:

> We contract placement out with a state university, and we're going to continue to use a contractor until we get our statewide longitudinal data all worked up. . . . They do UI wage matches for us, FEDES matches, military wages. They go through the National Student Clearinghouse to find our students at universities and colleges throughout the nation through SAT matches and ACT matches as well.

More than half of secondary and postsecondary state directors reported that their states did not use FEDES or the National Student Clearinghouse to acquire placement information about students (Exhibit 3.29). Legal restrictions in 12 states prevent secondary state directors from accessing UI wage records. More than half of states used state UI wage records (33) and state higher education databases (28) to obtain placement results for postsecondary stu-

[22] As of the time of this writing, the Department had issued a Notice of Proposed Rule Making (NPRM) under *FERPA*. According to an April 7, 2011, Department press release (U.S. Department of Education 2011), the proposed changes would "safeguard student privacy while clarifying that states have the flexibility to share school data that are necessary to judge the effectiveness of government investments in education. Over time, interpretations of *FERPA* have complicated valid and necessary disclosures of student information without increasing privacy protections and, in some cases, dramatically decreased the protections afforded students."

dents. Only three secondary and eight postsecondary state directors reported using all four types of administrative databases, while 15 secondary and six postsecondary state directors reported using none of the four databases.

Exhibit 3.29.
Number of states according to their use of administrative record matching resources to collect placement data, by education level

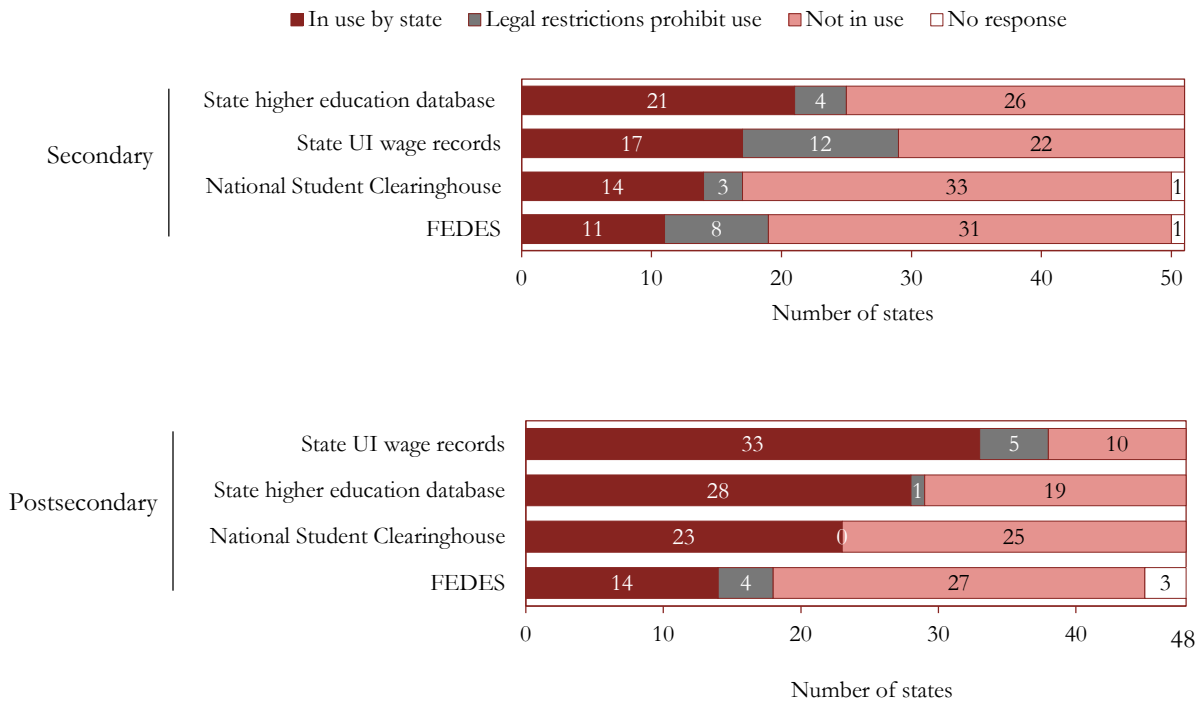

Exhibit reads: Less than half of secondary and postsecondary state directors reported using FEDES (11 secondary, 14 postsecondary) or the National Student Clearinghouse (14 secondary, 23 postsecondary) to acquire placement information about their students. Legal restrictions in 12 states prevent secondary state directors from accessing UI wage records.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

EMPLOYMENT DATA

Only 17 states used UI wage records to collect placement data for secondary students, and only 11 used FEDES data. Many states (33) used UI wage records to obtain placement data for postsecondary students, although only 14 used FEDES data.

UI wage records do not offer information about self-employed individuals, and 36 secondary and 39 postsecondary state directors reported that access to self-employment data had at least some impact on their ability to report placement data (Exhibit 3.27 and Exhibit 3.28). State directors reported some uncertainty regarding these data, with 12 secondary and 7

postsecondary directors indicating that they did not know if access to these data affected their ability to report placement outcomes.

In addition, states with access to UI wage records and FEDES may not have access to individual employment information outside their state borders. UI data provides information about many employees within a state, but not across state lines.[23] The majority of secondary state directors (39) noted that access to out-of-state employment data had at least some impact on their state's ability to report placement data, and 43 postsecondary state directors said the same (Exhibit 3.27 and Exhibit 3.28).

Two local case study respondents expressed concern about placement data derived from administrative records, noting that data from employment databases cannot determine if a former student is employed in a job related to his or her educational program. As one explained, "Some of the larger employers . . . have divisions that would cross many, many different occupations and many different training programs."

POSTSECONDARY ENROLLMENT DATA

Twenty-one secondary and 28 postsecondary state directors reported having the capacity to match students across education levels in their own state. When performing administrative record matches, finding students enrolled in postsecondary education and training programs outside the state requires matching student records with those in other states or the NSC. Only 14 states used NSC data to follow secondary students, in contrast to 23 states that used NSC data to track postsecondary students (Exhibit 3.29).

Secondary state directors registered concern about the impact of access to postsecondary enrollment data on reporting the placement indicator. Only three said that access to out-of-state enrollment data had no impact on reporting placement, while 21 said it had a great impact (Exhibit 3.27). Most responded that collecting enrollment data for both two- and four-year institutions had at least some impact, and nearly as many reported the same about collecting information about students enrolled at in-state private postsecondary institutions. Several secondary state directors did not know if collecting out-of-state (10) and in-state private (11) enrollment data would have an impact on their ability to report placement data.

Fewer postsecondary than secondary state directors reported that access to in-state two- and four-year public institution data had an impact on their ability to report placement data (Exhibit 3.28). A similar number, however, reported a perceived impact on their ability to report placement data due to access to out-of-state (38) and in-state private (31) postsecondary enrollment information.

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[23] The Wage Record Interchange System (WRIS) provides out-of-state private employment data, but WRIS data cannot currently be used in *Perkins* reporting.

Reporting timeline

Information about student placement outcomes may not be available to states or local subgrantees in time for the December 31 CAR submission deadline. For example, some postsecondary institutions have fall terms that end in December or January and, therefore, obtaining enrollment data from these institutions may not be possible until after December 31. To capture an entire term of fall enrollment, the NSC suggests making a request the first week of January.[24] As a result, states may be unable to obtain the data they need in time to meet the December CAR deadline. Further, if a state uses UI wage records to identify students employed in the second quarter after exiting their postsecondary institution (October 1 to December 31), the second quarter ends on the same day that the CAR submissions are due. Similarly, states using surveys to collect these data also must wait until after December 31 to ask students if they were employed during the second quarter.

Nontraditional participation and completion

The nonregulatory guidance outlines two separate measures for the nontraditional participation and completion indicator (Exhibit 3.30).

[24] Personal communication with LaTonya Page, National Student Clearinghouse, August 20, 2010.

Exhibit 3.30.
Nonregulatory guidance: Nontraditional participation and completion

Secondary	
6S1: Nontraditional participation	**Numerator:** Number of CTE participants from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE participants who participated in a program that leads to employment in nontraditional fields during the reporting year.
6S2: Nontraditional completion	**Numerator:** Number of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE concentrators who completed a program that leads to employment in nontraditional fields during the reporting year.
Postsecondary	
5P1: Nontraditional participation	**Numerator:** Number of CTE participants from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE participants who participated in a program that leads to employment in nontraditional fields during the reporting year.
5P2: Nontraditional completion	**Numerator:** Number of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE concentrators who completed a program that leads to employment in nontraditional fields during the reporting year.

Exhibit reads: The Department's nonregulatory guidance outlines two separate measures for the nontraditional participation and completion indicator.
SOURCE: Justesen (2007a).

These measures evaluate students' involvement in programs leading to occupations not considered traditional for their gender (e.g., men in early childhood education programs). The 6S1 and 5P1 measures of nontraditional participation are the only measures that assess the outcomes of participants rather than concentrators. States used the nonregulatory guidance verbatim more often for the postsecondary nontraditional indicators than for any other postsecondary indicators (Exhibit 3.11), while less than half of states used the guidance verbatim at the secondary level (Exhibit 3.10).

The number of students reported for these measures is very small in some states, raising concerns about states' and local subgrantees' ability to meet performance goals. According to a secondary administrator,

> One that I really question is nontraditional participation, particularly for the smaller agencies. It's possible that they don't have any nontraditional programs. By law, we can't require them to operate programs unless we can pay for them, which we can't do. So they're kind of destined to be sanc-

> tioned down the road because of something that they can't do, and they don't have the resources to do.

According to another administrator, the small populations assessed for the nontraditional indicators increase the potential for the misrepresentation of performance.

Of the 51 secondary state directors who responded, most indicated at least some confidence in the accuracy of data for nontraditional participation and completion (48 each) submitted by local providers (Exhibit 3.5). Most were less than very confident, however. Two postsecondary state directors reported having no confidence in the data reported for nontraditional participation, as did three for nontraditional completion (Exhibit 3.7). Most postsecondary state directors, however, had at least some confidence in the data. About 80 percent of LEA directors and more than 80 percent of IHE directors had at least some confidence in the accuracy of their nontraditional participation and completion data (Exhibit 3.6 and Exhibit 3.8).

Tech Prep

Tech Prep programs offer students a sequential course of study that includes at least two years of secondary education and two years of postsecondary education. *Perkins III* required states to report on Tech Prep students as a separate population for each performance measure, but *Perkins IV* introduces a new, separate set of performance indicators for Tech Prep programs.

Twenty-seven states reported merging their basic and Tech Prep grants as of the 2009–10 program year; these states are exempt from reporting results for the new indicators. States that did not merge funding are responsible for reporting the number of secondary and postsecondary Tech Prep students they serve, as well as performance results for the following nine Tech Prep indicators:

- Secondary students
  - Enrolling in postsecondary education
  - Enrolling in postsecondary education in the same field
  - Obtaining a certificate or license
  - Earning postsecondary credit
  - Enrolling in remedial courses in postsecondary
- Postsecondary students
  - Being placed in related employment
  - Obtaining a certificate or license

- Completing a degree or certificate within normal time
- Completing a baccalaureate degree within normal time

States had several reasons for merging their grants, including the philosophy that Tech Prep programs are similar to the new programs of study (POS) concept introduced in *Perkins IV* (18 secondary, 15 postsecondary) (Exhibit 3.31). Some wanted to incorporate the features of Tech Prep programs into all their state's CTE programs (23 secondary, 18 postsecondary) and some had difficulty identifying Tech Prep students or wanted to avoid the data burden associated with the new Tech Prep accountability requirements. None of the states that retained separate grants had plans to merge them by 2011–12.

Exhibit 3.31.
Number of states according to various reasons for merging Tech Prep and basic grant funds, by education level

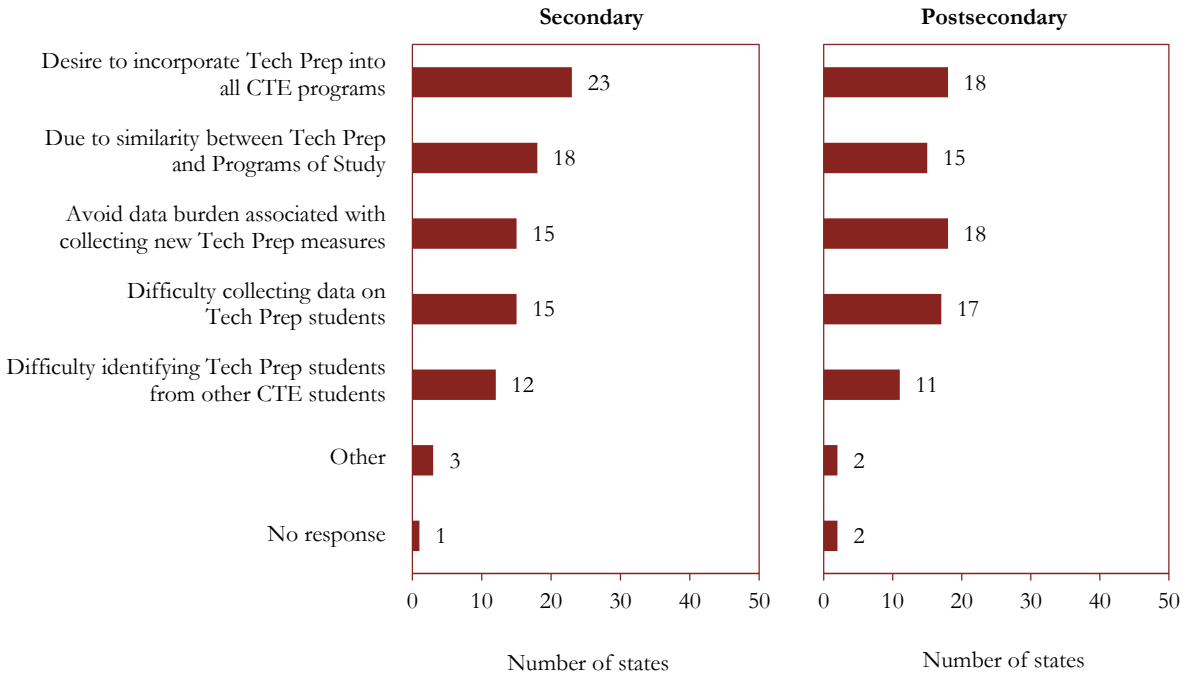

Exhibit reads: States reported several reasons for merging their grants, including their philosophy that Tech Prep programs are similar to Programs of Study (POS) (18 secondary, 15 postsecondary) and their desire to incorporate the features of Tech Prep programs into all their state's CTE programs (23 secondary, 18 postsecondary).
NOTE: N = 27 secondary, 27 postsecondary. Exhibit includes responses only from states that reported merging Tech Prep and Basic Grant funding. Excludes responses from territories and outlying areas.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

In states that merged funding, state directors overwhelmingly reported that the new Tech Prep measures imposed a substantial burden (Exhibit 3.32 and Exhibit 3.33). State directors also reported that the new measures would support state and local improvement efforts for both secondary and postsecondary education.

Exhibit 3.32.
Number and percentage of secondary state directors according to the extent to which they agreed or disagreed with potential effects of new Tech Prep accountability measures

	Number						Percent				
Potential effect	Agree or strongly agree	No opinion	Dis-agree or strongly dis-agree	Don't know	No re-sponse	Total	Agree or strongly agree	No opinion	Dis-agree or strongly dis-agree	Don't know	Total
Cause state to merge Title I and Title II funds	3	4	11	5	4	27	13	17	48	22	100
Able to collect accurate data on measures	5	2	14	2	4	27	22	9	61	9	100
Would like ED to issue nonregulatory guidance	7	9	5	2	4	27	30	39	22	9	100
Support local program improvement efforts	11	4	6	2	4	27	48	17	26	9	100
Support state program improvement efforts	14	3	4	2	4	27	61	13	17	9	100
Impose a substantial data burden on the state	17	1	3	2	4	27	74	4	13	9	100

Exhibit reads: Among states that merged Tech Prep and basic grant funds, 17 secondary state directors reported that the new Tech Prep measures imposed a substantial burden.
NOTE: Exhibit includes responses only from states that reported merging Tech Prep and Basic Grant funding. Excludes responses from territories and outlying areas. Percentage calculations exclude "No response."
SOURCE: Secondary State Director Survey, 2009.

Exhibit 3.33.
Number and percentage of postsecondary state directors according to the extent to which they agreed or disagreed with potential effects of new Tech Prep accountability measures

	Number						Percent				
Potential effect	Agree or strongly agree	No opinion	Dis-agree or strongly dis-agree	Don't know	No re-sponse	Total	Agree or strongly agree	No opinion	Dis-agree or strongly dis-agree	Don't know	Total
Cause state to merge Title I and Title II funds	1	5	11	2	8	27	5	26	58	11	100
Able to collect accurate data on measures	5	3	10	1	8	27	26	16	53	5	100
Would like ED to issue nonregulatory guidance	5	9	4	1	8	27	26	47	21	5	100
Support local program improvement efforts	14	4	1	0	8	27	74	21	5	0	100
Support state program improvement efforts	14	3	2	0	8	27	74	16	11	0	100
Impose a substantial data burden on the state	12	3	4	0	8	27	63	16	21	0	100

Exhibit reads: Among states that merged Tech Prep and basic grant funds, most postsecondary state directors believed that the Tech Prep measures would support state and local improvement efforts (14 each).
NOTE: Exhibit includes responses only from states that reported merging Tech Prep and basic grant funds. Excludes responses from territories and outlying areas. Percentage calculations exclude "No response."
SOURCE: Postsecondary State Director Survey, 2009.

Local directors reported mixed feelings about data quality and the advantages of the new measures. Most did not agree that the advantages of the measures outweighed the disadvantages—more than one-quarter had no opinion on this topic—but 56 percent of LEA directors and 58 percent of IHE directors reported that the measures would support local improvement efforts (Exhibit 3.34). More than half of secondary and postsecondary local directors agreed that the new measures would create a substantial burden. Many indicated they could collect data on all measures (53 percent of secondary directors and 45 percent of postsecondary directors), but only 38 percent of local directors thought the data collected would be of high quality.

Exhibit 3.34.
Percentage of local directors according to the extent to which they agreed or disagreed with the potential effects of new Tech Prep accountability measures, by education level

Potential effect	Somewhat or strongly agree	No opinion	Somewhat or strongly disagree	Don't know	Total
LEA					
Impose a substantial data burden	57	19	12	13	100
Support state program improvement efforts	50	19	15	17	100
Support local program improvement efforts	56	14	15	14	100
Data collected are of high quality	38	23	23	17	100
Advantages outweigh disadvantages	34	28	20	19	100
Able to collect data on all measures	53	16	14	17	100
Benefit from state guidance on collecting data	55	24	7	15	100
Other	6 !	32 !	1 !	60 !	100 !
IHE					
Impose a substantial data burden	64	14	12	10	100
Support state program improvement efforts	54	17	15	13	100
Support local program improvement efforts	58	15	18	10	100
Data collected are of high quality	38	23	27	13	100
Advantages outweigh disadvantages	35	25	27	14	100
Able to collect data on all measures	45	11	30	13	100
Benefit from state guidance on collecting data	54	20	12	13	100
Other	12 !	26 !	0 !	62 !	100 !

Exhibit reads: More than half of local directors agreed that the new measures would impose a substantial data burden. While many indicated that they could collect data on all measures (53 percent LEAs, 45 percent IHEs), only 38 percent of local directors said that they thought the data collected would be of high quality.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

States that merged their Tech Prep and basic grants anticipated several obstacles in tracking secondary Tech Prep students transitioning into postsecondary education (Exhibit 3.35). Many state directors noted the lack of a common student identifier between sectors as a challenge (19 secondary, 14 postsecondary). They also reported other issues, such as students not self-identifying, lack of ways to share data across sectors, and that the postsecondary sector does not, in some states, attempt to identify entering secondary Tech Prep students.

Exhibit 3.35.
Number of states according to obstacles faced in tracking Tech Prep students transitioning between secondary and postsecondary, by education level

Exhibit reads: Among states that merged their Tech Prep and basic grants, many state directors noted the lack of a common student identifier as a challenge (19 secondary, 14 postsecondary).
NOTE: N = 27 secondary, 27 postsecondary. Exhibit includes responses only from states that reported merging Tech Prep and Basic Grant funding in survey question 64. Excludes responses from territories and outlying areas.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

The survey and case studies did not provide further information about the reasons that states found the new measures burdensome. The Department did not issue nonregulatory guidance for the Tech Prep indicators, which may have posed difficulties for states attempting to develop measurement approaches. In an effort to promote comparability and alleviate the burden on states, the National Association for Tech Prep Leadership (NATPL) developed and shared suggested measurement approaches Tech Prep (National Association for Tech Prep Leadership 2009).

Perkins IV provides specific definitions for Tech Prep secondary and postsecondary students (Exhibit 3.36). States reported Tech Prep performance results for the first time in 2008–09. At the time of this writing, the Department has not released performance results, and little information exists about the utility and quality of Tech Prep indicators and data.

Exhibit 3.36.
***Perkins IV*: Definitions of Tech Prep students**

Secondary	
Secondary Tech Prep student	A secondary education student who has enrolled in two courses in the secondary education component of a tech prep program.
Postsecondary	
Postsecondary Tech Prep student	A student who has completed the secondary education component of a tech prep program; and has enrolled in the postsecondary education component of a tech prep program at an institution of higher education.

Exhibit reads: *Perkins IV* provides specific definitions for secondary and postsecondary Tech Prep student populations.
SOURCE: The *Carl D. Perkins Career and Technical Education Act of 2006*.

Performance

Perkins IV requires states to report student performance data each year. States negotiate targets for each indicator with the Department, and they update the targets over time to reflect data trends and promote continuous improvement. States not reaching at least 90 percent of any individual target must develop an improvement plan and may risk losing funds if results do not improve over time.

For the first time, *Perkins IV* extends the same level of accountability to local subgrantees. LEAs and IHEs now must negotiate performance targets with the state, and if local providers fall short of the 90 percent threshold for any measure, they must develop a local improvement plan. State education agencies also now have the authority to withhold *Perkins* funds from LEAs or IHEs that fail to implement an improvement plan, make progress within a year of plan implementation, or meet their performance targets for three consecutive years (Sec. 123(b)(4)(A).

Local Perspectives on Performance Requirements

In the study surveys and case study visits, local subgrantees offered their perspectives on changes to performance expectations and *Perkins* accountability requirements. A majority of local subgrantees (61 percent of LEAs and 67 percent of IHEs) reported that introducing sanctions would have no impact on local CTE administration and implementation, although some (15 percent of LEA and 11 percent of IHE directors) said it would have a somewhat to very positive impact. While the surveys did not provide further insight into local subgrantees' reasons for believing sanctions would have no effect or a positive effect, it is possible that the timing of the survey played a part. Local directors responded to the survey in late 2009, around the time they were submitting the first full year of *Perkins IV* data to their states. They had not yet had much experience with new state policies regarding sanctions for failing to meet negotiated targets.

About half of local directors (52 percent of LEAs and 54 percent of IHEs) reported that negotiating local targets would have no impact on CTE administration and implementation, and about one-quarter thought it would have a somewhat to very positive impact (Exhibit 3.37). This is consistent with the information presented later in this chapter (Exhibit 3.43 and Exhibit 3.44), which suggests that, among LEAs and IHEs that negotiated performance targets with their states, about half to about one-third of LEA and IHE directors experienced little to no difficulty in the negotiation process for each indicator.

Exhibit 3.37.
Percentage of LEAs and IHEs that reported that they expected various changes to *Perkins IV* accountability requirements to have a positive or negative impact on local administration and implementation

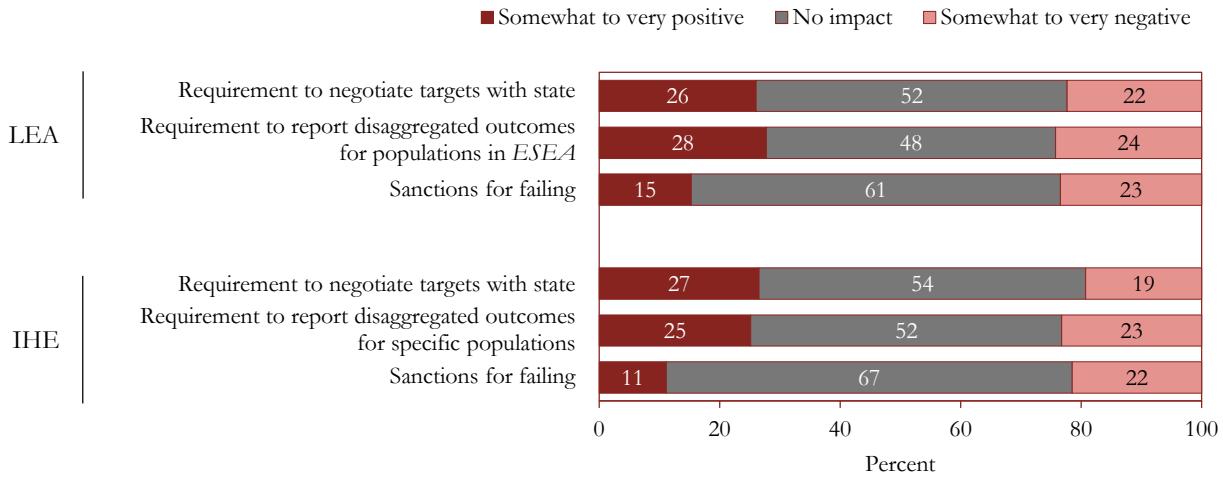

Exhibit reads: About half of LEAs and IHEs reported that negotiating local targets and reporting on disaggregated populations would have no impact on local administration and implementation.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

About three-quarters of LEAs and IHEs indicated that reporting on disaggregated populations would have no impact or a positive impact on how they administer local CTE programs, while about one-quarter said it would have a somewhat to very negative impact. This may reflect the fact that reporting outcomes for special populations was a requirement of *Perkins III*, and the only change to the special population definitions for *Perkins IV* was the removal of the *Perkins III* reference to "individuals with other barriers to educational achievement" (*Perkins III* Sec. 3(23) and *Perkins IV* Sec. (3(29)). *Perkins IV* adds, however, the requirement that each eligible local recipient must report disaggregated secondary indicator data annually using the categories of students listed in *ESEA* (Sec. 1111(h)(1)(C)(i)). Most of the *ESEA* categories are identical to the *Perkins IV* special populations, but *ESEA*

also includes "migrant status." While only 4 percent of LEA directors had no confidence in the accuracy of the data they reported for migrant students (72 percent had at least some confidence), 23 percent did not know if they had confidence in these data (Exhibit 3.16).

Case study site visits offered an opportunity to discuss *Perkins IV* accountability requirements in more depth with state and local administrators. One local postsecondary administrator raised issues about whether responsibility for defining accountability requirements rests with the state agency or the federal government: "Seems that the eligible agency is getting instructions from [the Department], and they interpret what they're hearing. Then they give it to us, and then we're trying to interpret what we're hearing, and it can be confusing." This administrator also mentioned the impact of even small changes to the system: "We do what we think we're supposed to do, and then the wording gets changed slightly and we have to go back and redo it all. It truly is a nightmare."

Among case study states, state and local administrators said that the cost of meeting the *Perkins IV* accountability requirements is prohibitive and that they do not have either the staff or funds needed to meet all the requirements. More than one suggested that the accountability requirements are an unfunded mandate. A state director and two local directors noted that they had participated in discussions about possibly giving up *Perkins* funds because of the burden imposed and the complexity of reporting requirements.

One superintendent had concerns about the demands on teachers' time: "It's the teachers in the classroom [who] are doing all of this . . . and it takes away directly from . . . what they can do with students. I know we live in a time of accountability, but the paperwork is a killer—and that's on everything, not just *Perkins*." While another state administrator observed that the state budget crisis and staff cuts make data collection and reporting a challenge, he said that it was unrealistic for the state to collect millions of dollars in federal funds "and not have to be accountable for [them]."

Although these case study responses may seem to contradict the survey responses, there are at least two possible explanations for the disparity. First, the case study states may have had a disproportionate and nonrepresentative number of individuals who believed the changes to *Perkins IV* would have a negative impact or increase the burden on states and local subgrantees. Second, the survey did not ask whether the *Perkins IV* accountability framework posed a burden, only what impact the *changes* would have. It is possible that states may see little additional positive or negative impact from the changes but still feel that the overall accountability requirements are burdensome.

Setting Performance Targets

For the 2007–08 transition year, the Department and states negotiated performance targets only for the secondary academic attainment and graduation rate measures (Justesen 2007a). States negotiated targets for the remaining measures as part of their five-year plans and can negotiate new targets prior to the third and fifth program years.[25]

Perkins IV requires the Department to consider the following two key issues when negotiating performance levels with states (Sec. 113(b)(3(A)(vi)):

- How the proposed targets compare to targets for other states, taking into account participant and program characteristics; and
- The extent to which the proposed targets will encourage continuous improvement on each indicator.

State negotiations with the Department

State and local directors reported generally positive experiences in negotiating performance targets, noting that similar issues were important to them during the process. Postsecondary state directors and IHE directors appeared to have had more concerns and challenges than their secondary counterparts.

State directors said that past *Perkins* performance and state goals for program performance were the most important issues considered when negotiating targets with the Department (Exhibit 3.38). Many considered multiple issues during the process, including anticipated changes in state circumstances, changes in funding, program modifications, and changes in student populations.

[25] The Department allows states to request performance-level revisions in other years "if the State can show that an unanticipated circumstance arose in the State that resulted in a significant change in the factors that were considered" when the state originally negotiated targets (Dann-Messier 2009, p. 2). "Unanticipated circumstances may include: significant shifts in population, economic changes such as spiraling unemployment rates, or natural disasters that closed programs for significant periods of time."

Exhibit 3.38.
Number and percentage of states according to the importance of various factors when negotiating performance targets with the Department, by education level

(5–point scale from Not important to Very important)

	Number						Percent		
Factors	Very important (5)	More than not, less than very important (2 - 4)	Not important (1)	Don't know	No response	Total	At least some importance	Not important	Total
Secondary									
Past state performance	37	12	0	1	1	51	100	0	100
State program performance goals	34	14	0	2	1	51	100	0	100
Anticipated changes in the state, excluding funding	21	21	7	1	1	51	86	14	100
Anticipated changes in CTE programs	12	27	9	2	1	51	81	19	100
Anticipated changes in student populations	8	32	8	2	1	51	83	17	100
Anticipated change in state or local funding	16	25	7	2	1	51	85	15	100
Other	3	0	1	3	44	51	75	25	100
Postsecondary									
Past state performance	36	8	1	1	2	48	98	2	100
State program performance goals	35	8	1	2	2	48	98	2	100
Anticipated changes in the state, excluding funding	18	22	7	0	1	48	85	15	100
Anticipated changes in CTE programs	6	27	12	2	1	48	73	27	100
Anticipated changes in student populations	9	23	12	3	1	48	73	27	100
Anticipated change in state or local funding	10	24	12	0	2	48	74	26	100
Other	4	1	1	2	40	48	83	17	100

Exhibit reads: Past state *Perkins* performance (37 secondary, 36 postsecondary) and state goals for program performance (34 secondary, 35 postsecondary) were very important issues when negotiating targets with the Department.
NOTE: Percentage calculations exclude "Don't know" and "No response."
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

More than half of secondary state directors had little or no difficulty in negotiating their transition year and annual performance targets with the Department (Exhibit 3.39). Among postsecondary directors who answered the survey, however, 23 indicated that it was somewhat or very difficult to negotiate annual targets. States noted a lack of baseline data as a common difficulty in setting performance benchmarks and targets for both the secondary (17) and postsecondary (17) sectors (Exhibit 3.40).

Exhibit 3.39.
Number of states according to the level of difficulty encountered when negotiating state performance targets with the Department, by education level

(5-point scale from Not difficult to Very difficult)

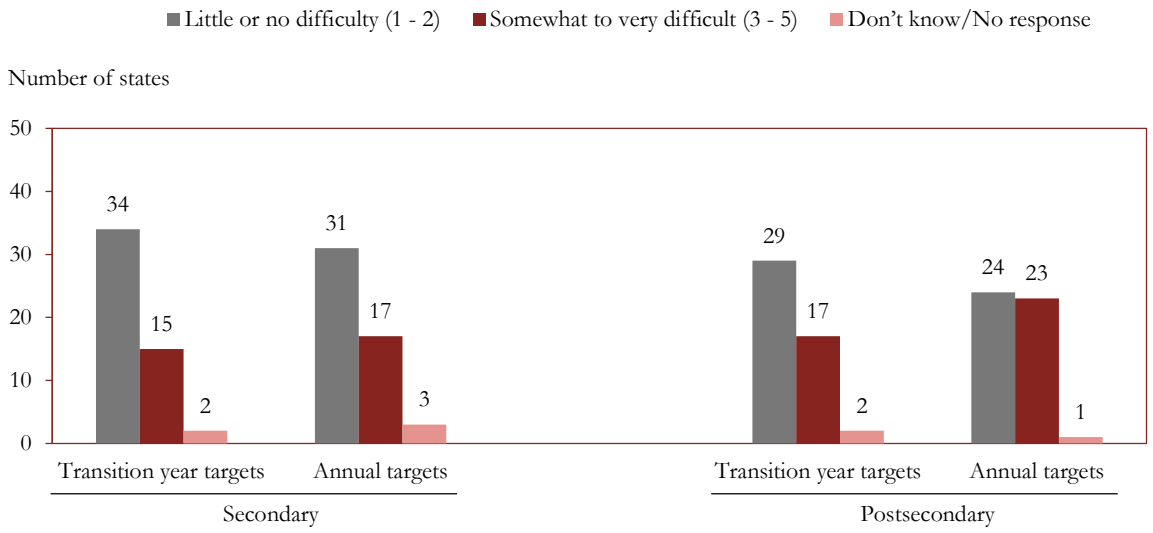

Exhibit reads: More than half of secondary state directors reported little or no difficulty in negotiating their transition year and annual performance targets with the Department. Among postsecondary state directors, 23 indicated that it was somewhat or very difficult to negotiate annual targets.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Exhibit 3.40.
Number of states according to various reasons for encountering difficulty when negotiating state performance benchmarks and targets with the Department, by education level

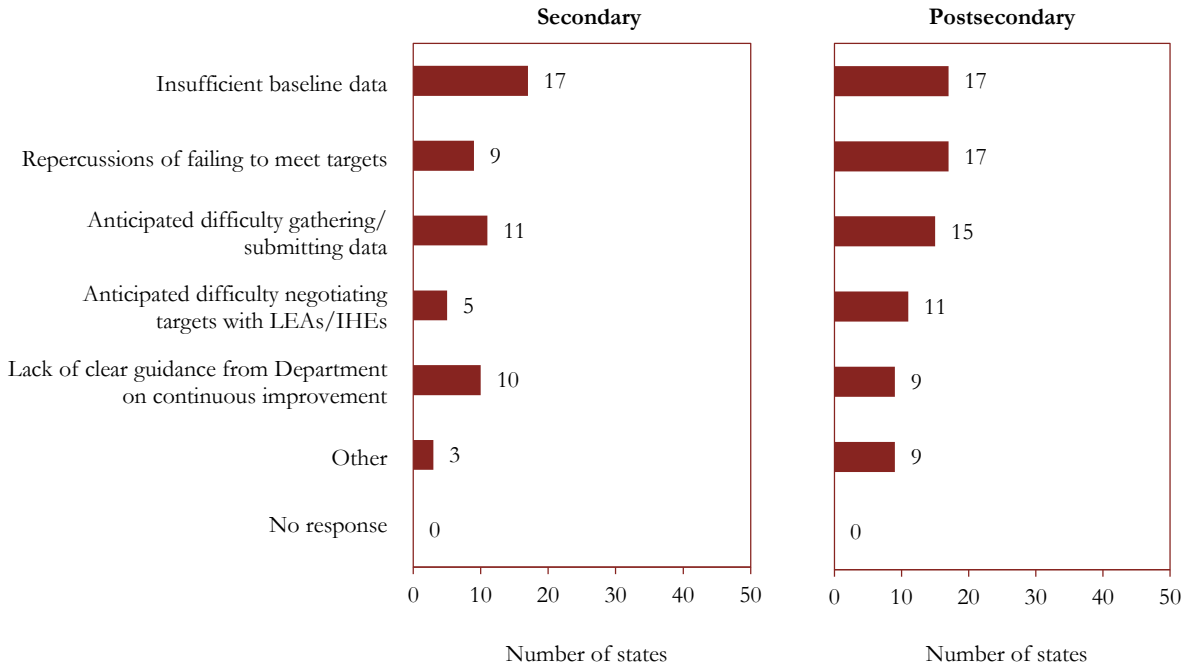

Exhibit reads: Seventeen secondary and 17 postsecondary state directors noted a lack of baseline data as a common difficulty in setting performance benchmarks and targets.
NOTE: N = 27 secondary, 27 postsecondary. Exhibit excludes states that did not report encountering difficulty.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

The case study site visits revealed differing views on the experience of negotiating performance levels with the Department. While some state administrators praised the Department's efforts, others described challenges. One state administrator commended the negotiation process as "very professional," explaining, "We made some suggestions, explained why we made those suggestions, and [the Department] responded." A postsecondary administrator offered another positive view, "We didn't get our way the first time, but we talked about what's reasonable. What could we look at as far as a growth model? I'm very pleased; working with [Department staff person] has been good."

One state administrator was frustrated by the lack of clear direction from the Department on continuous improvement: "It's not really clear what methodology they're [using to select] a target. If it was more transparent [and] . . . we knew what their goal was, we . . . could figure out what to do. . . ." This administrator questioned the value of trying to achieve perfect outcomes (100 percent) on performance measures: "The negotiations . . . were based on reaching 100 percent. . . . We all know that was not a reasonable supposition that anyone will

ever reach 100 percent in [the] eight-year period that was negotiated under [*ESEA*], but we were held to those [targets]."

A state assessment administrator noted difficulty with the process, describing it as "proposal-counter proposal conducted via email with the regional accountability specialist [RAS]. . . . There was apparently no room for negotiation on 1S1, 1S2, and 4S1 with our RAS. It was quite clear that we were going to be held accountable for the [*ESEA*] standards that had not been negotiated for CTE . . . and we did capitulate."

Another state director described an attempt to "fund a statistical review to map out a five-year plan of what would be realistic for our cohort of CTE students, but [the Department] wasn't interested in that approach." The state and the Department eventually came to a compromise, but only after several rounds of negotiation. According to the administrator:

> [Our] population is not your typical secondary school population; we're oversubscribed in special education. So [our RAS] got that [we] couldn't just follow [*ESEA*] growth charts, yet still negotiated fairly. For instance, for math in the CTE population, we were at 11 percent proficiency. . . . We had negotiated 20 or 22 percent proficiency, even though we knew we were only at 11 percent, then they came back and wanted 35 or 37 percent. . . . Neither our agency nor [the Department] would budge. I said, "Then I don't know what options we have here, except we're not going to take the money if it's based on this. This is crazy. I can't agree to this." . . . It was not a rational discussion at all.

Another state director encountered resistance from the Department in negotiating performance levels based on what the state perceived to be realistic. The director explained, "We want to be challenged by the [performance levels], but don't make them unrealistic. In our negotiation, I think the comment was made, 'This is what is expected, so I really can't even negotiate with you'."

State negotiations with LEAs and IHEs

States adopted a variety of approaches to setting local targets with LEAs and IHEs subgrantees. Some required all local providers to meet the state-negotiated targets, while others negotiated targets with individual subgrantees. In some states, all local providers adopted the state targets (18 secondary, 19 postsecondary), while in other states at least one local provider negotiated a different target for one or more measures (22 secondary, 16 postsecondary) (Exhibit 3.41).

Exhibit 3.41.
Number of states according to whether they negotiated different targets on at least one measure with one or more local subgrantees for 2008–09, by education level

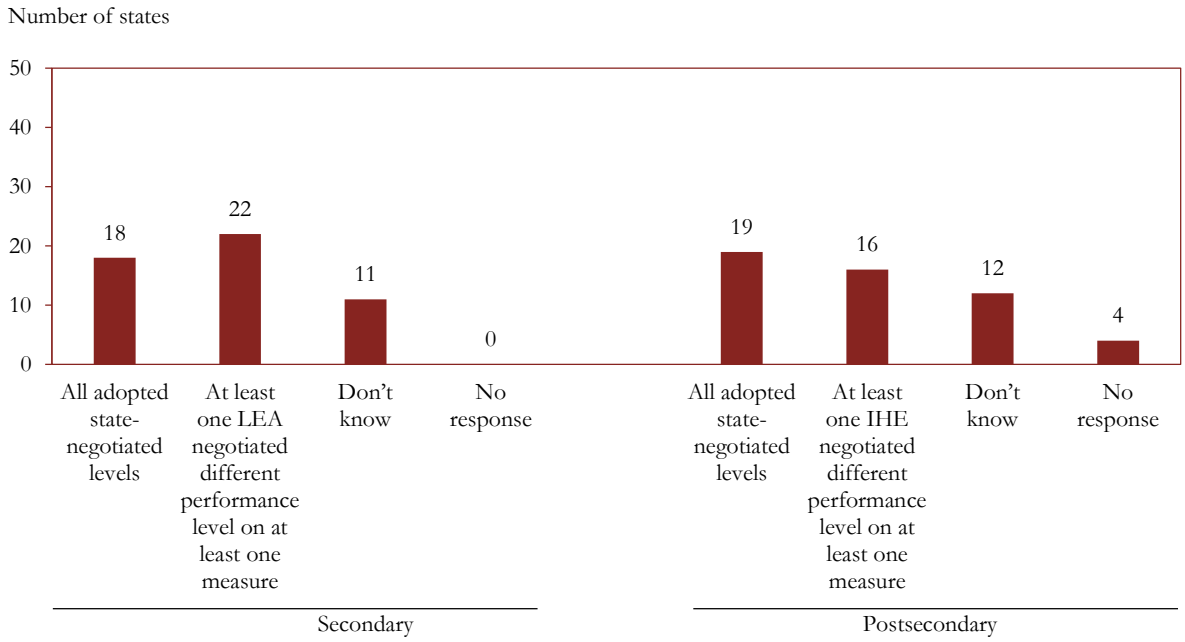

Exhibit reads: In some states, all local providers adopted the state targets (18 secondary, 19 postsecondary), while in other states at least one local provider negotiated a different target for one or more measures (22 secondary, 16 postsecondary).
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Three case study states did not negotiate targets with local subgrantees. In one state, an administrator said: "We have defaulted to not really negotiating, but it's more requiring that they meet a state goal." One postsecondary administrator described the state's approach as "dictated negotiation." Local providers can choose to adopt the state performance level for a measure, or they may add 3 percent to their current performance level for each measure.

Another state staff person said, "Negotiating with locals is ridiculous. Frankly, we didn't do it. We told our locals you have to accept the state levels or ask to negotiate because that's what the law says." The state based its approach on problems it perceived with local negotiations: (1) lack of state staff time to conduct negotiations with local providers and (2) complications that would arise if the state lowered targets for some providers and not others. The administrator went on to say, "For every agency I negotiate a lower number, that puts the state target in jeopardy. If you truly looked at the core indicators of quality programs, why would I hold somebody else to a different standard?"

In one case study state that does allow negotiation of different targets, the state and local providers have collaborated to develop an "online system that locals can access to see their performance measures. To accept, they just click. To negotiate, they . . . submit an official request to negotiate, with supporting justification on that particular measure."

State directors cited program performance goals and past performance as important issues when negotiating performance targets with LEAs and IHEs, issues similar to those considered important during state negotiations with the Department (Exhibit 3.42).

Exhibit 3.42.
Number and percentage of states according to the importance of different factors when negotiating performance targets with local subgrantees, by education level

(5–point scale from Not important to Very important)

	Number						Percent		
Factor	Very important (5)	More than not, less than very important (2 - 4)	Not important (1)	Don't know	No response	Total	At least some importance	Not important	Total
Secondary									
Program performance goals	15	6	0	1	0	22	100	0	100
Past performance	19	3	0	0	0	22	100	0	100
Anticipated changes in local conditions	7	12	3	0	0	22	86	14	100
Anticipated changes in CTE programs	3	14	5	0	0	22	77	23	100
Anticipated changes in student populations	3	13	6	0	0	22	73	27	100
Anticipated changes in state or local funding	4	10	8	0	0	22	64	36	100
Other	1	0	0	1	20	22	100	0	100
Postsecondary									
Program performance goals	9	7	0	0	0	16	100	0	100
Past performance	9	7	0	0	0	16	100	0	100
Anticipated changes in local conditions	6	9	0	0	1	16	100	0	100
Anticipated changes in CTE programs	1	12	2	1	0	16	87	13	100
Anticipated changes in student populations	2	10	3	1	0	16	80	20	100
Anticipated changes in state or local funding	4	8	3	0	1	16	80	20	100
Other	3	1	0	0	12	16	100	0	100

Exhibit reads: State directors cited program performance goals (21 secondary, 16 postsecondary) and past performance (22 secondary, 16 postsecondary) as important issues when negotiating performance targets with LEAs and IHEs.
NOTE: Exhibit includes only those states that negotiated at least one different performance target with at least one LEA or IHE. Percentage calculations exclude "Don't know" and "No response."
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Secondary local directors had little or no difficulty in negotiating targets on most individual measures with their states, with the exception of the nontraditional measures (Exhibit 3.43). About one-quarter of LEA directors indicated that it was at least somewhat difficult to reach agreement on the nontraditional participation and completion measures. At least 20 percent of IHE directors reported it was at least somewhat difficult to negotiate targets for every measure except technical skill attainment (Exhibit 3.44). Postsecondary local directors said that negotiating targets for nontraditional participation and completion posed the greatest difficulties. A large percentage of local directors did not know how to respond to this question, which may indicate a lack of familiarity with the process or not having the option to negotiate different performance levels.

Exhibit 3.43.
Percentage of LEAs according to the level of difficulty experienced when negotiating performance targets with the state

(5-point scale from Not difficult to Very difficult)

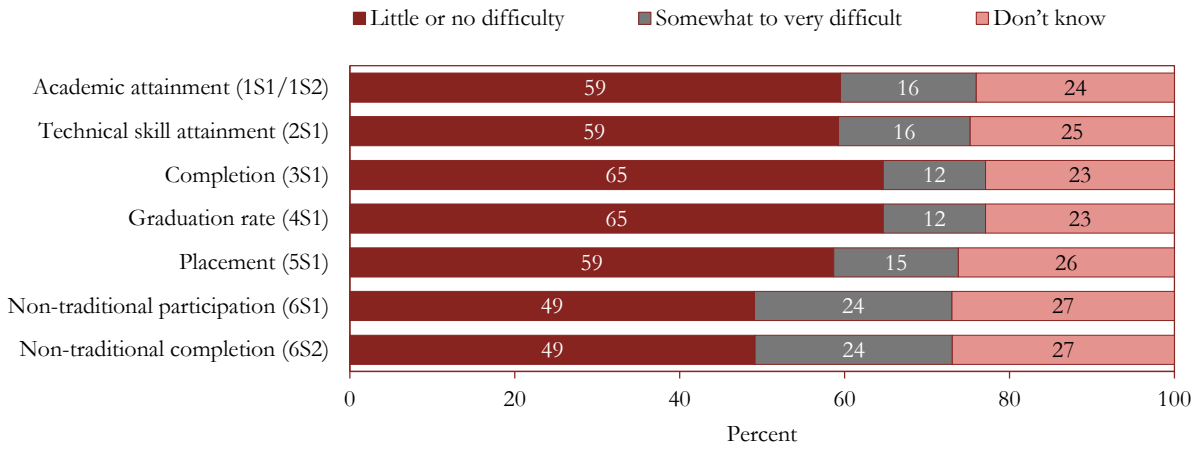

Exhibit reads: About one-quarter of LEA directors indicated that it was at least somewhat difficult to reach agreement on the nontraditional participation and completion measures.
NOTE: Estimates were weighted to reflect population values. Detail may not sum to totals because of rounding.
SOURCE: LEA Survey, 2009.

Exhibit 3.44.
Percentage of IHEs according to the level of difficulty experienced when negotiating performance targets with the state

(5-point scale from Not difficult to Very difficult)

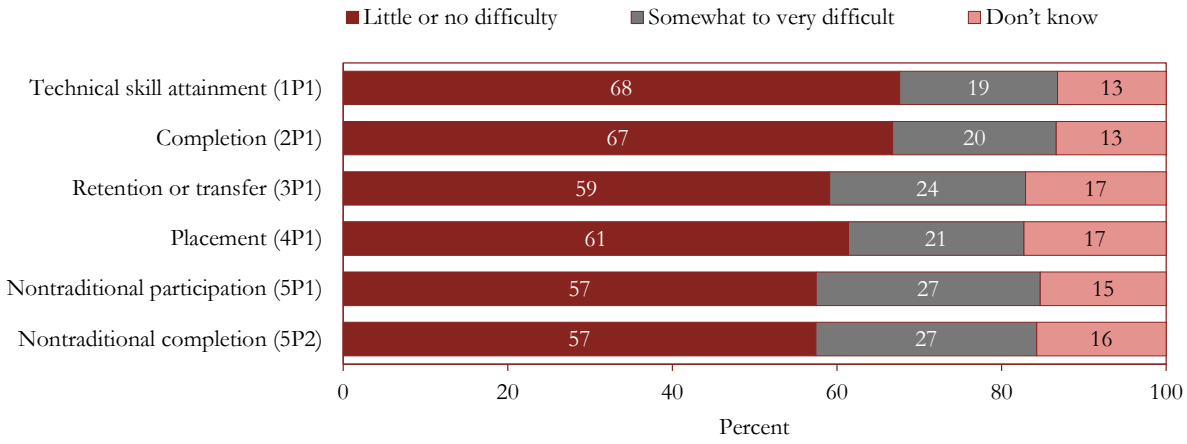

Exhibit reads: IHE directors said that negotiating targets for nontraditional participation and completion posed the greatest difficulties (27 percent each).
NOTE: Estimates were weighted to reflect population values. Detail may not sum to totals because of rounding.
SOURCE: IHE Survey, 2009.

Postsecondary local directors indicated that gathering and submitting the data required for *Perkins* accountability was their most common concern when negotiating performance targets with their states (Exhibit 3.45). Local directors from both education levels expected to face challenges in meeting the targets (61 and 55 percent, respectively), and IHE directors expressed more concern about insufficient baseline data (50 percent) than did LEA directors (34 percent).

Exhibit 3.45.
Percentage of LEAs and IHEs according to various reasons for encountering difficulty when negotiating performance targets with state

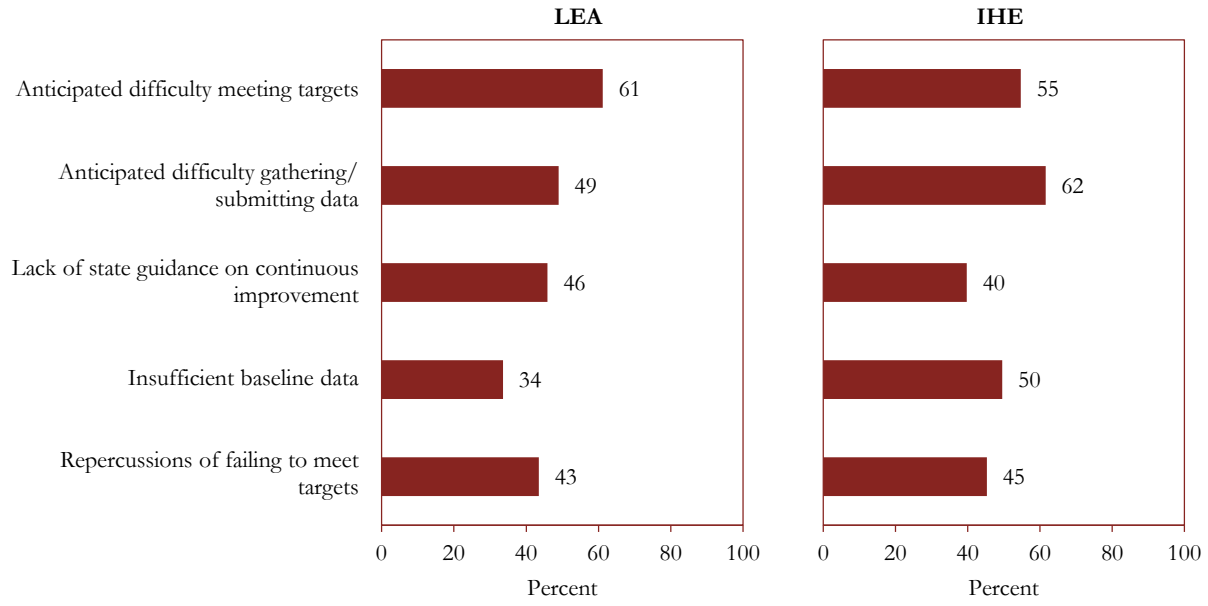

Exhibit reads: When negotiating performance targets with the state, LEAs and IHEs anticipated difficulty in meeting the targets (61 and 55 percent, respectively) and gathering and submitting data (49 and 62 percent, respectively).
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Local providers interviewed during the case study visits reported various experiences when negotiating performance targets with their states. One administrator was concerned about delayed funding: "They came to us and said 'Here are your performance measures. Here's what we're looking at.' You either accepted the percentages that they said you're going to meet, or you negotiated with the state. If you negotiated with the state, it delayed the *Perkins* funding for your district." In the same state, a postsecondary administrator noted, "There were only two colleges in the state that negotiated. … We got the pretty clear message that there wasn't much room [for negotiation]."

In contrast, a secondary respondent in one state claimed, "The negotiations are good because [they] cause some of the old directors to be more accountable . . . and make them better understand the process. When they have to sit down at the table and they have to be able to talk intelligently about it. . . . I think we're in a time where that is going to be . . . the big white horse in the room that everybody's going to have to deal with. . . . I like the way the state goes about it: let's negotiate so you can meet it."

More than one local respondent expressed a desire for a more transparent process of calculating targets. According to one administrator, it would be beneficial to know "not just what the formula is, but how the state got the numbers for each institution."

Reaching Performance Targets

Perkins IV requires states that do not meet at least 90 percent of their target on any individual measure to develop an improvement plan. If the state fails to implement a plan, to show improvement within a year of plan implementation, or to meet at least 90 percent of the negotiated target on a single indicator for three consecutive years, the Department may withhold all or part of the state's *Perkins* funds. *Perkins IV* requires local subgrantees to implement a local improvement plan if they do not meet 90 percent of any target.

The timing allowed for developing and implementing an improvement plan may pose a challenge for both states and local providers, however. An administrator in one case study state explained, "It doesn't make sense to have subgrantees put together plans and have only six months to influence data that get re-evaluated the next year." This state's solution was to extend the scope of improvement plans to two years for local providers, and notify them that they "have to be working toward the targets in the first year."

Most states have policies to sanction local providers who do not meet *Perkins IV* performance levels (Exhibit 3.46). Nearly all states (47 secondary, 38 postsecondary) required LEAs and IHEs to develop a local improvement plan in that circumstance, while others (30 secondary, 22 postsecondary) reserved the option of restricting the flexibility of *Perkins* funds use. Very few states withheld or decreased state and *Perkins* funds for local providers, however (11 secondary, 9 postsecondary). In addition, very few had no consequences for local providers who fall short of negotiated targets.

Exhibit 3.46.
Number of states according to consequences for local subgrantees failing to meet one or more performance targets, by education level

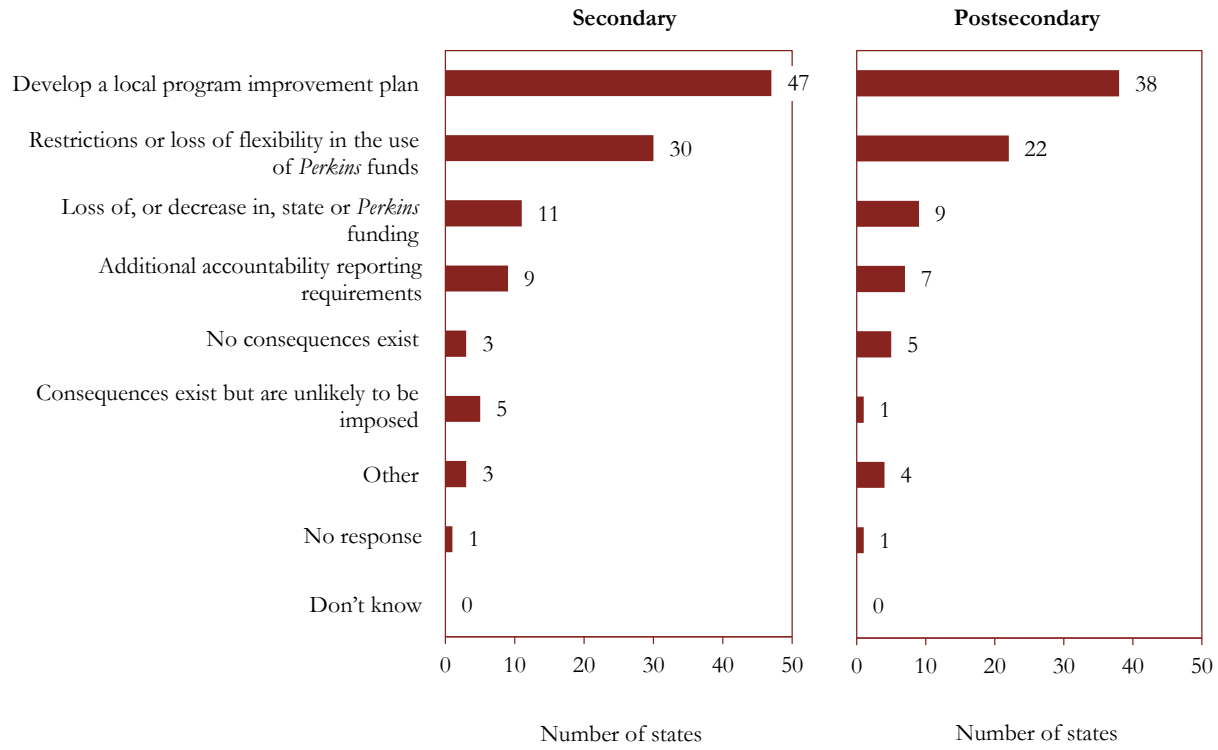

Exhibit reads: Most secondary (47) and postsecondary (38) state directors reported that they would require LEAs and IHEs that failed to meet a performance target to develop a local improvement plan, while 30 secondary and 22 postsecondary state directors said they reserved the option of restricting the flexibility of the use of Perkins funds.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Representatives from two case study states cited data quality as a barrier to implementing effective sanctions. According to one secondary administrator, "Occasionally . . . we have a data reporting problem that has to get fixed that may have affected performance." In the second state, a postsecondary administrator described a situation in which an error in the state data system was found, resulting in the suspension of sanctions implemented the previous year.

More than one state expressed reservations about using sanctions for local providers. One respondent said, "When it was about program improvement and not sanctions, give me a carrot and I can lead them on. Give me sanctions, and they just don't want to participate anymore, which means that I have less influence over what they're doing in their programs because they don't want my money." This state seemed to be working proactively to avoid using sanctions: "What we want to do is provide . . . the help and assistance you need, so

you're not sanctioned. That's why we set up this data monitoring process and are helping the locals clear up their data."

Similarly, another administrator observed, "In the grand scheme of things, [*Perkins* funding] is not very much money for a number of the districts. For them to go through the process of submitting data, following through with all of the other assurances and requirements associated with it, and then be flogged publicly and told you can't use your money for this particular purpose without fixing something, it undermines the process."

Another state had not yet developed a formal process or policy regarding sanctions, although the state does limit funding flexibility for underperforming local subgrantees. A respondent in this state offered her perspective on working with LEAs and IHEs to improve performance and prevent sanctions: "What we said is that, rather than taking money away, which doesn't make sense if you're struggling, is that we would have them focus their funds. . . . They wouldn't lose those *Perkins* funds, but they would be obligated to spend either all . . . or a portion . . . on improving the performance data that are falling behind."

According to case study interviews, two of the six states have created a system of financial sanctions for underperforming programs. One state director explained that any local providers who do not reach the required performance threshold for two years in a row "will no longer be included as CTE programs eligible for continued *Perkins* funding."

Some states are actively pursuing a system of rewards for high performance. According to one state administrator, "We want to move down the road to more of a performance-based carrot approach, in that you're rewarded for doing well, as opposed to smacking people over the head or somehow publicly flogging people for not doing well." Two state administrators indicated interest in adopting performance-based funding or reward systems, with one explaining, "Our ultimate goal is to reach a point where we can provide performance-based funding [for] school districts and/or community colleges."

According to local directors responding to the study surveys, program improvement plans were the most likely sanction their states might use in the event of missing a negotiated target (Exhibit 3.47). Local directors reported that professional development was also a common approach among states. Very few said that their states would eliminate underperforming programs (8 percent of LEAs and 12 percent of IHEs).

Exhibit 3.47.
Percentage of LEAs and IHEs that reported the presence of state policy on the use of various corrective actions for addressing accountability deficiencies

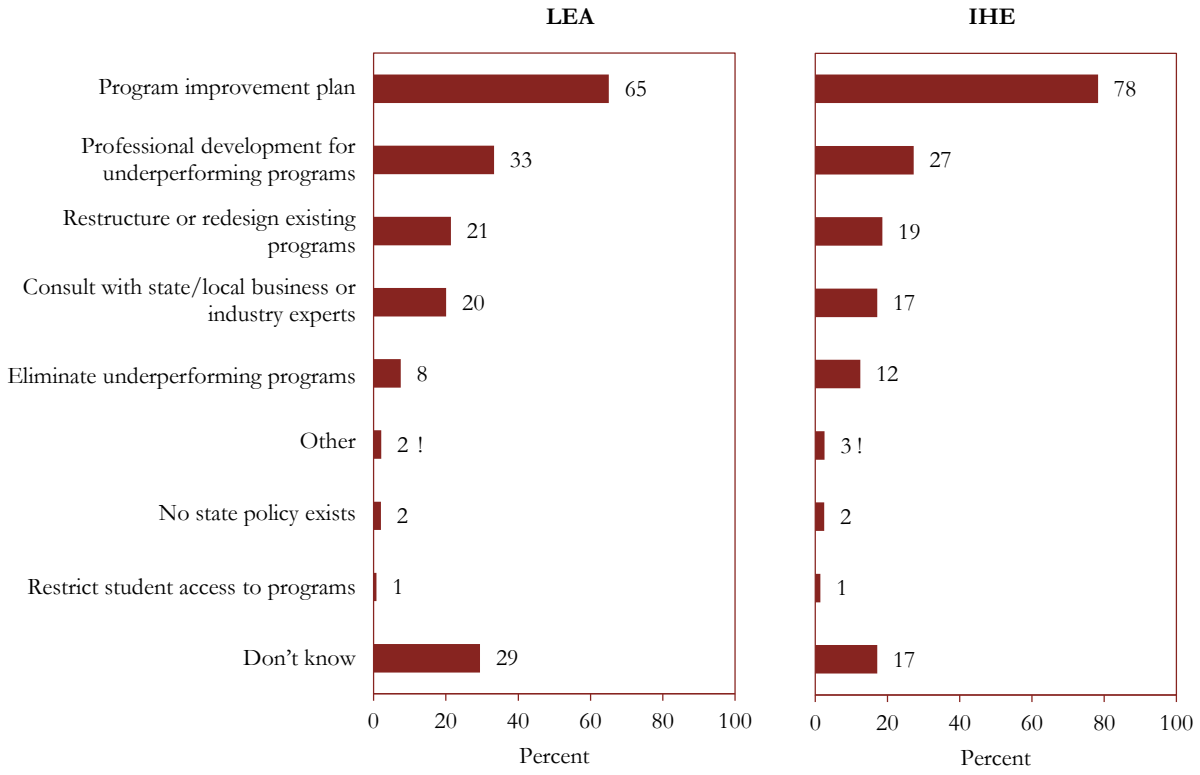

Exhibit reads: LEAs (65 percent) and IHEs (78 percent) said that program improvement plans were the most likely sanction their states might use if they missed a negotiated target.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Local administrators in some case study communities were concerned about the possibility of financial consequences. One explained: "If we don't write the plans, we won't get next year's *Perkins* money. So there is a money sanction tied to it." Some administrators of LEAs and IHEs took a more favorable view of potential financial sanctions. Although he did not want to lose funding, one administrator said, "If you don't meet one, you get time to submit an improvement plan. . . . It's strict, but reasonable." Another secondary administrator appeared to discount financial sanctions as an insurmountable barrier: "I have heard of sanctions, but if we lose $150,000 we will continue to do good things."

Using Data

The ultimate purpose of the accountability system is to promote the best possible educational outcomes for students. By refining, expanding, and clarifying the accountability framework, Congress and the Department are supporting state and local efforts to collect better data and to report and use state and local performance results to improve CTE programs and student outcomes.

Reporting

The Department shares *Perkins* accountability results through an annual *Report to Congress on State Performance* (U.S. Department of Education 2010b). In addition to detailing state progress in meeting performance targets, the report provides information about the Department's efforts to promote valid and reliable data collection and reporting.

States also share information, disseminating performance results to local providers through a variety of methods (Exhibit 3.48). As of 2008–09, most states released statewide performance outcomes averaged across all secondary or postsecondary subgrantees (40 secondary, 29 postsecondary). While states publicized *Perkins* performance data at the local level, very few (9 secondary, 6 postsecondary) controlled for similarities in institutional characteristics. Fewer than half of states posted performance reports on the Internet. Three secondary and six postsecondary state directors reported that their states did not share performance data at all for LEAs and IHEs.

One state administrator described significant progress in communicating performance results: "Until 07–08, [our state] only reported aggregate data at the state level; that was the first year the state began reporting school-level data. One of the big projects of our state longitudinal data system grant is a decision-support system, where you're able to mine this big monster data queue and go in and look at data and slice and dice it however you would like. . . ." In another state, postsecondary administrators noted that they have made substantial changes in the way the state shares information with IHEs. In the past, the state reported only aggregate data and did not share information from individual providers. Now the state provides performance reports to individual institutions, so providers can compare their results to the aggregate statewide performance results.

Exhibit 3.48.
Number of states according to the use of various methods to share performance outcomes with local subgrantees, by education level

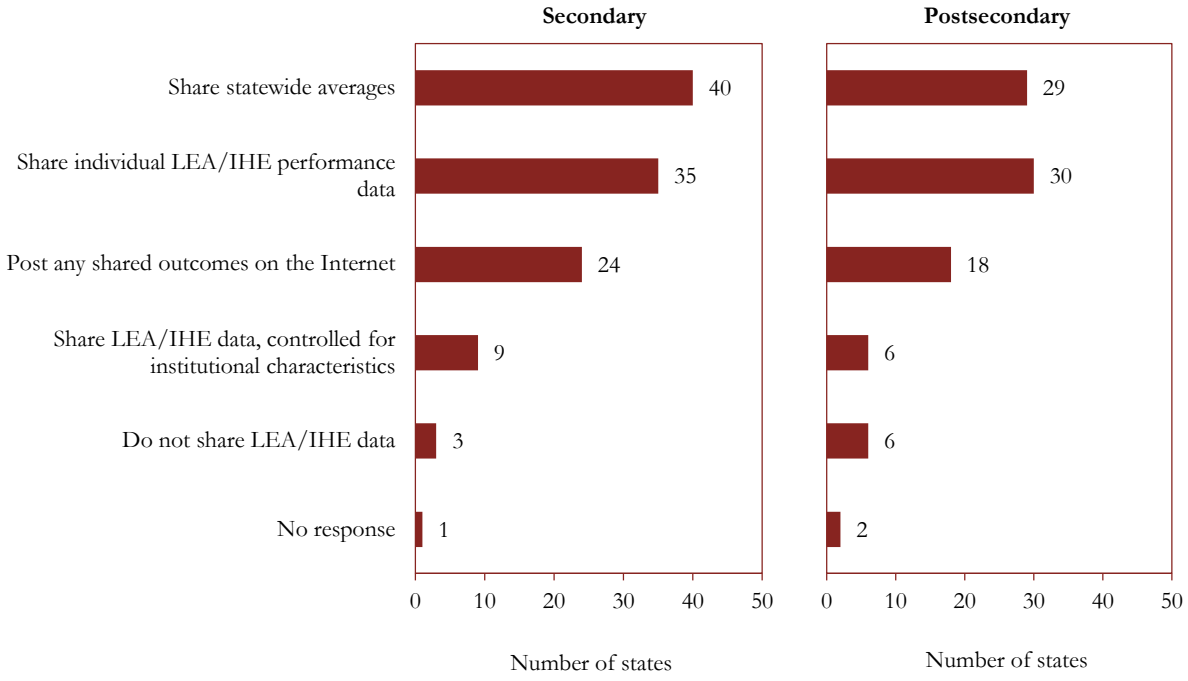

Exhibit reads: Most state directors reported that as of 2008–09, their states released statewide performance outcomes, averaged across all LEAs or IHEs (40 secondary, 29 postsecondary).
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Several administrators noted the various ways that data are used at local and state levels. In one case study state, a respondent noted that analyzing performance results enables staff to map out deficiencies and work to boost enrollment and scores. Another administrator indicated an interest in identifying high schools sending underprepared students to area CTE centers.

More than half of LEA and IHE directors reported receiving institution-level performance data (54 percent and 61 percent, respectively) (Exhibit 3.49). Approximately two-thirds said they received information containing statewide averages for all LEAs and IHEs. A small percentage of LEA (15 percent) and IHE (10 percent) directors reported that their state provided no feedback on institutional performance.

Exhibit 3.49.
Percentage of LEA and IHE directors that reported receiving various types of institutional performance data from the state

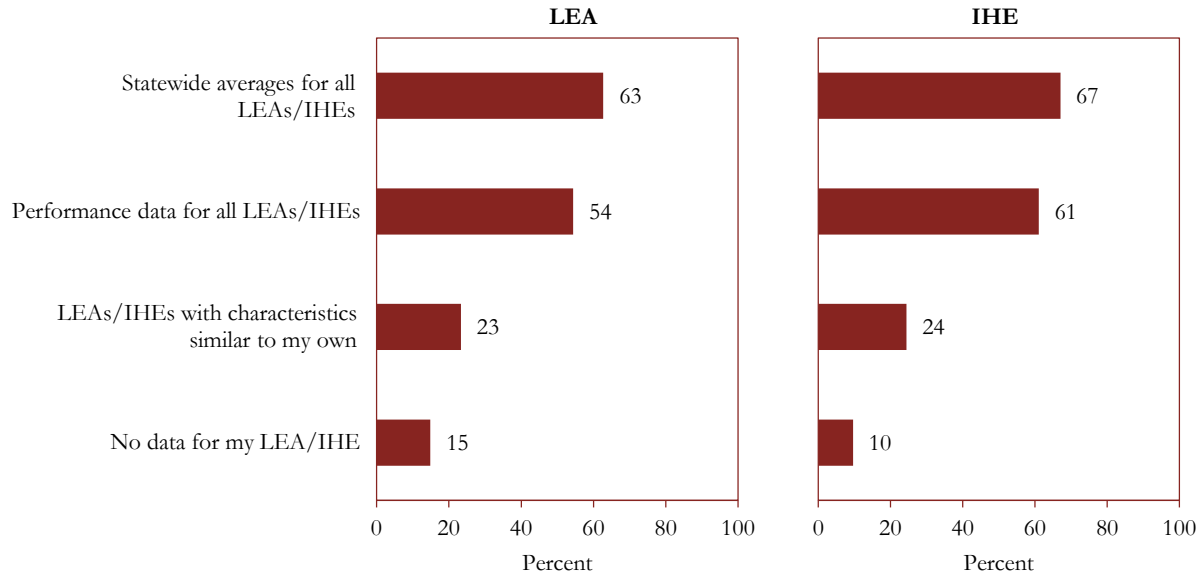

Exhibit reads: More than half of local directors reported receiving institution-level performance data (54 percent of LEAs and 61 percent of IHEs). Approximately two-thirds of local providers said they received information containing statewide averages for all local subgrantees.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Program Improvement

Most states used annual *Perkins* results to identify programs needing improvement and to provide targeted technical assistance (Exhibit 3.50). Although few states (11 secondary, 4 postsecondary) used core indicator data to reward LEAs and IHEs that performed well, more than half (29 secondary, 28 postsecondary) provided additional program improvement resources based on *Perkins* indicator results. Twenty-one states used the data at least somewhat to sanction LEAs for low performance. Sanctions were much less popular for postsecondary, with only 12 states employing sanctions at least somewhat against low-performing IHEs.

It is notable that while most state directors reported using *Perkins* data to provide targeted technical assistance (45 secondary, 40 postsecondary), only about one-third of local subgrantees thought their state had a policy of providing professional development to staff in underperforming programs (Exhibit 3.47).

Exhibit 3.50.
Number of states according to the extent to which they used *Perkins* core indicator data, by education level

(5–point scale from Used to a great extent to Used not at all)

Use of data	Used to a great extent to used somewhat (1 - 3)	Used not much to not at all (4 - 5)	No response	Total
Secondary				
Identify programs needing improvement	47	3	1	51
Provide targeted technical assistance	45	5	1	51
Identify underserved special populations	36	14	1	51
Identify unusually effective programs	35	15	1	51
Provide resources for program improvement	29	21	1	51
Sanction low performing LEAs	21	29	1	51
Reward LEAs for high performance	11	38	2	51
Other	3	3	45	51
Postsecondary				
Identify programs needing improvement	41	6	1	48
Provide targeted technical assistance	40	7	1	48
Identify underserved special populations	34	13	1	48
Identify unusually effective programs	29	18	1	48
Provide resources for program improvement	28	19	1	48
Sanction low performing IHEs	12	34	2	48
Reward IHEs for high performance	4	43	1	48
Other	3	6	39	48

Exhibit reads: Most states used annual *Perkins* results to identify programs needing improvement (47 secondary, 41 postsecondary) and to provide targeted technical assistance (45 secondary, 40 postsecondary).
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

One case study state reported using instructor-level data to improve teacher performance: "We have been able to look at programs and see if we thought the teachers were doing a good job and make recommendations for professional development in a much more prescriptive way than we've been able to in many years." This state also is developing a reporting mechanism to produce customized performance reports: "One of the things that we hope to launch for *Perkins* is a business improvement project. . . . We have the [reports] by school, by program, and then the sub-indicators that we hope to be able to share to give [grantees] the resources they need to identify problems."

Among states that do not currently use performance data to identify underperforming programs, several will use the data for this purpose in the next two years (one secondary, five

postsecondary) (Exhibit 3.51). A few planned to use *Perkins* performance data to reward LEAs (four states) and IHEs (four states) in the next two years. Among those not currently using sanctions, eight secondary and eight postsecondary planned to implement sanctions for low-performing LEAs and IHEs within the next two years.

Exhibit 3.51.
Number of states that are not already using *Perkins* data in various ways that may use *Perkins* data in those ways in the next two years, by education level

Use of data	Yes	No	Don't know	No response	Already using data	Total
Secondary						
Sanction LEA for low performance	8	4	9	1	29	51
Reward LEA for high performance	4	11	16	0	20	51
Provide resources for program improvement	3	3	6	0	39	51
Identify unusually effective programs	3	0	4	0	44	51
Identify programs needing improvement	1	0	1	0	49	51
Provide targeted technical assistance	0	0	2	0	49	51
Identify underserved special populations	0	1	2	0	48	51
Other	0	1	0	1	49	51
Postsecondary						
Sanction IHE for low performance	8	8	11	0	21	48
Identify programs needing improvement	5	0	0	0	43	48
Provide resources for program improvement	5	4	3	0	36	48
Reward IHE for high performance	4	17	14	0	13	48
Identify unusually effective programs	4	1	3	0	40	48
Provide targeted technical assistance	3	1	0	0	44	48
Identify underserved special populations	3	2	1	0	42	48
Other	1	0	2	3	42	48

Exhibit reads: Among states not currently using sanctions, eight secondary and eight postsecondary directors said they plan to implement sanctions for low-performing LEAs and IHEs within the next two years.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Using *Perkins IV* performance data to identify underperforming programs was common practice in the case study states. Five state representatives described their approaches to spotting local providers who did not meet at least 90 percent of any target, and one outlined a color-coded system for categorizing local providers who met targets, were within 90 percent of the target, or fell below the target.

One state uses a "risk-based monitoring" system, in which it more closely monitors local providers falling below 90 percent of the performance target. The state required the providers to prepare corrective action plans focused on the problematic indicators. A postsecond-

ary administrator outlined plans to promote local subgrantee review and use of data. While some providers meet the negotiated targets for indicators, they may not meet targets for disaggregated subgroups, particularly for the nontraditional indicators. According to an administrator, "We even make them count how many of these special population groups are below their district-negotiated targets in their programs. We could do it electronically, but we make them count just so we know they looked."

About half of LEAs and IHEs used their data quite a bit or to a great extent to identify programs needing improvement and make funding choices in 2008–09 (Exhibit 3.52 and Exhibit 3.53). About 40 percent of LEAs and IHEs used the data to offer targeted technical assistance and about one-third used it to identify underserved populations. Among LEAs and IHEs that did not use a given approach, approximately one-quarter to one-third planned to employ an approach in the future.[26]

Exhibit 3.52.
Percentage of LEAs according to the extent to which they used prior year *Perkins* data for various purposes in 2008–09

(5-point scale from Used not at all to Used to a great extent)

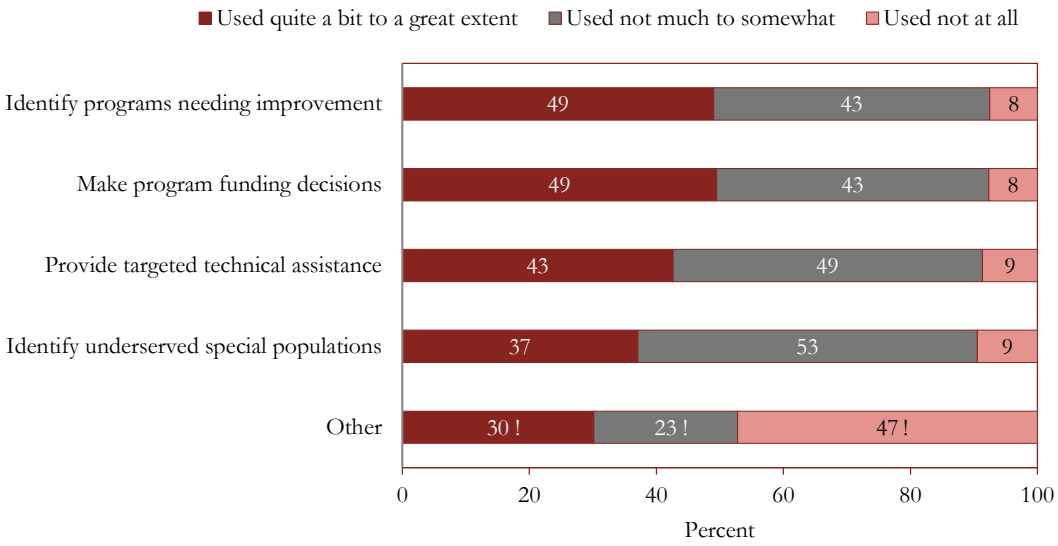

Exhibit reads: About half of LEAs used Perkins data quite a bit or to a great extent to identify programs needing improvement and make program funding decisions (49 percent each) in 2008-09.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA Survey, 2009.

[26] LEA and IHE Surveys, 2009.

Exhibit 3.53.
Percentage of IHEs according to the extent to which they used prior year *Perkins* data for various purposes in 2008–09

(5-point scale from Used not at all to Used to a great extent)

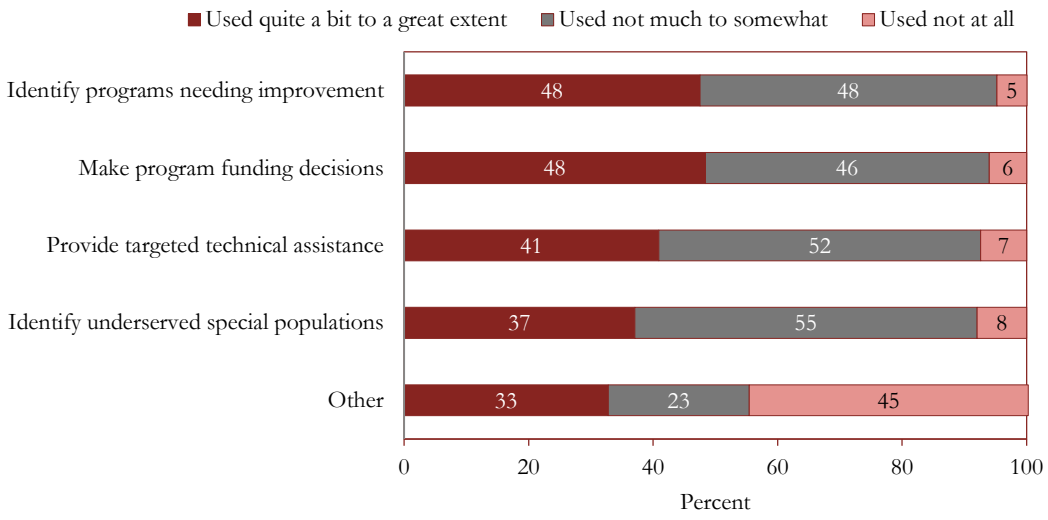

Exhibit reads: Many IHEs used Perkins data quite a bit or to a great extent to identify programs needing improvement (47 percent) and make program funding decisions (48 percent) in 2008–09.
NOTE: Estimates were weighted to reflect population values.
SOURCE: IHE Survey, 2009.

Although survey results indicated that local subgrantees use *Perkins* data for purposes like identifying programs that need improvement, conversations in case study states revealed that at least a few providers do not use these data at all. One person said, "The feds told us we have to report something, so here are the numbers. . . . If the goal is really to improve our programs, I'm all for that, but I need accurate information in order to do that." A second local provider viewed *Perkins* accountability data as a compliance requirement: "I do what's asked for, get [the data], look at them, and report them rather than act on them." A third said that, because the district is performing well, there was no need to use the performance data to improve. This administrator explained: "If it should come to pass in the next application that we have to address a certain area, then . . . I will photocopy [the data] and see if any of my teachers want to look at them." Several postsecondary providers noted that *Perkins* data were a starting point and that they need to perform other analyses to report more useful local data.

A local secondary administrator, however, said that both administrators and instructors in the district use *Perkins* data to learn about program performance. An IHE representative said, "We use all of those data in terms of our program improvement. We also use those data to close programs. . . . I would also say we use them to direct resources." In one state, a local respondent reported using *Perkins* data extensively: "We brought all the principals to-

gether and shared the data with them so they could see the progress that their CTE students have achieved." In the same state, another local director said, "In our types of programs . . . we get kids who are right on the cusp. . . . It's the data that help us know how to help those kids and push those kids in the direction they need to go."

Chapter 4. Programs of Study

The *Carl D. Perkins Career and Technical Education Act of 2006* (*Perkins IV*) introduced the requirement that all local subgrantees offer programs of study (POS) that incorporate academic, career, and technical content to prepare students for the transition from secondary to postsecondary education and careers. While the POS requirement is new, the idea of organizing instructional delivery to make the knowledge and skills studied in school more relevant to students' career goals is a time-tested concept. In the last quarter of the 20th century, initiatives such as school-to-work, apprenticeships, dual enrollment, and Tech Prep were introduced to strengthen the links between secondary and postsecondary education and between education and work (Lewis, Kosine, and Overman 2008).

Perkins IV builds upon these earlier initiatives, and on statutory language contained within Title II (Tech Prep) of the 2006 legislation, in putting forth POS as an organizing principle for delivering CTE course work.[1] Although all local subgrantees are required to offer at least one POS, *Perkins IV* offers relatively little direction on how states are to support local education agencies (LEAs) and institutions of higher education (IHEs) in developing and implementing these programs. And because the U.S. Department of Education (the Department) did not issue policy guidance on POS until January 2010, states have been left largely on their own to interpret statutory language and provide policy support, guidance, and technical assistance to local subgrantees. Accordingly, the analyses in this chapter seek to answer the following research questions:

- How are states and local subgrantees developing and implementing POS?
- What challenges are states and local subgrantees facing in developing and implementing POS?
- What is the scope of student participation in POS?

[1] Tech Prep was introduced as a demonstration program in the *Carl D. Perkins Vocational and Applied Technology Education Act of 1990* (*Perkins II*) and given increased emphasis in the *Carl D. Perkins Vocational and Applied Technology Education Act of 1998* (*Perkins III*). Appropriations for the program were discontinued in FY 2011. Tech Prep programs combine at least two years of secondary and two years of postsecondary education with course work offered in a nonduplicative, sequential manner. Academic instruction and technical skill instruction are integrated and, where feasible, students are provided with opportunities to participate in work-based learning. Programs are intended to lead to an associate's or a baccalaureate degree, or a postsecondary certificate in a specific career field, as well as placement in appropriate employment or further education [Section 202(a)(3)].

- How are states and local subgrantees addressing the core elements defined by federal legislation?

The chapter opens with an overview of the four core POS components identified in *Perkins IV* and highlights Department guidance intended to support states in developing effective programs. This section is followed by a description of how states, LEAs, and IHEs developed POS and the barriers they encountered in the process. The chapter also discusses the extent to which POS created by state agencies and local subgrantees reflect Department guidance, as well as state approaches to monitoring and evaluating POS.

The chapter draws upon several sources of data to answer the research questions. Surveys administered in fall 2009 to all secondary and postsecondary state career and technical education (CTE) directors, a nationally representative sample of local secondary and postsecondary CTE staff, and the universe of area CTE centers assessed subgrantees' perceptions and opinions on the design and implementation of POS. Case study visits to eligible agencies in six states and three local partnerships within each state provided in-depth state and local perspectives on developing and implementing POS and the challenges encountered in this endeavor. Finally, an expert panel reviewed states' guidance to LEAs and IHEs on POS development.[2]

Information collected for this chapter focuses on state and local activities conducted during the 2008–09 program year, the first full year of POS implementation under *Perkins IV*.[3] As described in this chapter, many states were still in the early stages of providing assistance to local subgrantees in developing and implementing POS. As a result, findings presented do not necessarily reflect the current status of POS implementation within states.

Key Findings

1. *States and local subgrantees are developing and implementing POS, although the characteristics and quality of these programs vary.*

All local providers reported that they were offering POS as of the 2008–09 program year, although study data from local site visits revealed considerable variation in the structure and quality of POS across states and, in some instances, among local subgrantees within states.

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[2] See Appendix A for a more detailed description of the study's methodology.

[3] Although Congress authorized *Perkins IV* in 2006, states were given a transition year, covering the 2007–08 program year to develop state plans to respond to new *Perkins IV* requirements. States' approaches to developing POS varied during this period: some states began program development during the transition period, while others delayed adoption until their state plans were accepted. Consequently, data for this section focus on the 2008–09 program year, the first year in which all state agencies and local subgrantees were expected to have addressed *Perkins IV* requirements relating to POS design and implementation.

This variability is a result of the considerable flexibility that states had in implementing statutory provisions. For example, most state directors reported that their state neither created legislation nor developed administrative guidance to support LEAs and IHEs in developing POS. A substantial number of state directors (29 secondary, 20 postsecondary) reported that state approval is required for all POS, with both secondary and postsecondary state directors reporting that POS developed locally with state guidance were the most common type of state-approved POS.

2. *State and local agencies face substantial challenges that complicate POS development and implementation.*

State and local administrators reported that they worked in good faith to ensure that each *Perkins IV* subgrantee offered one or more POS. Directors faced a series of challenges in developing these programs, most often citing a lack of funds, staff, and time as barriers to POS creation. Both secondary and postsecondary state directors also described a lack of understanding among local academic instructors about the purposes of POS, and indicated that academic and CTE instructors often lacked sufficient time to plan programs and integrate curricula. Local directors reported that shortages of CTE staff and lack of technical expertise also were barriers to POS development, though to a lesser extent than other factors. Staff in area CTE centers reported difficulty establishing meaningful POS sequences that included the academic coursework taken by students in the 9th and 10th grades at their sending schools.

3. *Most states and local subgrantees are unable to quantify the number of students enrolled in POS or the outcomes that they achieve.*

Although *Perkins IV* requires that all local subgrantees offer at least one POS, the legislation neither offers a statutory definition of a POS student, nor holds state agencies or local subgrantees accountable for reporting student participation rates or educational or employment outcomes. As such, relatively few state or local *Perkins IV* subgrantees are able to produce data on the number of students in these programs. Many states and local subgrantees also lack the capacity to track secondary students transitioning from high school to postsecondary education, even when they have established secondary-postsecondary partnerships or programs that award postsecondary credit to students while still enrolled in high school. State directors reported that, in some instances, they are able to track secondary students into selected in-state public institutions (e.g., community colleges), but are unable to assess student transitions into private two-year or public and private four-year colleges located in or out of state.

4. *Secondary and postsecondary administrators and instructors have difficulty coordinating POS development across levels.*

LEA and IHE program administrators reported that they cooperated to design POS, although case study visits suggested that maintaining communication and fostering collaboration across the secondary and postsecondary education levels can be logistically challenging. Local administrators and staff noted that high school teachers and college faculty often were physically isolated from one another, diminishing opportunities to collaborate. Other barriers included a lack of time and training to support teachers and faculty in aligning secondary and postsecondary curricula, the bureaucratic procedures required to develop local articulation agreements, and resistance from some postsecondary faculty, who considered POS primarily a secondary program delivery strategy.

5. *The majority of secondary students participating in POS had opportunities to earn college credit, but fewer than half of LEA directors reported that their POS led to an industry-recognized credential or a postsecondary degree or certificate.*

Perkins IV calls for, but does not require, that secondary students participating in POS have the opportunity to earn college credit. Three-quarters of secondary LEA directors reported establishing articulation agreements with at least one postsecondary institution, and more than half of secondary and postsecondary state directors reported that students in one or more of the top five POS offered at the local level could earn dual credit. Although required by the legislation, fewer than half of LEA directors reported that their POS led to an industry-recognized credential or a postsecondary certificate or degree, with many responding that they did not know whether these opportunities existed.

Features of Programs of Study

Perkins IV requires each local recipient of federal funds to offer one or more POS, and defines four POS components.[4] Specifically, a POS should

- Incorporate secondary and postsecondary education elements;
- Include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, nonduplicative progression of courses that align secondary education with postsecondary education to adequately prepare students for success in postsecondary education;

[4] Sec. 122(c)(1)(A).

- Offer the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits;[5] and
- Lead to an industry-recognized credential or certificate at the postsecondary level or an associate's or bachelor's degree.

The legislation requires states to describe how they will consult with LEAs and IHEs to develop and implement POS in their five-year *Perkins IV* plans, but the statute provides no expectations that states report on the results of this assistance or the status of local implementation.

The POS Design Framework

To support states in developing POS that incorporate each of the required elements, the Department issued a *POS Design Framework* (Framework) in January 2010 that describes 10 components considered essential to creating and implementing high-quality comprehensive POS.[6] This Department guidance was released nearly three years following the implementation of *Perkins IV,* meaning that states and local communities worked on POS development with limited federal direction. As a consequence, data collected for this study document the extent to which state POS development efforts aligned with the essential components of effective POS subsequently identified by Department staff.

[5] *Perkins IV* introduces this as an optional component, stipulating that programs "May include the opportunity for secondary education students…" to participate in programs that offer postsecondary credit.

[6] The Framework currently is posted on the Department's *Perkins Collaborative Resource Network* (*PCRN*), a website designed to share resources to promote quality CTE programs and the collection of accurate data relating to *Perkins IV* accountability features. http://cte.ed.gov/nationalinitiatives/rposdesignFramework.cfm (accessed October 15, 2010).

POS Design Framework

1. *Legislation and Policies*—Federal, state, and local legislation or administrative policies that promote POS development and implementation.
2. *Partnerships*—Ongoing relationships among education, business, and other community stakeholders that are central to POS design, implementation, and maintenance.
3. *Professional Development*—Sustained, intensive, and focused opportunities for administrators, teachers, and faculty involved in the design, implementation, and maintenance of POS.
4. *Accountability and Evaluation*—Systems and strategies to gather quantitative and qualitative data on both POS components and student outcomes to aid ongoing efforts to develop and implement POS.
5. *College and Career Readiness Standards*—Content standards that define what students are expected to know and be able to do to enter and advance in college and/or careers.
6. *Course Sequences*—Nonduplicative sequences of secondary and postsecondary courses within POS that ensure that students can make a transition to postsecondary education without duplicating classes or requiring remedial coursework.
7. *Credit Transfer Agreements*—Credit transfer agreements that provide opportunities for secondary students to gain postsecondary credits, supported by formal agreements between secondary and postsecondary partners.
8. *Guidance Counseling and Advisement*—Guidance counseling and advisement that help students make informed decisions about which POS to pursue.
9. *Teaching and Learning Strategies*—Innovative and creative instructional approaches that enable teachers to integrate academic and technical instruction and students to apply academic and technical learning in their POS coursework.
10. *Technical Skill Assessments*—National, state, and/or local assessments that provide ongoing information on student attainment of the necessary knowledge and skills for entry and advancement in postsecondary education and careers in their chosen POS.

State reactions to department guidance

State and local staff interviewed during case study visits generally supported the Department's effort to provide guidance through the POS Framework.[7] A majority of state staff observed, however, that the guidance would have been helpful earlier in the process and expressed frustration at the lack of direction in the initial stages of POS development. One state technical assistance provider summed it up in this way:

> It seemed like there wasn't a complete vision at the federal level as far as what they really expected and wanted. Yet they were expecting us to implement something that they didn't really know what it was. . . . It took them a long time [to provide examples] and by the time we got them, we'd already developed what we thought might work.

A state director echoed this sentiment:

> The work that was recently done out of [the Department] around POS—I wish we would've had that three years ago. That should've come out immediately. We wouldn't have the mess we're in right now of diversity of states. . . . So it's going to be more difficult now, because states have already gone down certain roads. We've got to figure out how to create some national structures that make sense.

Not all state and local providers shared this view. Some believed that an overly prescriptive set of requirements would have stifled creativity and innovation, and they appreciated the flexibility the Department provided. Moreover, having spent up to three years developing and implementing POS on their own, staff in some state agencies expressed concern at the prospect of a stricter definition or set of prescriptive regulatory guidance. As one state staff member observed, "Having structure and a framework isn't bad. Requiring us to do certain strategies strips the innovation out of it."

When guidance was released more than three years after the authorization of *Perkins IV*, some state personnel became wary that the Department would follow with regulatory language that would force educators to modify or reverse what they already had in place. Two state-level staff commented that having regulatory guidance would limit collaboration, buy-in, and creativity among states, with one noting: "We have close partnerships with our other agencies and we work together to figure [POS] out. . . . If it had been mandated and there had been regulations governing it, what we have may not have been as effective as it is because there wouldn't be the ownership that we have now."

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[7] Because the Framework had not yet been released at the time the surveys were conducted, data on field perceptions of this guidance are limited to those collected during case study site visits.

State staff wondered if states would now be held accountable for all 10 POS components, with some expressing mistrust of further regulatory guidance or statutory language. As one state director noted, "I think if federal regulations were going to happen for POS, it needed to happen at the time it was rolled out. To call it back now and say, 'Oh, no, you're doing it all wrong.' I don't think you can do that…it's not an acceptable way of doing business."

Development of POS

Data revealed that states and local subgrantees have developed and implemented POS through a variety of processes. In the absence of federal regulatory guidance, some state agencies took the lead in establishing statewide POS that were mandatory for local adoption, while others opted to provide nonbinding guidance, allowing local subgrantees a measure of design flexibility. A handful of states allowed LEAs and IHEs to develop POS on their own with little or no state guidance.

Case study findings suggested that states with strong Tech Prep networks under *Perkins III* were able to transition to POS with relatively greater ease than those without such systems. One state director noted that legislative requirements for POS "gave us the anchor" to reinforce and build on work begun under Tech Prep. Survey data supported the case study. When reporting on the five POS with the largest student enrollments, 46 percent of LEA respondents and 56 percent of IHE respondents indicated that one or more POS had previously operated as a Tech Prep program (Exhibit 4.1).

Three states credited "foundational work with Tech Prep" as a very important factor in POS development. As one state department of education representative observed, "For a lot of the school districts with strong Tech Prep consortiums, POS is a natural and an easy fit." People who had previously been engaged in Tech Prep also took leadership roles in POS development. As one state representative explained, "We've had the luxury of having good local people who know how to do Tech Prep. They know how to develop local articulation agreements."

Exhibit 4.1.
Percentage of LEAs and IHEs according to whether at least one of their top five POS previously was part of a Tech Prep program

Agency	None	At least one of top five POS	Don't know
LEAs	25	46	29
IHEs	20	56	25

Exhibit reads: At the local level, 46 percent of LEAs and 56 percent of IHEs reported that at least one of their top five POS was previously part of Tech Prep.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

During case study visits, state and local administrators demonstrated varying attitudes toward POS. Some identified the POS concept as the most important innovation in *Perkins IV,* crediting it as a lever for reforming CTE. As one state director shared, "It's a generational change here, and we're hanging POS out there as the banner (for) change" Conversely, others saw it simply as a way of relabeling existing ideas. As one state administrator noted, "What's interesting about all of this talk about POS is it's not like the concept is new. It's a new title, just as Tech Prep was a new title. But all of the things that were in Tech Prep, and all of the things that are in POS are things that we were doing in the 60s."

Quality control

The state approval process helps ensure that POS offered by local providers adhere to a minimum level of program quality. In case study interviews, state staff described approval processes that involve measuring locally submitted POS against state-established criteria; most also said that these processes provided local subgrantees opportunities to revise and resubmit their plans for POS should their initial request be denied. When surveyed, 29 secondary and 20 postsecondary state directors reported requiring some form of state approval for all POS offered by local subgrantees (Exhibit 4.2).

Exhibit 4.2.
Number of states according to the extent to which state approval is required for POS, by education level

Education level	Yes, for all	Only for a subset	Only for one[a]	No
Secondary	29	6	6	10
Postsecondary	20	2	8	18

Exhibit reads: More state directors reported that state approval is required for all POS (29 secondary, 20 postsecondary). Only 10 secondary and 18 postsecondary state directors reported their states do not require state approval for any POS.

[a] The one POS required of each local agency.

NOTE: N = 51 secondary, 48 postsecondary.

SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

In contrast, 10 secondary and 18 postsecondary state directors reported that state approval is not required for any POS, meaning that the characteristics and components of POS are left to local interpretation. One state administrator conceded that this flexibility could lead to significant local variations: "We would like to hope there was a typical process for POS development . . . but [there are] a lot of divergent approaches."

POS Implementation: A Case Study Example

"Hampden" College (name masked to protect anonymity) is a large, urban, four-campus community college with several partner school districts. Hampden College's long-standing relationship with its feeder school districts began with the establishment of Tech Prep consortia in 1995. The college established 12 POS in the first year (2008–09), and was developing 10 more in 2009–10. The college plans to develop about 50 in total, using a generic state template as a guide.

The state recently passed legislation that is intended to increase the rigor of CTE programs by integrating them with academic programs. At the secondary level, the legislation recommends common planning periods for CTE and academic faculty members, a focus on high-wage and high-demand programs, articulation agreements with postsecondary institutions, close relationships with business and industry, and cohort scheduling. In response to this legislation, one district's associate superintendent is enhancing and expanding CTE by emphasizing career awareness in elementary school and linking middle school CTE programs to POS career pathways.

To fund POS development, the districts and the college agreed to maintain their Tech Prep consortium, with each member contributing a percentage of their *Perkins* funding. These funds are used to bring secondary and postsecondary faculty together for Saturday workshops that address promoting articulation, integrating academic content into CTE course work, and reducing remediation rates for incoming students. For their participation, faculty members receive a stipend funded through consortium money. POS development has also benefited from input by longstanding CTE program advisory boards made up of alumni and local industry representatives.

Since 1995, Hampden College has awarded several million dollars to high school students in its consortium districts to cover tuition payments for articulated college credits. These are included in a student's transcript upon enrollment at Hampden. At the heart of the programs are the articulation agreements for joint assessments: college faculty review portfolios of high school students' work or administer a test, developed in collaboration with high school teachers, using the state's curriculum frameworks as a guide. These arrangements are made district wide, as well as separately for each program. The college also offers dual enrollment classes taught at the high school by college faculty or by qualified instructors primarily employed by the high school. Students in POS are tracked locally through data sharing agreements: districts send coursework information to the college, which treats students with qualifying articulated or dual credit as transfer students.

Both secondary and postsecondary state directors reported that POS developed locally with state guidance were the most common type of state-approved POS. One state identified 1,748 of this type of POS at the secondary education level, a number far exceeding the national median of 84 observed among the 27 states that offered this type of POS (Exhibit 4.3 and Exhibit 4.4). Within one state, the highest number of state-approved, locally developed POS at the postsecondary education level was 452, with the median being 53 among the 16 states that reported this type of POS.[8]

Exhibit 4.3.
Average and maximum number of state-approved POS developed at the state or local level

	State-developed POS				State-approved and locally developed POS with state guidance				State-approved and locally developed POS without state guidance			
Education level	**N**	**Median**	**Minimum**	**Maximum**	**N**	**Median**	**Minimum**	**Maximum**	**N**	**Median**	**Minimum**	**Maximum**
Secondary	29	48	1	200	27	84	1	1,748	5	5	1	144
Postsecondary	11	16	1	200	16	53	1	452	5	16	1	400

Exhibit reads: The average number of state-developed POS was 47 for the 29 states with secondary state-developed POS and 34 for the 11 states with postsecondary state-developed POS.

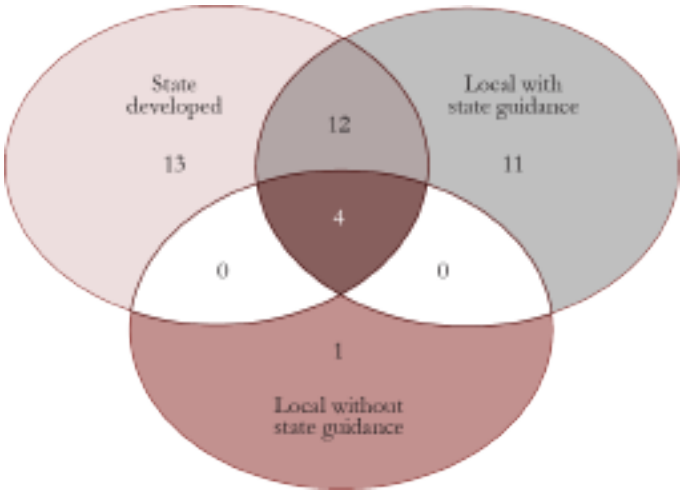
NOTE: Of the approved state-developed POS, 7 secondary directors and 3 postsecondary directors indicated the number provided is an estimate. For locally developed POS with state guidance, 14 secondary directors and 9 postsecondary directors responded that their numbers are estimates. For locally developed POS without state guidance, 1 secondary director and 5 postsecondary directors said their numbers are estimates. N = 46 secondary, 34 postsecondary. Exhibit includes only states that reported at least one POS in one of the categories. States reporting no POS in any category and states who did not know the number of POS developed across all categories were excluded.

SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

[8] Five postsecondary and three secondary directors entered zero across all three categories: state-developed POS, locally developed POS with state guidance, and locally developed POS without state guidance. These were not included in the average calculations.

Exhibit 4.4.
Number of states according to type of POS development, by education level

Secondary



Postsecondary

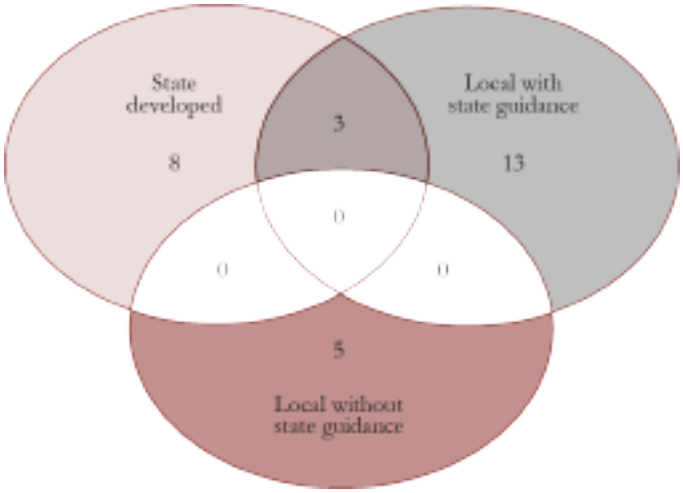


Exhibit reads: Thirteen states had only state developed secondary POS; 11 had only locally developed secondary POS with state guidance; and 12 had both. Eight states had only state developed postsecondary POS; 13 had only locally developed POS with state guidance for postsecondary; and three reported both. Four states had all three types for secondary and no states had all three for postsecondary.
NOTE: n = 46 secondary, 34 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

In contrast to state director reports, 47 percent of LEA directors said that their most common state-approved POS were state developed (Exhibit 4.5).[9] At the postsecondary level, the information reported by IHE directors was more consistent with state-level findings: 53 percent of IHEs identified the most common type of POS as locally developed with state guidance. A large percentage of respondents (20 percent or more) also indicated they did not know the number or type of POS offered.[10]

Exhibit 4.5.
Percentage of LEAs and IHEs offering state and locally developed POS, by approval type

	State-developed POS	Locally developed POS with state guidance	Locally developed POS without state guidance	Locally developed POS with or without guidance
Agency response	**Approved**	**Approved or will be approved**	**Approved or will be approved**	**Approval not required**
LEAs				
At least one	36 !	46 !	12 !	14 !
None	23 !	24 !	51 !	48 !
Don't know	39 !	28 !	36 !	36 !
IHEs				
At least one	22 !	53 !	20 !	20 !
None	44 !	26 !	54 !	52 !
Don't know	33 !	20 !	25 !	26 !

Exhibit reads: At the local level, 37 percent of LEAs and 22 percent of IHEs offered at least one state-developed POS. Forty-seven percent of LEAs and 53 percent of IHEs offered at least one developed locally with state guidance. Only 15 percent of LEAs and 21 percent of IHEs offered any locally developed POS without state approval.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Survey results suggested that IHEs typically offered more state-approved POS options than LEAs. LEAs had an average of 10 state-developed POS and eight POS developed locally with state guidance (Exhibit 4.6). In contrast, IHEs offered almost twice as many of each type of state-approved POS—an average of 18 state-developed POS and 16 locally developed POS with state guidance.

[9] Because local survey results were not intended to be representative of individual states, care should be taken in interpreting this finding.
[10] Zeros were entered across all categories by 104 LEA (1.2 percent) and 37 IHE (3.0 percent) respondents, indicating that they had no POS of these types.

Exhibit 4.6.
Average and maximum number of POS offered in LEAs and IHEs, by development method and approval type

	LEAs		IHEs	
Development method and approval type[a]	**Average**	**Maximum**	**Average**	**Maximum**
State-developed POS	10.2 !	81 !	18.1 !	128 !
Locally developed POS with state guidance[b]	8.3 !	82 !	16.0 !	185 !
Locally developed POS without state guidance[b]	7.0 !	107 !	17.0 !	190 !
Locally developed POS with state guidance:				
Approval not required	6.2 !	27 !	7.2 !	46 !
Locally developed POS without state guidance:				
Approval not required	7.7 !	83 !	9.4 !	65 !

Exhibit reads: LEAs offered an average of 10 state-developed POS (with a maximum of 81), and IHEs offered an average of 18 state-developed POS (with a maximum of 128).
! Interpret data with caution. These items have a response rate below 85 percent.
[a] Each category only includes those cases that had at least one POS reported for that particular category.
[b] Only includes those that were locally developed and state-approved.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Stakeholder Participation in POS Development

Because POS curricula must be integrated both vertically (spanning the secondary and postsecondary education levels) and horizontally (connecting academic and technical course content within levels), secondary and postsecondary stakeholders across academic and CTE areas might be expected to be involved in POS development. When surveyed, both secondary and postsecondary state directors reported that they viewed CTE instructors as the stakeholder group most involved in POS development (Exhibit 4.7). Specifically, secondary state directors reported that secondary CTE teachers (35 states) and postsecondary CTE faculty (22 states) participated a lot in POS development, followed by secondary LEA administrators (18 states).

Similarly, postsecondary state directors reported that postsecondary CTE faculty (24 states), secondary CTE teachers (19 states), and postsecondary administrators (16 states) participated a lot in POS development. One state director in a case study state credited the *Perkins IV* POS requirement with validating the importance of CTE teachers in educational planning because they now "…feel like they're at the table, they're accepted more, because they're part of this whole process. Suddenly we're all on the same chart."

In contrast, both secondary and postsecondary state directors viewed academic instructors as the least involved among the stakeholder groups. Only five secondary and seven postsecondary state directors reported that academic instructors at either level participated a lot in

POS development. Moreover, many postsecondary state directors reported that they did not know whether a particular stakeholder group participated in POS development, suggesting a lack of state-level awareness of stakeholder engagement in POS development.

Exhibit 4.7.
Number of state directors reporting the extent to which various stakeholders participated in POS development, by education level

Education level and stakeholder group	Not at all	Some	A lot	Don't know	No response
Secondary					
Secondary academic teachers	7	35	5	3	1
Secondary CTE teachers	2	12	35	0	2
Secondary guidance counselors	8	30	9	3	1
Secondary LEA administrators	4	27	18	1	1
National industry, union, and professional groups	13	22	12	3	1
Postsecondary academic faculty	15	24	7	4	1
Postsecondary CTE faculty	3	23	22	2	1
Postsecondary administrators	8	26	14	2	1
Local business, unions	7	24	16	3	1
Local chamber of commerce	19	17	4	10	1
Postsecondary					
Secondary academic teachers	10	22	5	10	1
Secondary CTE teachers	7	16	19	5	1
Secondary guidance counselors	11	24	1	11	1
Secondary LEA administrators	8	24	6	8	2
National industry, union, and professional groups	11	24	3	9	1
Postsecondary academic faculty	6	24	7	10	1
Postsecondary CTE faculty	2	19	24	2	1
Postsecondary administrators	3	25	16	3	1
Local business, unions	4	27	9	7	1
Local chamber of commerce	19	15	1	12	1

Exhibit reads: At the state level, 35 secondary CTE directors reported that secondary CTE teachers participated a lot in state agency efforts to develop POS, while 24 postsecondary CTE directors reported that postsecondary CTE faculty did the same.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

A majority (66 percent) of LEA directors reported that secondary CTE teachers had the highest level of participation in POS development (Exhibit 4.8). In contrast, only 14 percent of LEA directors reported that secondary academic teachers participated a lot in POS development. IHE directors responded similarly, although they reported higher participation of

academic faculty than did LEA directors.[11] Postsecondary local directors saw secondary CTE teachers as participating a lot (37 percent) in POS development, in contrast to only 16 percent of secondary local directors who saw postsecondary CTE faculty as participating at the same level (Exhibit 4.8). Some local directors did not know who participated in POS development from the other level.

Reflecting the survey findings, the case studies revealed that several local administrators identified secondary CTE teachers as important facilitators of POS development. As one school superintendent observed, "They're the ones that drive it really—they're the ones that want to make sure they're aligned—that their curriculum is aligned, that their kids are prepared." Another *Perkins IV* coordinator also attributed progress in POS development to "high-energy" teachers with industry knowledge and personal connections at colleges.

About twice as many IHE (27 percent) as LEA (13 percent) directors reported that local businesses participated a lot in POS development. Case studies also revealed that business and industry partners participated extensively in POS development in some local communities. An administrator in a mid-sized district noted: "If a system does not have strong ties to the employer community, then it won't have valid CTE programs. You can't have a meaningful POS unless you… have business and industry coming in and working with students, helping you to understand where you're going and steering you in the right direction."

[11] All comparisons of the IHE and LEA survey data were tested for statistical significance using the Student's *t*-statistic, and all differences cited are statistically significant at the $p < .05$ level.

Exhibit 4.8.

Percentage of local directors reporting the extent to which various stakeholders participated in POS development, by agency

Agency and stakeholder group	Not at all	Some	A lot	Don't know
LEAs				
Secondary CTE teachers	4	21	66	8
LEA administrators	9	41	37	13
Counselors	14	46	30	11
Building administrators	12	45	30	14
Postsecondary CTE instructors	20	40	16	24
Secondary academic teachers	22	51	14	13
Local business, unions	16	50	13	21
Postsecondary administrators	28	35	9	29
Postsecondary academic instructors	30	35	8	28
National industry, union groups	34	30	6	31
Local chamber of commerce	37	26	5	25
IHEs				
Postsecondary CTE instructors	4	28	60	8
Postsecondary administrators	5	36	52	7
Secondary CTE teachers	12	38	37	13
Local business, unions	11	47	27	15
Postsecondary academic instructors	20	43	27	10
LEA administrators	17	30	20	33
Advisors	17	43	21	19
Building administrators	25	29	18	28
National industry, union groups	27	37	13	24
Secondary academic teachers	28	41	12	19
Local chamber of commerce	35	29	6	25

Exhibit reads: Sixty-six percent of secondary local directors and 60 percent of postsecondary local directors reported that CTE instructors in their respective sectors participated a lot in POS development.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Barriers to POS Development

Both the surveys and case studies revealed a number of barriers to POS development at the state and local levels. Case study findings suggested that building effective partnerships between secondary and postsecondary systems was a major hurdle for many states and local providers, even though there was widespread understanding that coordination between the two levels was a major goal of *Perkins IV*. The expert panel on POS also found a disconnection between the materials provided by secondary and postsecondary state agencies. In the surveys, however, most state and local directors highlighted other factors as more significant

impediments to POS development and implementation. The following section provides a discussion of the barriers that states, LEAs, and IHEs face.

State level

In their survey responses, state directors reported that their most challenging barriers to POS development related to their limited capacity to devote staff and fiscal resources to program creation. Directors most often cited shortages of federal funding, state staff, and time as the greatest challenges to POS development (Exhibit 4.9 and Exhibit 4.10). Both secondary and postsecondary state directors also cited a lack of understanding of POS among local academic instructors as one of the biggest barriers to POS development. Additionally, postsecondary state directors cited a lack of influence among CTE staff as a barrier.

Exhibit 4.9.
Number of secondary state directors according to the extent to which they agreed that various barriers limited POS development, by type of barrier

Barrier	Strongly disagree	Disagree	No opinion	Agree	Strongly agree	Not applicable	No response
Academic teachers do not have a good understanding of POS	2	3	2	17	23	3	1
Inadequate federal funding	3	7	4	15	19	2	1
Shortage of state staff	1	11	6	12	15	5	1
State staff lack adequate time	3	14	2	19	10	2	1
Little state staff influence at local level	12	15	5	7	8	3	1
CTE teachers do not understand POS	9	12	3	16	7	3	1
Lack of skills or time for curriculum integration	5	10	9	16	6	4	1
Lack of statewide technical content standards	18	12	1	9	5	5	1
Lack of technical skills assessments	11	15	2	15	5	2	1
Inadequate federal guidance	7	15	7	15	4	2	1
Lack of statewide curricular materials	15	14	4	10	3	4	1
State staff lack technical expertise in POS design	20	14	4	8	2	2	1

Exhibit reads: Among secondary state CTE directors, 23 strongly agreed and 17 agreed that secondary academic teachers did not have a good understanding of POS, which was a barrier to POS development.
NOTE: N = 51.
SOURCE: Secondary State Director Survey, 2009.

Exhibit 4.10.
Number of postsecondary state directors according to the extent to which they agreed that various barriers limited POS development, by type of barrier

Barrier	Strongly disagree	Disagree	No opinion	Agree	Strongly agree	Not applic-able	No response
State staff lack adequate time	3	11	0	13	17	3	1
Shortage of state staff	2	6	5	13	15	6	1
Inadequate federal funding	3	6	5	16	15	2	1
Academic faculty do not have a good understanding of POS	2	3	11	13	15	2	2
Little state staff influence at local level	4	14	2	16	9	2	1
CTE faculty do not understand POS	6	11	5	14	9	2	1
Lack of technical skills assessments	12	11	6	8	8	2	1
Lack of skills or time for curriculum integration	2	9	16	10	8	2	1
Lack of statewide curricular materials	7	16	7	6	7	3	2
Lack of statewide technical content standards	11	12	6	7	6	5	1
Inadequate federal guidance	7	11	4	17	5	3	1
State staff lack technical expertise in POS design	14	13	5	7	4	4	1

Exhibit reads: Among postsecondary state CTE directors, 17 strongly agreed and 13 agreed that state staff did not have adequate time to support POS development.
NOTE: N = 48.
SOURCE: Postsecondary State Director Survey, 2009.

While state directors at both levels often cited lack of staff time and other resources as barriers, they generally had a positive view of cooperation between secondary and postsecondary state staff on POS development. A majority of state directors agreed or strongly agreed (32 secondary, 33 postsecondary) that state staff cooperated in developing POS (Exhibit 4.11). They also perceived high levels of cooperation between secondary and postsecondary local administrators: 28 secondary and 28 postsecondary state directors agreed or strongly agreed that secondary and postsecondary local administrators cooperate to create POS.

Given the long-standing focus on academic and technical integration in *Perkins*, it might be expected that collaboration between academic and CTE instructors would be relatively strong. However, a number of state directors indicated that this was not the case, and secondary state directors were nearly twice as likely as their postsecondary colleagues to express concern about the level of cooperation between academic and CTE instructors. At the secondary level, 17 state directors disagreed with the statement that secondary CTE and academic teachers cooperate to create POS, while only eight postsecondary state directors disagreed.

Exhibit 4.11.
Number of state directors according to the extent to which they agreed or disagreed that state and local staff cooperated on POS development, by education level

Education level and staff cooperating	Strongly disagree	Disagree	No opinion	Agree	Strongly agree	Not applic-able	No response
Secondary							
Secondary CTE and academic teachers in LEAs cooperate to create POS	3	17	10	9	8	3	1
Secondary and postsecondary instructors cooperate to create POS	1	6	6	23	11	3	1
Secondary and postsecondary administrators cooperate to create POS	3	11	6	17	11	2	1
Secondary and postsecondary state staff cooperate to implement POS	2	5	5	15	17	6	1
Postsecondary							
CTE and academic teachers in IHEs cooperate to create POS	3	8	10	22	3	1	1
Secondary and postsecondary instructors cooperate to create POS	2	4	6	28	5	2	1
Secondary and postsecondary local administrators cooperate to create POS	3	8	7	20	8	1	1
Secondary and postsecondary state staff cooperate to implement POS	1	6	4	16	17	3	1

Exhibit reads: Seventeen secondary and 25 postsecondary state directors agreed or strongly agreed that CTE and academic instructors in their respective sectors cooperate to create POS.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Local level

According to both LEA and IHE directors, perceived shortages of funds and time posed challenges to POS development at the local level (Exhibit 4.12). Almost half of local directors at both levels (between 44 and 48 percent) reported that these shortages limited their efforts to develop POS a lot, while an additional third (between 33 and 35 percent) reported some negative effect. Respondents also reported that shortages of local CTE staff and lack of technical expertise were barriers to local POS development, though to a lesser extent.

Exhibit 4.12.
Percentage of LEAs and IHEs according to the extent to which various barriers limited POS development, by type of barrier

Agency and barrier	Not at all	Some	A lot	Don't know
LEAs				
Shortage of time	11	33	48	8
Shortage of funds	14	33	45	9
Shortage of LEA CTE staff	36	36	18	10
Lack of technical expertise	46	35	6	12
Resistance to state influence at local level	60	21	4	16
Conflicts between relevant individuals	55	25	4	16
Lack of cooperation by state level staff	68	13	3	17
IHEs				
Shortage of time	12	35	48	5
Shortage of funds	17	33	44	6
Shortage of institutional CTE staff	35	43	15	7
Lack of technical expertise	53	35	5	8
Resistance to state influence at local level	60	23	4	13
Conflicts between relevant individuals	59	26	2	13
Lack of cooperation by state level staff	72	13	2	12

Exhibit reads: At the local level, 48 percent of secondary and 48 percent of postsecondary local directors reported that shortage of time limited their efforts to develop POS a lot.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Case study data reinforced these survey findings, revealing that pervasive budget shortfalls caused state administrators and local educators to worry more about program survival than about POS development. As a staff member at one state agency noted, "We could not survive without *Perkins IV* funding. Our program survives because of the small amount of money that we have from *Perkins*…we do the best we can." Similarly, one local postsecondary administrator explained the time constraints he experienced with POS development. "I've got a full-time job as a dean, and I took this on. It's difficult to spend the amount of time it would take to really do it right." A postsecondary administrator in another state also cited time, or lack of it, as a primary barrier to POS development and implementation, commenting that it takes "…a lot of time to meet with secondary partners to align course sequences. I think part of it is just the newness of it, and I think it's easier now but it's still a challenge."

Sixty-eight percent of secondary and 72 percent of postsecondary local directors reported that lack of cooperation by state-level staff was not at all a barrier to POS development. In addition, about half of local directors at both levels (between 55 and 60 percent) said that conflicts between relevant individuals and resistance to state influence were not barriers to POS development at all.

In contrast to the survey responses, case study findings suggested that educators face challenges in forming effective secondary-postsecondary partnerships. There were significant variations among the number and effectiveness of secondary-postsecondary partnerships across districts and between comprehensive high schools and area CTE centers. Success appeared largely dependent on relationships between representatives of the two types of institutions at the local level and the commitment of individual administrators or faculty members.

Local administrators frequently cited the enormous effort required to forge secondary-postsecondary connections and the lack of time and resources for both partners as barriers to POS development. For example, several days may be required to walk faculty through the steps and challenges of aligning secondary and postsecondary curricula, the step-by-step process of developing a local articulation agreement and, in the words of one state official, overcoming the "preconceived notions [about the unpreparedness of secondary students] that exist sometimes on the part of the postsecondary faculty." Finding sufficient resources and staff release time can be a challenge to conducting such trainings.

In five of the six case study states, respondents described the particular challenges that small, rural school districts in remote areas face in developing POS. In particular, they said that rural school districts often lack the staff to offer a full sequence of POS courses spanning secondary and postsecondary education. A representative of one small district described the difficulty of applying the state-designed POS Framework locally due to limited course offerings and instructional capacity. A number of local secondary practitioners also cited difficulties in finding local postsecondary partners. In three of the states visited, rural districts reported that they were unable to access postsecondary partners regularly because of distance and, in some circumstances, inclement weather or hazardous road conditions. As a secondary CTE director in a rural district said, "I meet the requirements for having a POS, but it is aligned with a college 90 miles down the road in a different county." In addition, some small rural districts reported difficulty in finding appropriate business and community representatives to serve on advisory committees.

Enrollment in POS

Perkins IV does not require state agencies or local subgrantees to report on student participation or to differentiate POS outcomes within their accountability measures. In the absence of federal reporting requirements, few state and local practitioners reported that they collect POS enrollment or outcome data. At the state level, 13 secondary and 21 postsecondary directors reported that they did not know how many CTE students in their state were enrolled in POS (Exhibit 4.13). Case study interviewees often hedged or protested outright when asked about enrollments, with officials in two states characterizing reporting on POS outcomes as an unfunded mandate. As one official explained, "Had that been built into *Perkins IV* legislation, then we would've looked at it differently. But it wasn't, and so we just followed the language of the law." Officials in only one of six case study states reported having the capacity to distinguish POS students at the secondary level from the broader CTE population. Moreover, only one case study state had a longitudinal data system in place for tracking K–12 students, but officials reported that they could not use this system, as currently configured, to identify POS participants.

Exhibit 4.13.
Number of states according to the percentage of CTE students enrolled in POS coursework in 2008–09, by education level

Education level	None	Less than 25%	Between 26–50%	Between 51–75%	Between 76–99%	All	Don't know	No response
Secondary	4	7	5	7	6	8	13	1
Postsecondary	6	8	4	1	3	4	21	1

Exhibit reads: Eight secondary and four postsecondary state directors reported that all students participated in POS coursework in 2008–09. Many state directors (13 secondary, 21 postsecondary) did not know if CTE students participated in POS coursework during that year.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Case study states also varied in their capacity to follow POS students as they transitioned from secondary to postsecondary education. As one state official noted, "We currently don't have an easy way at either education level office [secondary or postsecondary] to watch students move through one POS segment to another." Case study respondents in three states cited the *Family Educational Rights and Privacy Act* (*FERPA*) or state restrictions on the use of Social Security numbers (SSN) as barriers to tracking students across secondary and postsecondary levels. They suggested that a common, unique identifier would facilitate tracking student transitions. However, following students across education levels was complicated even in those states with identifiers and mechanisms in place to track students. For example, only one of three states that had access to the National Student Clearinghouse reported having the capacity to follow secondary students into postsecondary education and beyond.

Officials in one state questioned the utility of tracking secondary POS students into postsecondary institutions as a measure of success, since a secondary POS student who learned that the POS career pathway was not for them experienced a valuable outcome. Several local respondents made similar observations about the futility of tracking students: one noted that students who leave a program early to work or who attend multiple colleges to complete their training would not be included in counts of successful POS completers.

Both secondary and postsecondary state directors reported that Business Management and Administration, Information Technology, and Architecture and Construction were in the top five POS (by Career Cluster[12]) in terms of enrollment (Exhibit 4.14).[13] Secondary state directors also identified Human Services and Agriculture, Food, and Natural Resources among the POS with the highest enrollments in the state, while postsecondary state directors cited Manufacturing and Health Sciences.

[12] Career clusters are an organizing tool to promote seamless student transitions from education to career. The States' Career Clusters Initiative, established and maintained by the National Career Technical Education Foundation, is intended to help states connect CTE to education, workforce preparation, and economic development. For more information on the initiative, refer to the initiative website: http://www.careerclusters.org/.

[13] The LEA and IHE surveys asked local directors to list the five POS with the highest enrollments in their district or institution. A subsequent set of questions referred respondents back to their list of the five POS with the highest enrollments (hereafter referred to as "top five POS").

Exhibit 4.14.
POS with the highest enrollments according to state directors who reported the top five POS with the highest enrollments in their state, by education level and Career Cluster

Education level and Career Cluster[a]	Number of states reporting in top five	Average enrollment	Number of states listing in top five that don't know exact enrollment
Secondary			
Business Management and Administration	23	10,368 [b]	8
Human Services	23	13,779 [c]	9
Agriculture, Food, and Natural Resources	22	8,716	11 [d]
Architecture and Construction	18	15,285 [e]	9
Information Technology	16	2,426 [f]	8 [g]
Postsecondary			
Health Sciences	25	13,889 [h]	12 [i]
Business Management and Administration	24	26,838 [j]	10
Manufacturing	14	3,335 [k]	4
Architecture and Construction	11	2,819	8
Information Technology	11	1,956	4

Exhibit reads: The Business Management and Administration Cluster was one of the top five secondary POS with the highest enrollments in 23 states, with an average enrollment of 10,368 students. The Health Sciences Cluster was one of the top five postsecondary POS with highest enrollments in 25 states, with an average enrollment of 13,889 students.

[a] Survey respondents wrote in their five POS with highest enrollments and then selected the Career Cluster under which each POS was categorized. The identified clusters were used for this analysis.

[b] Three of the states had two of their top five POS in the Business Management and Administration Cluster. The sum of all enrollment numbers was used for calculating the average; however, the sum was taken as the average across eight states because only eight were unique respondents (not 11).

[c] Three of the 14 respondents had two of their top five POS in the Human Services Cluster. The average does not include an outlier of three.

[d] One of the 11 respondents had four of their top five POS in the Agriculture, Food, and Natural Resources Cluster and did not know enrollment numbers for any. Another respondent had two of their top five POS in the Agriculture Cluster, but did not know enrollment numbers for either.

[e] The average does not include an outlier of five.

[f] One of the 16 respondents for this question had two of the top five POS in the Information Technology Cluster. The average does not include an outlier of 32,954.

[g] Includes one state who had two of its top five POS in the Information Technology Cluster, but did not know enrollment numbers for either.

[h] One state had three of its top five POS in the Health Sciences Cluster.

[i] Ten unique responses (two states who had two of their top five POS in the Health Sciences Cluster did not know enrollment numbers for either).

[j] Three states had two of their top five POS in the Business Management and Administration Cluster.

[k] One state had three of its top five POS in the Manufacturing Cluster. The average does not include an outlier of 38,000.

NOTE: Percentages are calculated from the total number of state directors at each level (not the total who responded to the question). The average enrollments are based only on states that reported enrollment numbers. States that did not provide responses were not included in calculations of average enrollment. Exhibit includes response only from states that responded to the survey question. States that did not respond are excluded.

SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

According to secondary local directors, the POS with the highest LEA enrollments were Agriculture, Food, and Natural Resources; Business Management and Administration; Health Sciences; Architecture and Construction; and Human Services (Exhibit 4.15).[14] In contrast, the POS with the highest enrollments for postsecondary education were Health Sciences; Business Management and Administration; Information Technology; Transportation, Distribution, and Logistics; and Education and Training.[15]

Exhibit 4.15.
Top five POS with highest enrollments according to local directors, by agency and Career Cluster

Agency and Career Cluster	Percent of local directors
LEAs	
Agriculture, Food, and Natural Resources	43 !
Business Management and Administration	38 !
Health Sciences	28 !
Architecture and Construction	25 !
Human Services	24 !
IHEs	
Health Sciences	52 !
Business Management and Administration	38 !
Information Technology	26 !
Transportation, Distribution, and Logistics	21 !
Education and Training	18 !

Exhibit reads: The Agriculture, Food, and Natural Resources Cluster was a top five POS for 43 percent of LEAs, while Health Sciences was a top five POS for nearly 53 percent of IHEs.
! Interpret data with caution. These items have a response rate below 85 percent.
[a] Survey respondents wrote in their five POS with highest enrollments and then selected the Career Cluster under which each was categorized. The identified clusters were used for this analysis.
[b] Number of entities reporting this Career Cluster in their top five.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

Plans for POS Expansion

Perkins IV requires each LEA and IHE to offer at least one POS. Findings from case studies and surveys suggested that subgrantees' commitment to POS implementation and expansion

[14] Exhibit 4.15 shows the sum of POS developed in each Career Cluster for the top five Clusters, as well as the percentage of local agencies reporting the particular Cluster in their top five.
[15] Data were drawn from national samples at each level rather than using matched pairs of LEAs and IHEs. Therefore, these data do not allow an analysis of whether secondary POS students who enroll in postsecondary education continue in the same program.

varies significantly. As one state director explained, "My gut tells me that we're at the compliance level with some people [exceeding] that. But most people are probably at the compliance level."

Many states did not have policies that require all CTE programs to eventually become POS. More states, however, had such a policy at the secondary level (28) than at the postsecondary level (15), although the majority of these states did not have a specific timeline for the transition (19 secondary, 10 postsecondary) (Exhibit 4.16).

Exhibit 4.16.
Number of states according to whether state administrative policy requires all CTE programs to eventually become POS, by education level

Education level	Yes, during *Perkins IV* lifetime	Yes, no timeline	No	Don't know
Secondary	9	19	23	0
Postsecondary	5	10	32	1

Exhibit reads: Many states did not have administrative policies that require all CTE programs to eventually become POS (23 secondary, 32 postsecondary).
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Nonetheless, few case study respondents viewed POS as a temporary phenomenon. Administrators and staff at both the state and local levels discussed at length their plans for expanding POS offerings in the immediate future and over the long term. Plans for expansion were guided by a variety of factors: industry needs, labor market conditions and trends, student career choices, and the interests of local administrators and faculty members. One local administrator observed how valuable it would be if CTE teachers used POS more extensively as part of their career planning units, if school counseling staff used POS to advise students on different career paths, and if administrators used the POS concept to organize their thinking about the importance of both college and careers for students.

Some local administrators indicated that the implementation of POS, notably the integration of CTE and academic courses, was changing perceptions about CTE and CTE students themselves. As one local director stated, "No longer is CTE seen as a dumping ground, but more of a proving ground." Officials in one state reported using the POS concept to market CTE to a broader segment of secondary students: "Part of the message that we bring is the fact that this [POS] is about college and career readiness for all students." Officials in other states, however, still found it challenging to promote the value of CTE. As one veteran state staffer lamented, "What we haven't managed to really do is sell this idea that POS is the way to do it . . . to deliver CTE. That is the way."

Design of POS

As noted previously, *Perkins IV* identifies four core elements that broadly define a POS. To support states in developing effective POS that address these elements, the Department subsequently released a design framework that incorporates these elements as well as supporting components that should be considered in the design and implementation of POS. The following sections describe how state and local practitioners are addressing the core elements and supporting components in their efforts to create and deliver POS.

Perkins IV *Core Elements*

New statutory language in *Perkins IV* requires eligible agencies to describe POS that may be adopted by LEAs and IHEs as an option for students to use in planning and completing future coursework in CTE content areas. These descriptions, which were to be included in each state's *Perkins* plan, were expected to encompass the four core elements specified in the legislation. *Perkins IV* also indicated that state plans should include information about how eligible agencies would develop and implement POS, as well as support LEAs and IHEs in carrying out specified activities. Findings related to states' efforts to address each of the four elements are presented below.

Core element one: Secondary-postsecondary elements

The first core element of *Perkins IV* requires that POS include elements from both secondary and postsecondary education. Survey responses indicated that state officials often did not require, and local CTE administrators often did not include, secondary and postsecondary elements in their POS. At the state level, only 28 secondary and 20 postsecondary directors reported that state-approved POS spanned secondary and postsecondary education in their state (Exhibit 4.17). At the local level, 68 percent of secondary and 70 percent of postsecondary local directors reported that at least one of the five POS with the largest enrollments spanned both education levels (Exhibit 4.18 and Exhibit 4.19).

Exhibit 4.17.
Number of states according to various curriculum requirements for POS, by education level

Education level and curriculum requirement	Required	Not required	Don't know	No response
Secondary				
Spans secondary and postsecondary	28	22	0	1
Nonduplicative across secondary and postsecondary	32	13	4	2
POS uses curriculum that is…				
Locally developed	22	25	1	3
State-developed	18	30	1	2
Industry-developed	12	33	2	4
Third party (vendor)-developed	2	43	2	4
Other	9	14	4	24
Postsecondary				
Spans secondary and postsecondary	20	25	0	3
Nonduplicative across secondary and postsecondary	23	23	0	2
POS uses curriculum that is…				
Locally developed	25	16	3	4
State-developed	6	36	4	2
Industry-developed	11	29	5	3
Third party (vendor)-developed	1	40	4	3
Other	5	12	5	26

Exhibit reads: More than half of secondary state directors reported that POS are required to span secondary and postsecondary levels (28), while fewer postsecondary directors reported the same (20). States were most likely to require state-approved POS to use locally developed curriculum for both secondary (22) and postsecondary (25).
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Exhibit 4.18.
Percentage of LEAs reporting the use of various curriculum characteristics in at least one of their top five POS

Curriculum characteristic	None	At least one of top five POS	Don't know
Spans secondary and postsecondary	8	68	24
Nonduplicative across secondary and postsecondary	16	42	42
POS uses curriculum that is…			
State-developed	18	65	17
Industry-developed	22	48	30
Third party (vendor)-developed	42	23	35
Locally developed	26	53	21
Other	43 !	4 !	52 !

Exhibit reads: Almost 68 percent of LEA directors reported that at least one of their top five POS spanned the secondary and postsecondary levels, but only 42 percent reported that at least one of their top five POS was nonduplicative across levels. About 65 percent of LEA directors reported that at least one of their top five POS used state-developed curriculum.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA Survey, 2009.

Exhibit 4.19.
Percentage of IHEs reporting the use of various curriculum characteristics in at least one of their top five POS

Curriculum characteristic	None	At least one of top five POS	Don't know
Spans secondary and postsecondary	15	70	15
Nonduplicative across secondary and postsecondary	16	59	25
POS uses curriculum that is…			
State-developed	31	55	15
Industry-developed	25	58	16
Third party (vendor)-developed	62	14	24
Locally developed	20	66	15
Other	50 !	9 !	40 !

Exhibit reads: More than half of IHE directors reported that at least one of their top five POS spanned the secondary and postsecondary levels (70 percent) and was nonduplicative across levels (59 percent). The majority (66 percent) reported that at least one of their top five POS used locally developed curriculum.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: IHE Survey, 2009.

Case study respondents noted challenges in creating the necessary secondary-postsecondary partnerships for POS. While educators seemed to understand that POS are meant to incorporate secondary and postsecondary elements, POS development activities tended to concentrate on the secondary level. Staff at one state agency suspected that some secondary subgrantees had completed the postsecondary portion of the statewide POS template simply by looking at their local community college's course catalog and filling in plausible related coursework. Indeed, the case study visit to a rural district in the state confirmed this observation.

The expert panel convened to review state POS materials also noted an absence of state guidance to support the alignment of POS with the postsecondary level. The panel reported that states' POS guidance focused heavily on the design and implementation of POS at the secondary level, with relatively little attention paid to the unique characteristics of postsecondary educational programs.

The case study team also observed instances of alignment between the secondary and postsecondary POS elements. For example, local staff in several sites identified cooperation between secondary and postsecondary institutions as key to successful POS development and implementation. As one postsecondary local director explained regarding course sequences, "Having those meetings, where we sat together [with secondary colleagues] and worked them out, helped us to prepare POS locally." Similarly, in explaining how his program was related to a local postsecondary institution, a secondary local director said, "Early on, way early on, it was about [secondary instructors and postsecondary faculty] getting to know each other, getting to understand this [POS] process if we're going to work together. . . . We really are a team to make good things happen for students."

In some local communities, efforts by secondary staff and teachers to work with postsecondary partners on POS were crucial to forging relationships across education levels and developing strong programs. According to a senior state staff member, educators in many school districts "see the benefit of programs of study now. A lot are venturing out. They're being very innovative with their CTE programs, and they're looking for colleges that will articulate some of the programs with them." On the other end of the spectrum, some sites were not actively seeking partnerships; in one local case study site, for example, the secondary *Perkins IV* coordinator could not even identify her counterpart at the local community college.

Core element two: Academic and technical rigor

Perkins IV requires that POS strive to develop the academic and technical skills of secondary and postsecondary students enrolling in CTE coursework. To do so, the legislation builds upon and promotes long-standing efforts by states and localities to create and integrate challenging academic and technical standards into CTE curricula. States have considerable flexibility in determining the scope, sequence, and rigor of the curricula and standards they create or adopt, as highlighted below.

Curriculum

About half of states required state-approved POS to be aligned with locally developed curriculum (22 secondary, 25 postsecondary). Fewer states required alignment with state-developed, industry-developed, or some other curriculum type (Exhibit 4.17). Consistent with state-level findings, half (53 percent) of secondary local directors reported that at least one of their top five POS incorporated locally developed curricula, and 65 percent reported alignment with state-developed curricula (Exhibit 4.18). About two-thirds (66 percent) of postsecondary local directors reported that at least one of their top five POS incorporated locally developed curricula (Exhibit 4.19).

Although *Perkins IV* clearly indicates that POS courses should be aligned and nonduplicative across secondary and postsecondary education, the survey findings revealed that not all POS met this requirement. At the state level, only 32 secondary and 23 postsecondary directors reported that their states required state-approved POS coursework to be nonduplicative across education levels (Exhibit 4.17). At the local level, only 42 percent of secondary and 59 percent of postsecondary local directors reported that at least one of their top five POS was nonduplicative across both education levels (Exhibit 4.18 and Exhibit 4.19). About 42 percent of secondary and 25 percent of postsecondary local directors reported that they did not know if any of their top five POS were nonduplicative.

Standards

States reported that CTE programs reflected a variety of content standards, including those developed by the States' Career Clusters Initiative, industry-based standards, and state- or locally developed standards, and many reported using more than one. Secondary state directors reported that the most common standards used were state developed (41 states), industry developed (38 states), or based on the Career Clusters (24 states) (Exhibit 4.20). Postsecondary state directors reported using standards developed in consultation with a business or advisory council (33 states) and standards adopted from industry groups by local instructors (24 states) most frequently.

Exhibit 4.20.
Number of states using various approaches to developing content standards for state-approved POS, by education level

Standard	Secondary	Postsecondary
State develops secondary CTE standards	41	n/a
State develops postsecondary CTE standards	n/a	10
State adopts industry-based standards	38	17
State adopts 16 Career Cluster standards	24	14
Local instructors develop content standards based on state criteria	19	14
Local instructors develop their own standards	8	17
Local instructors adopt standards created by industry groups	19	24
Local instructors consult with business or advisory council to develop or select standards	26	33
No standards exist	1	2
Don't know	0	0
No response	1	3

Exhibit reads: Forty-one secondary state directors reported that the state developed secondary CTE content standards for state-approved POS, while 33 postsecondary state directors reported that local instructors consulted with business or advisory councils to develop or select content standards for state-approved POS.
n/a = Not available.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

The surveys asked state and local directors about the extent to which state-approved POS were aligned with CTE standards. Although coherent POS that span both secondary and postsecondary education should in theory have a sequenced, single set of standards, survey responses differed significantly across the two levels. According to state directors, more secondary state POS requirements included state and national standards, whereas more postsecondary state POS requirements included local standards. Among state directors, 35 secondary and 25 postsecondary directors reported that their states required state-approved POS to be aligned with industry-developed technical standards (Exhibit 4.21). Many states also required that state-approved POS be aligned with state-developed technical standards (31) and Career Clusters standards (29) for secondary education. Meanwhile, half of postsecondary state directors reported that their states required state-approved POS to be aligned with locally developed technical standards.[16]

[16] Responses were not mutually exclusive; numbers reflect the number of respondents for each option.

Exhibit 4.21.
Number of states according to required alignment of state-approved POS with various types of standards, by education level

Standard	Required	Not required	Don't know	No response
Secondary				
State postsecondary standards or program completion requirements	33	15	2	1
State-developed technical standards	31	17	1	2
Industry-developed technical standards	35	14	0	2
Technical standards based on Career Clusters	29	16	1	5
Locally developed technical standards	16	31	1	3
Other technical standards	9	10	6	26
Postsecondary				
State postsecondary standards or program completion requirements	n/a	n/a	n/a	n/a
State-developed technical standards	18	26	2	2
Industry-developed technical standards	25	16	4	3
Technical standards based on Career Clusters	19	21	3	5
Locally developed technical standards	25	17	3	3
Other technical standards	5	9	8	26

Exhibit reads: The majority of states (35) required LEAs to use industry-developed standards for state-approved POS. Half of states required IHEs to use industry-developed and locally developed technical standards.
n/a = Not available.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

The responses of local directors did not precisely match those of state directors. While survey findings suggested that the majority (81 percent) of LEAs were aligning at least one of their top five POS with state secondary academic standards, only about half (57 percent) aligned their POS with industry-developed technical standards. Between 16 and 33 percent of LEA respondents, depending on the standard, reported not knowing whether their top five POS were aligned with a particular standard type (Exhibit 4.22).[17]

[17] In many instances throughout the survey, secondary and postsecondary state and local directors indicated that they did not have the information needed to answer the question. While this may indicate a lack of awareness on the part of some directors, it also may indicate the complexity associated with developing and implementing POS statewide. Given that many state approved POS are locally developed, the information needed to answer survey questions may not be routinely communicated between state and local directors. For this reason, one should be cautious when reviewing the survey findings.

Exhibit 4.22.
Percentage of LEAs according to the inclusion of various standards in at least one of their top five POS

Standard	None	At least one of top five POS	Don't know
State secondary academic standards	3	81	16
Postsecondary standards or requirements for program completion	4	73	23
State-developed technical standards	6	74	21
Industry-developed technical standards	11	57	33
National technical standards (Career Clusters)	9	60	31
Locally developed technical standards	24	49	27

Exhibit reads: Nearly 81 percent of LEAs incorporated state secondary academic standards in at least one of their top five POS.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA Survey, 2009.

Among IHEs, 81 percent incorporated state postsecondary standards or requirements for program completion in at least one of their top five POS (Exhibit 4.23). About two-thirds of IHEs incorporated state-developed technical standards (67 percent) and industry-developed technical standards (71 percent) in at least one of their top five POS. IHE directors responded more often than LEA directors that "none" of their POS aligned with the standards listed.

Exhibit 4.23.
Percentage of IHEs according to the inclusion of various standards in at least one of their top five POS

Standard	None	At least one of top five POS	Don't know
State postsecondary standards or requirements for program completion	6	81	13
State-developed technical standards	14	67	19
Industry-developed technical standards	11	71	17
National technical standards (Career Clusters)	18	50	32
Locally developed technical standards	22	60	18

Exhibit reads: The majority of IHEs aligned at least one of their top five POS with state postsecondary standards or requirements for program completion (81 percent). More than half aligned at least one of their top five POS with state-developed (67 percent) or industry-developed technical standards (71 percent).
NOTE: Estimates were weighted to reflect population values.
SOURCE: IHE Survey, 2009.

Core element three: Dual enrollment

Perkins IV requires that states provide high school students enrolling in POS with the opportunity to participate in dual enrollment, though the provision is offered as an option, not a requirement. Specifically, the legislation directs that POS "May include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits" (Sec. 122(c)(1)(A). Noting the ambiguity of this guidance, a postsecondary administrator in one case study state commented, "I'm not sure if dual enrollment is actually part of the POS. It's very confusing what is and is not part of the POS." There also is some uncertainty within states on terminology. Secondary and postsecondary educators in many case study sites used the terms "dual enrollment," "articulation," and "dual credit"—or some combination thereof—interchangeably and in many cases, they were not sure of how each of these options was precisely defined in the state.

Irrespective of how the agreements were labeled, many state and local agencies had established articulation or dual enrollment agreements that enabled secondary students to earn postsecondary credit. Some local case study sites had maintained articulation agreements established under Tech Prep, while others had enhanced or transformed them into dual credit or dual enrollment arrangements. About half (28 secondary, 25 postsecondary) of state directors reported that state-approved POS were required to have an articulation agreement between secondary and postsecondary education (Exhibit 4.24). However, only 21 postsecondary state directors reported that they required state-approved POS to offer secondary CTE courses that allow students to earn postsecondary credit.

Exhibit 4.24.
Number of states according to various curriculum requirements for POS, by education level

Education level and curriculum requirement	Required	Not required	Don't know	No response
Secondary				
Part of an articulation agreement with a secondary/postsecondary partner	28	21	0	2
Covered by a statewide articulation agreement	7	42	0	2
Offers secondary CTE courses for academic credit toward high school diploma	12	36	0	3
Offers secondary CTE courses with dual or concurrent enrollment	17	32	0	2
Postsecondary				
Part of an articulation agreement with a secondary/postsecondary partner	25	20	1	2
Covered by a statewide articulation agreement	12	33	1	2
Offers postsecondary credit to secondary students through dual or concurrent enrollment	21	23	1	3

Exhibit reads: Twenty-eight secondary directors reported that state-approved POS must be part of an articulation agreement with a postsecondary partner, while almost as many (25) postsecondary directors reported that state-approved POS must be part of an articulation agreement with a secondary partner. Only 7 secondary and 12 postsecondary state directors reported that state-approved POS must be part of a statewide articulation agreement.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

More than half of LEAs (58 percent) offered dual enrollment or college credit opportunities to secondary students in at least one of their top five POS. About half (53 percent) of secondary local directors reported that at least one of their top five POS had an articulation agreement with at least one postsecondary partner, and 36 percent had articulation agreements with two or more postsecondary partners (Exhibit 4.25). Between 16 and 33 percent of LEA directors did not know if their POS incorporated any of these features.

Exhibit 4.25.
Percentage of LEAs according to inclusion of various curriculum characteristics in top five POS

Curriculum characteristic	None	At least one of top five POS	Don't know
Part of an articulation agreement with only one postsecondary institution	25	53	22
Part of an articulation agreement with two or more postsecondary institutions	39	36	25
Covered by statewide articulation agreement	39	29	33
Offers secondary CTE courses for academic credit toward high school diploma	13	71	16
Offers secondary CTE courses for postsecondary credit (dual or concurrent at secondary and postsecondary levels)	23	58	19

Exhibit reads: About 53 percent of LEA directors reported that at least one of their top five POS was part of an articulation agreement with only one postsecondary partner.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA Survey, 2009.

The majority (76 percent) of IHEs offered postsecondary credit to secondary students through dual or concurrent enrollment in at least one of their top five POS. Twenty-five percent of IHEs had an articulation agreement with at least one school district for at least one of their top five POS, and 58 percent had articulation agreements with two or more school districts (Exhibit 4.26). Between 12 and 19 percent of IHE directors said they did not know if their institutions offered these options.

Exhibit 4.26.
Percentage of IHEs according to inclusion of various curriculum characteristics in top five POS

Curriculum characteristic	None	At least one of top five POS	Don't know
Part of an articulation agreement with only one secondary district	56	25	19
Part of an articulation agreement with two or more secondary districts	24	58	18
Covered by statewide articulation agreement	45	36	19
Offers postsecondary credit to secondary students through dual or concurrent credit	12	76	12

Exhibit reads: About 25 percent of IHE directos reported that at least one of their top five POS was part of an articulation agreement with one secondary partner.
NOTE: Estimates were weighted to reflect population values.
SOURCE: IHE Survey, 2009.

Case study interviews suggested that schools sometimes had a hard time convincing students and parents of the benefits of dual enrollment. According to a district administrator, "The biggest problem that we've had with dual enrollment is making folks really believe they're getting the credit." This confusion may be related to the complexities associated with the award of postsecondary credit under the old Tech Prep model. According to local adminis-

trators, many of the articulation agreements established under Tech Prep did not offer a simple and straightforward process for transcribing postsecondary credits earned at the secondary level. As an example, one local postsecondary administrator described the cumbersome transcription process under a since-abandoned articulation agreement:

> The old model was students would complete a [college-] approved course at the [area CTE center], and as long as [they demonstrated] by the time they graduated that they met college level placement scores, then they could apply for the credit and it was retroactive. They had a couple-year window of time. And it was confusing and not effective. It didn't make sense.

One local site is using a new model in which the community college approves courses for dual enrollment credit, and students who take the courses receive a community college transcript, eliminating unnecessary waiting and paperwork. However, students are required to pass the college placement exam before enrolling in dual credit courses.

In some sites, respondents attributed their lack of progress in effectively connecting secondary and postsecondary systems to an inability to overcome mismatches in organizational structures and the logistics of scheduling and transportation. Secondary and postsecondary educators also had questions about who handles articulation, how to design memoranda of understanding (MOUs), and how best to schedule meetings. Indeed, the expert panel found that the most useful state guidance on articulation agreements and credit transfer included templates of articulation agreements and MOUs to guide local institutions through the process.

Core element four: Leads to postsecondary credential or degree

The fourth core element of *Perkins IV* stipulates that all POS should lead to an industry-recognized credential or degree at the postsecondary level to prepare students for the labor market and further education. However, many local directors reported that their POS did not lead to such outcomes or that they did not know if these options existed.

Less than half of secondary local directors reported that at least one of their top five POS led to an industry-recognized or sponsored credential (47 percent), a postsecondary credential or certificate (43 percent), or an associate's degree (33 percent) (Exhibit 4.27). One-third to about one-half of secondary local directors reported that none of their POS led to such outcomes and between 19 and 25 percent did not know.

Exhibit 4.27.
Percentage of LEA directors reporting whether top five POS led to various credentials

Credential	None	At least one of top five POS	Don't know
Industry-recognized or sponsored credential	35	47	19
Postsecondary certificate	35	43	22
Associate's degree	46	33	22
Bachelor's degree	53	22	25

Exhibit reads: About 47 percent of LEA directors reported that at least one of their top five POS led to an industry-recognized or sponsored credential.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA Survey, 2009.

Conversely, about three-quarters of postsecondary local directors reported that their POS led to a certificate, credential, or associate's degree, compared to roughly 11 percent who did not know (Exhibit 4.28). This result might be expected, given that postsecondary programs are typically designed to lead to some type of credential. Unlike secondary CTE programs that may be designed to expose students to a range of career options, most postsecondary CTE programs strive to equip students with the skills that will allow them to enter the work-force immediately following graduation.

Exhibit 4.28.
Percentage of IHE directors reporting whether top five POS led to various credentials

Credential	None	At least one of top five POS	Don't know
Industry-recognized or sponsored credential	10	78	12
Postsecondary certificate	9	80	11
Associate's degree	14	77	9
Bachelor's degree	51	32	16

Exhibit reads: The majority of IHE directors (77 to 80 percent) reported that at least one of their top five POS led to an industry-recognized or sponsored credential or to a postsecondary certificate or associate's degree. About 32 percent reported that at least one of their top five POS led to a bachelor's degree.
NOTE: Estimates were weighted to reflect population values.
SOURCE: IHE Survey, 2009.

The majority of state directors (33 secondary, 31 postsecondary) reported that all state-approved POS were required to be responsive to a local high-skill, high-wage, and high-demand field of employment (Exhibit 4.29). At the local level, slightly more postsecondary (86 percent) than secondary (74 percent) CTE directors reported that at least one of their top five POS focused on high-skill, high-demand, and high-wage jobs (Exhibit 4.30). This finding likely reflects the differing purposes of a secondary and postsecondary education.

Exhibit 4.29.
Number of states that required all state-approved POS to be responsive to local high-skill, high-wage, and high-demand job areas and to offer career guidance, by education level

Education level and requirement	Required	Not required	Don't know	No response
Secondary				
Responds to local high-skill, high-wage, and high-demand job area	33	16	0	2
Career guidance must be available	38	11	1	1
Postsecondary				
Responds to local high-skill, high-wage, and high-demand job area	31	13	2	2
Career guidance must be available	20	20	5	3

Exhibit reads: At the state level, 33 secondary and 31 postsecondary state directors reported that their state required state-approved POS to respond to local high-skill, high-wage, and high-demand job areas. The majority of secondary (38) but less than half of postsecondary (20) state directors reported that their state required career guidance to be available in all state-approved POS.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Exhibit 4.30.
Percentage of local directors reporting the inclusion of various features in top five POS, by agency

Agency and feature	None	At least one of top five POS	Don't know
LEAs			
Responds to high-skill, high-wage, and high-demand job areas identified by state or local agency	7	74	19
Career guidance must be, or is, available	4	84	13
All secondary CTE students required to select a POS	32	43	25
IHEs			
Responds to high-skill, high-wage, and high-demand job areas identified by state or local agency	4	86	10
Career guidance must be, or is, available	3	88	10
All secondary CTE students required to select a POS	n/a	n/a	n/a

Exhibit reads: Among local directors, 74 percent of LEA and 86 percent of IHE directors reported that at least one of their top five POS responds to high-skill, high-wage, and high-demand occupational areas identified by the state or their local agency.
n/a = Not available.
NOTE: Estimates were weighted to reflect population estimates.
SOURCE: LEA and IHE Surveys, 2009.

Supporting Components

The Department's *POS Design Framework* identifies 10 components that contribute to the development of effective POS. Four of these components—course sequences, credit transfer agreements, partnerships, and college and career readiness standards—further clarify the four core elements of *Perkins IV* discussed above. The other components, as described below, might be considered supporting components that facilitate POS development and delivery. The Department identified the supporting components based on input from state directors and experts in POS design and implementation. The following section describes how staffs at the state and local levels have used the supporting components to advance POS development and delivery.

Guidance counseling and advisement

POS are intended to help students find their way through the education and career preparation system. At the state level, 38 secondary and 20 postsecondary state directors reported that career guidance was required in all state-approved POS (Exhibit 4.29). At the local level, the majority of LEAs and IHEs provided career guidance in at least one of their top five POS (Exhibit 4.30). Nevertheless, some state staff interviewed for the case studies suggested that there was a lack of knowledge among school counselors and a lack of career materials to use in educating students and the public about POS. As one state director explained, "The challenge is making sure that a school-level person understands and uses developed POS as a tool to assist that local guidance counselor or career counselor. Use this as a tool, an asset. This is not additional work." Another state's CTE director described why working with school counselors is so vital: "We understand they're gatekeepers and if they didn't understand what we were doing and why we were trying to make this curricular shift, we were dead in the water."

Furthermore, the expert panel rated state-developed POS student guidance and advisement materials to be among the most useful of the tools recommended by the Framework. However, panelists noted that state websites often contained information on high school course sequences and college entry requirements, but little to no information on career preparation or POS specifically.

Teaching and learning strategies

POS require increased coordination between secondary and postsecondary partners and between CTE and academic instructors. As a result, new teaching and learning strategies are emerging. According to one CTE instructor interviewed for the case studies, the transition to POS led to changes in instruction "by necessity." A community college administrator described how intensive, curriculum-driven meetings between high school and community college instructors led some instructors to the following revelation: "When we started talking about what we're trying to do and . . . that we're having to teach to the lower level because

those students aren't coming out with [the skills needed] . . . the light bulbs went on. And they said, 'Gosh, if we could give our students in the high school and in the [area CTE center] this, then look what we could do with the students at the college level'."

Some rural district staff reported turning to innovative strategies to offer their students dual enrollment opportunities. One local postsecondary administrator explained:

> A lot of our courses are done through distance learning and also through online courses. So those students can take our online courses in logistics and engineering processing technology, for example, through dual enrollment. And [one district] has a wonderful model where they have [a] paraprofessional that is in the computer lab with the students, and they're working on their dual enrollment coursework during school time.

One local district official described how incorporating technical and academic instruction was making a difference for students and leading to higher graduation rates:

> When I presented our graduation rates to our school board you could see the heads pop up. And one of the members asked me, 'Why is that so?' I responded, 'Well, if I were to bring in a VCR and hand you a manual and have you read it and then give you a written test on it, have I proven that you can program that VCR?' Until you can apply knowledge, you haven't mastered anything. And it's the same thing in math class.

Technical skill assessments

Perkins IV explicitly calls for the measurement of secondary and postsecondary CTE student attainment of career and technical skill proficiencies that are aligned with industry-recognized standards, if available and appropriate. As with standards and curriculum, states varied widely in their use of technical skill assessments in POS, which reflected the diversity of POS from one LEA (or IHE) to another; in general, there was little consistency.

For POS, both secondary (28) and postsecondary (21) state directors reported using state-developed exams aligned with industry standards more than any other type of technical skill assessment (Exhibit 4.31). States used a variety of approaches for technical skill assessments, including program completion (26 secondary, 15 postsecondary) and national (19 secondary, 17 postsecondary) or state (20 secondary, 18 postsecondary) licensing or credentialing exams. In addition, 20 states required state-developed exams that were aligned with state technical standards for secondary, but only four required the same for postsecondary.

Exhibit 4.31.
Number of states using various measures of technical skill attainment for POS, by education level

Measure of technical skill attainment	Secondary				Postsecondary			
	Required	Not required	Don't know	No response	Required	Not required	Don't know	No response
State-developed exams								
Aligned with state technical standards	20	29	0	2	4	37	3	4
Aligned with Career Cluster standards	14	35	0	2	9	33	2	4
Aligned with industry standards	28	21	1	1	21	22	2	3
Aligned with other standards	4	18	5	24	2	18	5	23
Locally developed exams								
Aligned with state standards	17	29	2	3	6	30	8	4
Aligned with Career Cluster standards	7	38	2	4	7	30	6	5
Aligned with industry standards	17	29	2	3	14	23	6	5
Aligned with other standards	3	18	7	23	4	17	8	19
Industry-developed exams	16	32	0	3	5	34	5	4
National licensing or credentialing exams	19	28	1	3	17	24	2	5
State licensing or credentialing exams	20	27	0	4	18	24	2	4
GPA instead of exam	7	38	3	3	10	31	3	4
Course or program completion	26	23	0	2	15	25	3	5
Other	5	15	6	25	6	12	5	25

Exhibit reads: States most often required local grantees to assess technical skill attainment via state-developed exams aligned with industry standards (28 secondary, 21 postsecondary). More than half of states required LEAs to use course or program completion (26 states).
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Secondary local directors also reported using a variety of instruments to assess technical skills, but there was little overlap between their responses and those of secondary state directors. Many LEAs (about 35 percent) did not use state- or industry-developed technical skill assessments or state or national licensing or credentialing exams to assess technical skills in their top five POS (Exhibit 4.32), although secondary state directors reported requiring these assessments. Rather, over half (60 percent) of secondary local directors reported that the most common method of assessing POS students' technical skills in at least one of their top five POS was through locally developed exams aligned with state standards; 54 percent reported using locally developed exams aligned with Career Cluster standards. About 25 percent, on average, did not know what assessments they used in their top five POS.

Exhibit 4.32.
Percentage of LEAs that used various measures of technical skill attainment in their top five POS

Measure of technical skill attainment	None	At least one of top five POS	Don't know
Locally developed exams aligned with state standards	19	60	21
Locally developed exams aligned with Career Cluster standards	16	54	30
Locally developed exams aligned with industry standards	16	53	31
State-developed exams aligned with technical standards	36	45	19
Industry-developed exams	36	39	25
National licensing or credentialing exams	40	33	27
State licensing or credentialing exams	40	33	27

Exhibit reads: LEAs most often used locally developed exams aligned with state standards to assess students' technical skill attainment in at least one of their top five POS (60 percent); LEAs used state licensing or credentialing exams least frequently (33 percent).
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA Survey, 2009.

Survey findings revealed that approaches to technical skill assessment were even less consistent at the postsecondary level. In contrast to their state-level counterparts, IHEs most often assessed technical skill attainment via locally developed exams aligned with industry standards in at least one of their top five POS (Exhibit 4.33).

Exhibit 4.33.
Percentage of IHEs that used various measures of technical skill attainment in their top five POS

Measure of technical skill attainment	None	At least one of top five POS	Don't know
Locally developed exams aligned with industry standards	14	70	16
National licensing or credentialing exams	27	58	15
State licensing or credentialing exams	28	57	15
Industry-developed exams	31	51	18
Locally developed exams aligned with state standards	34	46	19
Locally developed exams aligned with Career Cluster standards	27	42	31
State-developed exams aligned with technical standards	44	41	15

Exhibit reads: IHEs most often used locally developed exams aligned with industry standards to assess students' technical skill attainment in at least one of their top five POS (70 percent).
NOTE: Estimates were weighted to reflect population values.
SOURCE: IHE Survey, 2009.

Variability in approaches to technical skill assessments limits the portability of technical skill credentials within and across states. It also impedes states' ability to maintain useful data systems because the technical skill test scores may not be standardized, comparable, or accurate. The expert panel found states' guidance on this component of POS to be the least useful and most in need of improvement. The few states whose guidance on technical skill assessments the panel found useful provided lists of available assessments by career area, source, and costs, as well as links to state licensing agencies and industry websites with certification requirements.

As with the survey findings, the case studies surfaced a range of opinions on technical skill assessments. One secondary state administrator established incentives for local districts to offer industry certifications on the grounds that these would help students be more marketable. A counterpart in another state allowed local subgrantees to provide industry certifications but would not require them to do so because "there are some areas that simply don't have industry certification or licenses."

In several case study states, secondary educators at both the state and local levels questioned the practice of administering assessments to provide industry certifications to secondary POS participants. The CTE director in one case study state argued that grade point average was the best indicator of technical skill attainment: "We measure technical skill proficiencies through multiple demonstrations . . . throughout the semester. Why would I take one test and say that your one paper-and-pencil test is your level of proficiency?"

The state director in another state convened teams of CTE instructors and industry experts to develop common statewide capstone assessments for POS, starting with high-enrollment

cluster areas. He explained that the state agency had "given up" on using commercially available exams to demonstrate skill attainment because of the difficulty in obtaining data from the testing entity. He also noted that the state-developed assessments were intended to drive curriculum change as POS continued to develop. However, he also acknowledged resistance to common assessments from some directors of regional CTE centers because they are not required specifically by the *Perkins IV* legislation.

The state director from another case study state said it would be valuable for the Department to provide more leadership on assessments. "We got some push-back [from local agencies] . . . because the legislation simply says you'll provide a measurement of students' skill attainment, but it doesn't mandate formal assessments. We couldn't say, 'This is required of *Perkins.*' . . . If someone savvy enough challenged that in a tight budget, we'd have to back off." Another secondary state official said, "We have states that have spent millions of dollars on assessment. They don't even know if it's going to be accepted, because the feds haven't identified in enough detail what will be accepted."

Accountability and evaluation

Although *Perkins IV* does not require detailed reporting on POS outcomes, states must ensure that local subgrantees have at least one POS that complies with legislative requirements. In nearly all states (47 secondary, 41 postsecondary) state agency staff were responsible for monitoring the implementation of state-approved POS for *Perkins IV* compliance; local staff share some of these responsibilities (Exhibit 4.34).

Exhibit 4.34.
Number of states according to various individuals responsible for monitoring local POS implementation for *Perkins IV* compliance, by education level

Individuals responsible	Secondary	Postsecondary
State agency staff	47	41
LEA administrators of CTE	29	16
Secondary teachers or administrators	16	8
Postsecondary faculty or administrators	11	20
Advisory committees	11	6
Other agency or individual	3	3
Not applicable or not done	1	3
No response	1	1

Exhibit reads: State agency staff were most often responsible for monitoring local POS implementation (47 secondary, 41 postsecondary). LEA administrators also were responsible for monitoring POS implementation within the secondary education level in 29 states. Postsecondary faculty or administrators were responsible for monitoring POS implementation in the postsecondary sector in 20 states.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Case study visits revealed that three of the six states did not yet have an evaluation process for measuring POS quality; state officials merely documented the presence or absence of POS by reviewing local *Perkins IV* plans for evidence of whether they addressed the four legislated elements. Staff interviewed from the other three states concluded that their POS were of good quality, based on the monitoring systems currently in operation, and emphasized the effort and attention that state staff had given to technical assistance and standard setting around POS. Administrators in several case study states said they had incorporated POS review into consolidated program audits that included other non-CTE programs at the secondary and postsecondary levels.

Survey findings indicated that the majority of states monitored and evaluated POS through state reporting requirements or state agency staff visits to individual sites (Exhibit 4.35). Of those states that conducted state monitoring activities, most used both staff visits and state reporting requirements at both the secondary (33) and postsecondary (21) education levels (Exhibit 4.36).

Exhibit 4.35.
Number of states according to various POS monitoring and evaluation activities, by education level

	Secondary		Postsecondary	
Monitoring and evaluation activity	**Monitoring**	**Evaluation**	**Monitoring**	**Evaluation**
State agency staff visit individual sites	39	34	30	24
LEA administrators visit individual sites[a]	18	14	n/a	n/a
Secondary district office staff visit individual sites	n/a	n/a	5	4
Through state reporting requirements for POS	42	39	28	28
Other approach	5	10	8	11
Not applicable or not done	2	4	8	7
No response	1	1	1	1

Exhibit reads: States most often used staff visits and state reporting requirements to monitor and evaluate local POS activities.
n/a Not applicable.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Exhibit 4.36.
Number of states according to use of staff visits and state reporting requirements to monitor and evaluate POS, by activity and education level

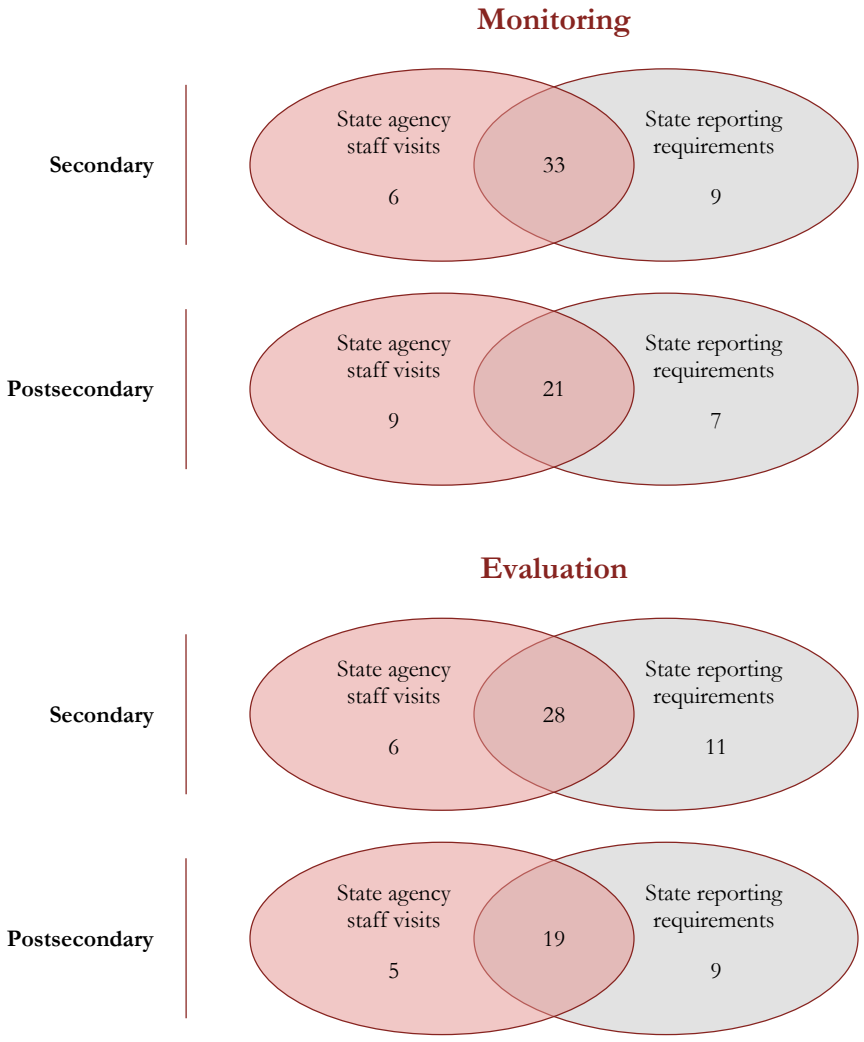


Exhibit reads: Most state directors reported using both state agency staff visits and reporting requirements to monitor and evaluate POS.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Legislation and policies

While all state officials outlined procedures for POS development in their state plans, most states did not have legislation to support POS for secondary (33) or postsecondary (34) education (Exhibit 4.37). Some states had made changes to administrative policies (20 secondary, 20 postsecondary) to support POS development, and some had not made any policy changes by the time of the survey (12 secondary, 20 postsecondary).

Exhibit 4.37.
Number of states that adopted legislation and modified or expanded policies supporting POS since passage of *Perkins IV*, by education level

Education level	Yes, in response to *Perkins* reauthorization	Yes, for reasons other than *Perkins* reauthorization	No, already have supporting legislation	No	Don't know
Secondary					
State legislation	2	3	12	33	1
Policy modification or expansion	20	12	6	12	1
Postsecondary					
State legislation	5	1	6	34	2
Policy modification or expansion	20	5	3	20	0

Exhibit reads: Only a few states adopted legislation to support POS since the passage of *Perkins IV* (five secondary, six postsecondary). In contrast, more than half (32 secondary, 25 postsecondary) modified or expanded policies in support of POS.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

Case study findings suggested that state legislation supporting POS may facilitate POS development. A state director from one state with such legislation reported that CTE is seen by the state officials as "very important in the educational process . . . [there are] ways that [CTE is] embedded in our legislature, in our laws, in our department policies, and where we stand today." State officials in this state cited plans to offer all CTE through POS by 2012.

Some state administrators reported meeting resistance from some local subgrantees in initiatives not explicitly required by *Perkins IV*. One state director acknowledged being burdened by legislative requirements that were not accompanied by additional funding: "These people [local subgrantees] have no problem picking up the phone and calling [the Department] and saying, 'This is another unfunded mandate. I don't have to do this'."

In "local control states"—i.e., those in which LEAs and IHEs have primary decision-making authority for educational programs—state agencies cannot mandate curriculum or the particular form that POS will take. In these circumstances, state agency staff described attempts to provide policy guidance and leadership in the local POS development and implementation process. As one state director acknowledged, local control "doesn't excuse an absence of state leadership." Even if local control states cannot mandate a process for developing POS, state leaders can "shine a light on what is ideal" and provide "encouragement to go in the right direction."

Professional development

Because POS are new in *Perkins IV* and require more investment at all levels, states had to provide support to local agencies in developing and implementing POS. The majority (47 secondary, 35 postsecondary) of states provided training and professional development to local staff as their primary type of support (Exhibit 4.38). In most states, state staff at both the secondary and postsecondary levels created POS models or templates (44 secondary, 31 postsecondary). A majority of states developed guides for aligning CTE content with academic and technical standards (35 states) and curriculum guides or other materials (32 states) for secondary education.

Exhibit 4.38.
Number of states according to various actions taken to align local POS development with *Perkins IV* core elements, by education level

Action	Secondary	Postsecondary
Providing training and professional development to LEA/IHE staff	47	35
Creating POS models or templates	44	31
Securing secondary and postsecondary agreement on specific POS elements	38	32
Designing guides for aligning CTE content with academic standards	35	16
Designing guides for aligning CTE content with technical standards	35	16
Requiring LEAs/IHEs to provide evidence of alignment in local plans	33	25
Consulting Career Clusters developed by SCCI	33	26
Developing curriculum guides or other materials	32	10
Other	4	n/a
No response	1	2

Exhibit reads: States most often provided training and professional development to local grantees to ensure POS aligned with the *Perkins IV* core elements (47 secondary, 35 postsecondary).
n/a = Not available.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

More than half of local directors reported that their state offered at least one type of professional development for instructors, administrators, and counselors, and almost as many reported that these groups participated in such activities. Specifically, 73 percent of secondary local directors reported that their state offered training to administrators and within those states, 79 percent of LEAs reported that local administrators participated in training (Exhibit 4.39). Similarly, 82 percent of IHE directors indicated that the state offered training to postsecondary administrators, and 86 percent of IHEs in states that offered training said that their administrators participated in training.

Exhibit 4.39.

Percentage of local directors reporting whether their state offered and local staff participated in at least one type of professional development focused on POS, by agency and type of staff

	At least one type of professional development offered		Among those reporting professional development offered, percentage that had staff participate	
Agency and type of staff	Percent responding Yes	Don't know	Percent responding Yes	Don't know
LEAs				
Teachers and faculty	81	8	85	6
Administrators	73	12	79	9
Counselors and advisors	68	16	76	11
IHEs				
Teachers and faculty	77	10	86	6
Administrators	82	8	86	8
Counselors and advisors	53	27	79	12

Exhibit reads: About 81 percent of LEA directors reported that their state offered professional development focused on POS for teachers.

NOTE: Estimates were weighted to reflect population values. Professional development includes the following types of activities: state/regional conferences, local workshops, online webinars, one-on-one support, and other types of professional development.

SOURCE: LEA and IHE Surveys, 2009.

State directors at both levels reported that local administrators and CTE instructors were the most likely audiences for professional development focused on POS (Exhibit 4.40). Postsecondary state directors reported that postsecondary counselors were the least likely to receive such training from their state.

Exhibit 4.40.
Number of states that offered professional development focused on POS, by education level and type of staff

Education level and type of staff	At least one type of professional development offered	None	Don't know	No response
Secondary				
Administrators	48	0	1	2
Secondary CTE teachers	48	0	1	2
Secondary counselors	45	0	3	3
Secondary academic teachers	41	3	5	2
Postsecondary				
Administrators	43	2	1	2
Faculty	40	4	2	2
Counselors	27	14	4	3

Exhibit reads: Almost all (48) secondary state directors reported offering at least one type of professional development on POS for local administrators and for secondary CTE teachers; slightly fewer reported offering professional development on POS for secondary counselors or for academic teachers. At the postsecondary level, 43 states reported offering professional development on local POS for administrators, and fewer states reported offering professional development for faculty and counselors.
NOTE: Professional development includes the following types of activities: state and regional conferences, local workshops, online workshops and webinars, and one-on-one support. N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

In addition to professional development, states also provided technical assistance to local subgrantees. States most often offered technical assistance through POS templates or guidelines for both secondary (45 states) and postsecondary (32 states) (Exhibit 4.41). While states offered technical assistance on a variety of other topics, Career Clusters was the only other technical assistance topic offered frequently at both levels (36 secondary, 26 postsecondary).

Exhibit 4.41.
Number of states that introduced new technical assistance activities on various POS topics, by education level: 2007–08 or 2008–09

POS topic	Secondary	Postsecondary
POS templates or guidelines	45	32
Career guidance and counseling	39	17
CTE content standards	38	17
Career Clusters	36	26
Academic and CTE curriculum integration	36	22
Technical skill assessments	34	27
Data systems for monitoring student progress	34	24
Secondary and postsecondary curriculum alignment	33	27
CTE curriculum development guidelines	26	9
Aligning standards and assessments	25	10
Other	3	2
No response	1	1

Exhibit reads: States introduced a variety of new technical assistance opportunities to local grantees in support of POS development in 2007–08 and 2008–09, although offering POS templates or guidelines was the most frequent form for both the secondary and postsecondary education levels.
NOTE: N = 51 secondary, 48 postsecondary.
SOURCE: Secondary and Postsecondary State Director Surveys, 2009.

At the secondary level, survey findings revealed some incongruence between technical assistance opportunities offered by state officials and local participation in them. For example, 33 states offered technical assistance to LEAs on the alignment of secondary-postsecondary curriculum (Exhibit 4.41), but only 57 percent of LEA directors reported receiving state-sponsored technical assistance on this topic (Exhibit 4.42). Similarly, 39 states offered technical assistance to LEAs on career guidance and counseling (Exhibit 4.41), while only 63 percent of LEA directors reported receiving state-sponsored technical assistance on this topic (Exhibit 4.42).

More LEA than IHE respondents reported receiving technical assistance from the state on a variety of topics related to POS. These topics included Career Clusters, CTE content standards, CTE curriculum development guidelines, and academic and CTE curriculum integration (Exhibit 4.42). Postsecondary local directors reported receiving more technical assistance than secondary local directors on secondary-postsecondary curriculum alignment and POS templates or guidelines.

Exhibit 4.42.
Percentage of local directors who reported whether their state offered and local staff participated in technical assistance on various POS topics, by agency

	LEAs		IHEs	
POS topic	State offered	Staff participated	State offered	Staff participated
POS templates or guidelines	74	73	78	84
Career Clusters	82	83	76	80
CTE content standards	81	76	63	78
CTE curriculum development guidelines	70	74	58	78
Academic and CTE curriculum integration	65	79	53	80
Secondary and postsecondary curriculum alignment	57	76	64	90
Technical skills assessments	55	77	47	80
Career guidance and counseling	63	83	44	87
Data systems for monitoring student progress	43	80	42	79
Aligning standards and assessments	54	69	47	78
Other	1 !	91 !	3 !	86 !

Exhibit reads: About 74 percent of secondary directors reported that their state offered technical assistance on POS templates, and about 73 percent reported that thier staff participated in professional development on this topic.
! Interpret data with caution. These items have a response rate below 85 percent.
NOTE: Estimates were weighted to reflect population values.
SOURCE: LEA and IHE Surveys, 2009.

The case study findings suggested that some local staff were generally satisfied with the technical assistance offered by the state, but others found it insufficient or not equally valuable to every stakeholder. In one state, a postsecondary administrator summed up his view by saying, "I'm sure they're [the state agency] underfunded and have a lot of responsibilities, but we're pretty much on our own."

In many case study states, travel budget cuts at the state level had curtailed the ability of state staff to visit local subgrantees and provide on-site assistance in developing POS. In one case study state, budget difficulties had reduced staff at the state department to the extent that only one staff member remained to provide services to local subgrantees. In referring to the state education department, a local director said, "They're not a big department . . . and there's only so much you can expect out of those few people." Local recognition of the negative effects of the economy on state departments was widespread but met with varying degrees of acceptance.

The expert panel reviewed many types of POS guidance provided by states, but the primary type reviewed was that which was available on state websites (see Appendix B). Overall, the panelists agreed that state POS guidance most helpful to local subgrantees would include easily navigable, user-friendly websites organized around CTE, POS, and technical assistance

and include contact information for state staff members who could provide assistance with specific topics. The panel found disorganized websites or websites that offered sparse, outdated, and confusing information, and particularly a lack of POS-specific information to be least helpful. Recognizing that local program staff often rely on the Internet for information on *Perkins IV* requirements, panel members judged poor-quality websites to be a substantial obstacle to POS design and implementation.

The expert panel concluded that LEAs and IHEs needed increased state guidance on many POS components and identified a number of areas in which additional support was particularly critical. These areas included developing secondary and postsecondary partnerships, improving opportunities for credit transfer, developing teaching and learning strategies to support POS instruction, and identifying options for technical skill assessment.

Chapter 5. Conclusion

With each reauthorization, Congress has worked to refine and improve the provisions of the *Carl D. Perkins Career and Technical Education Act* (*Perkins*). These modifications have, over time, expanded the scope of the legislation, tightened administrative and compliance expectations, and introduced new policy initiatives to improve the effectiveness and reach of career and technical education (CTE). Although federal funding constitutes only a fraction of the resources expended on CTE nationwide, Department policies and administrative guidance have some effect on the organization, administration, and delivery of CTE services at the state and local levels.

Since its introduction in 1984, *Perkins* legislation has gradually evolved in response to changing educational conditions and policy priorities. While *Perkins IV* retains many of the key provisions and statutory requirements contained within preceding legislation, not all of them have remained static. As detailed in this report, *Perkins IV* introduced new legislative initiatives intended to increase state flexibility in using resources, extend performance and accountability expectations to the local level, and promote the development and implementation of POS to improve the transitions that students make from secondary to postsecondary education.

Legislative Advances

Over time, federal efforts to expand accountability, enhance the integration of academic knowledge and technical skills, and improve program effectiveness through initiatives such as Tech Prep and POS have fostered innovation and helped shape CTE policies and practices at the state and local levels. Legislative benefits identified in this study include the following:

1. *State agency staff and local practitioners rely on federal* Perkins IV *funds to support statewide program improvement efforts and to enhance local program quality.*

Continuous improvement is a guiding principle of the legislation, and state directors rely on *Perkins IV* state leadership funds to support statewide technical assistance and program improvement efforts. States also rely on *Perkins IV* state administration resources to offset staffing and other costs associated with legislative oversight, monitoring, and grant administration. Local educators, in turn, depend on *Perkins IV* to fund the development and im-

plementation of new initiatives, with many reporting that they would have difficulty keeping instructional programs current without federal support for CTE. In particular, LEA and IHE staff rely on *Perkins IV* funds to purchase and service classroom equipment, as well as to keep curriculum and instruction up-to-date with changing technical requirements in their fields.

2. *The refinement of* Perkins IV *accountability systems and extension of performance expectations to local subgrantees have focused state and local administrators' attention on student and program outcomes.*

Perkins IV requires that states report valid and reliable data and outlines a refined set of secondary and postsecondary core indicators to assess CTE student and program outcomes. The introduction of new Tech Prep indicators expands accountability requirements to include programs supported by the Title II grant. *Perkins IV* also extends performance expectations to the local level: states must now negotiate individual performance targets with each LEA and IHE or require that programs adopt state-established targets, which has helped direct states and local subgrantees' attention toward achieving agreed-upon performance levels. Local agencies falling short of negotiated targets face progressive sanctions, beginning with the requirement that they develop a local program improvement plan to address identified deficiencies and culminating in the loss of some or all of their federal funding.

3. Perkins IV *promotes program alignment across the secondary and postsecondary education levels.*

Perkins IV introduces the requirement that all local subgrantees offer one or more POS to qualify for continued funding. This new initiative, which builds upon existing Tech Prep policies that promote alignment across the secondary and postsecondary education levels, is leading state and local administrators to reconsider how CTE instruction is organized and delivered. Although the scope and components of POS vary considerably among states, statutory requirements, in conjunction with guidance contained within the Department's *POS Design Framework*, encourage secondary educators to coordinate with postsecondary faculty in order to align and sequence secondary and postsecondary education coursework. Moreover, statutory changes that allow states to merge their Title II (Tech Prep) with Title I (basic grant) funding have increased state flexibility, prompting some states to undertake statewide efforts to better align CTE offered at the secondary and postsecondary levels.

Reauthorization Issues

While Congress used reauthorization to refine existing provisions and advance new legislative opportunities, state and local administrators identified a number of issues that complicate the implementation of the legislation. Reauthorization offers Congress an opportunity to address identified challenges and consider new directions to achieve the legislation's intended purposes.

1. *Congress has introduced new requirements with each* Perkins *reauthorization, adding to the administrative and data-reporting responsibilities of states and local subgrantees.*

Perkins IV expands state performance accountability expectations and introduces POS as a new program delivery strategy. These new statutory requirements have added to the administrative duties of state and local staff. For example, while the expectation that all providers offer one or more POS has promoted program alignment across education levels, this innovation has intensified state technical assistance obligations, along with the expectations of state and local administrators to conduct compliance monitoring. These increased administrative tasks occur against the backdrop of an economic recession that has led state and local agencies to institute staffing cuts and mandatory furloughs. Moreover, while federal funding for CTE has increased in nominal dollars, resource allocations have declined in real terms, meaning that state and local administrators must take on added responsibilities in a challenging resource environment.

2. *Accountability data are not comparable across states and, in some instances, are difficult to collect due to state and local capacity and infrastructure constraints.*

Perkins IV statutory provisions and the Department's nonregulatory guidance offer states flexibility in interpreting accountability requirements, contributing to variation in practices for collecting and reporting data across states. This effort to preserve state control prevents the Department from aggregating data to obtain a national perspective. State and local administrators also face challenges in obtaining required data for some measures. In particular, limitations in the capacity of state and local student information systems, concerns over protecting students' privacy, and lack of access to some required data continue to affect the ability of some states to implement all *Perkins* accountability requirements.

3. Perkins IV *requirements for POS are broadly defined and, until recently, lacked guidance from the Department; consequently, POS vary considerably across states.*

Prior to the Department's release of the *POS Design Framework* in January 2010, states relied on the four core elements of POS as defined in the legislation. Study findings indicate that while most state and local agencies were actively engaged in POS development and implementation, the scope and quality of programs vary dramatically. This is due to several reasons, including lack of state legislation and policies directing local POS creation, limited understanding or misconceptions of POS among state and local staff, logistical challenges that complicate program coordination across the secondary and postsecondary levels, and a lack of fiscal and human resources. Moreover, while secondary and postsecondary education administrators have cooperated somewhat in jointly planning POS, *Perkins IV* does not earmark resources for cross-level coordination and does not hold educators responsible for assessing student and program outcomes. Lack of clear definitions on what constitutes a POS

student and the absence of standardized reporting requirements relating to POS further confound state implementation efforts. To date, relatively few state or local *Perkins* subgrantees are capable of providing accurate counts of the students who participate in POS or their outcomes.

In Summary

Federal *Perkins* legislation continues to play an important role in promoting continuous improvement in the organization and delivery of CTE services. The dedicated financial support that *Perkins IV* provides is critical to maintaining state CTE leadership and keeping local CTE programs and equipment up-to-date with the skill demands of a dynamic workplace. Accountability requirements continue to hold states and local subgrantees responsible for achieving results. Moreover, the introduction of POS is promoting alignment and coordination of CTE services across the secondary and postsecondary levels.

In many respects, *Perkins* has arrived at a crossroads. Successive reauthorizations have added to the legislation's requirements at a time when many states are struggling to maintain CTE programs and staff, making it increasingly challenging for state administrators and local program directors to implement *Perkins IV's* components and monitor subgrantees effectively. While the Department has attempted to improve the validity and reliability of *Perkins IV* accountability data, consistency of information varies within and across states, as well as across specific indicators. This lack of consistency may be traced to the flexibility inherent in the legislation, the nonregulatory nature of the Department's guidance, and continuing challenges to state and local collection of data. And while POS offer a new framework for organizing the content and delivery of CTE coursework, *Perkins IV* resource distribution formulas are not designed to promote this initiative, for example, by providing cross-sector incentives to encourage collaboration. The absence of performance accountability expectations also prevents federal and state policymakers from assessing the potential contribution that these programs may offer.

As Congress begins its reauthorization deliberations, careful consideration should be directed to the scope and specificity of the current legislation. While policymakers have historically used reauthorization to improve and redirect the legislation, for example, by adding expectations for POS development, the continued addition of new requirements complicates state and local administration and program management. Statutory flexibility also has, to date, allowed states to respond differently to grant requirements. Congress may wish to use reauthorization to assess the extent to which current legislative provisions and state flexibility to respond to them contribute to achieving the legislation's intended purposes.

References

Adelman, Clifford. 2005. *Moving Into Town – and Moving On: The Community College in the Lives of Traditional-Age Students*. Washington, DC: U.S. Department of Education.

Adelman, Clifford. 2006. *The Toolbox Revisited: Paths to Degree Completion From High School Through College*. Washington, DC: U.S. Department of Education.

Bailey, Thomas. R., D. Timothy Leinbach, and Davis Jenkins. 2006. *Is Student Success Labeled Institutional Failure? Student Goals and Graduation Rates in the Accountability Debate at Community Colleges*. New York: Columbia University, Teachers College, Community College Research Center.

The Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV), Pub. L. No. 109-270, 120 Stat. 683 (2006).

The Carl D. Perkins Vocational and Applied Technology Education Act of 1990 (Perkins II), Pub. L. No. 101-392, 104 Stat. 829 (1990).

The Carl D. Perkins Vocational and Applied Technology Education Act of 1998 (Perkins III), Pub. L. No. 105-332, 112 Stat. 3076 (1998).

The Carl D. Perkins Vocational and Technical Education Act of 1984 (Perkins I), Pub. L. 98-524, 98 Stat. 2490 (1984).

Center on Education Policy (CEP). 2010. *State Profiles and Worksheets for State Test Score Trends Through 2007–08*. Accessed September 15, 2010. http://www.cep-dc.org/index.cfm?fuseaction=Page.viewPage&pageId=572.

Dann-Messier, Brenda. 2009, December 23. *Guidance for Submission of State Plan Revisions, Budgets, and Performance Levels for FY 2010 Perkins IV Grant Awards - OMB Approval Number: 1830-0029*. Program Memorandum. Washington, DC: U.S. Department of Education, Office of Vocational and Adult Education. Accessed September 12, 2010. http://cte.ed.gov/file/2010_SP_Guidance_LTR.pdf.

Data Quality Institute. 2006a, January. *Phoenix Data Quality Institute Report: Remaining Issues and Options*. Report from the Data Quality Institute, June 2005, Phoenix. Accessed October 1, 2010. http://cte.ed.gov/accountability/dqi.cfm.

Data Quality Institute. 2006b, August. *Postsecondary Definitions and Measures*. Accessed August 23, 2010. http://cte.ed.gov/accountability/dqi.cfm.

DeWitt, Stephen. 2008, October. *Technical Assessments: Positions and Activities*. Association for Career and Technical Education (ACTE). Accessed August 20, 2010. http://cte.ed.gov/downloads/CTEProfessionalOrganizationPerspectiveACTE.pdf.

Elementary and Secondary Education Act (ESEA), Pub. L. No. 89-10, 79 Stat. 27 (1965).

The Family Educational Rights and Privacy Act of 1974 (FERPA), Pub. L. No. 93-380, 88 Stat. — (1974).

Hagedorn, Linda S., Alberto Cabrera, and George Prather. 2010–11. The Community College Transfer Calculator: Identifying the Course-Taking Patterns That Predict Transfer. *Journal of College Student Retention*: 105–130.

Hansen, William D. 2003, January 30. *Additional Guidance on the Application of the Family Educational Rights and Privacy Act (FERPA) to Reporting under the Carl D. Perkins Vocational and Technical Education Act and the Adult Education and Family Literacy Act*. Memorandum. Washington, DC: U.S. Department of Education, Family Compliance Office. Accessed October 15, 2010. http://www2.ed.gov/policy/gen/guid/secletter/030130.html.

Higher Education Act of 1965, Pub. L. No. 89-329, 79 Stat. 1219 (1965).

Hilber, Don, and Bob Sheets. 2007. *Technical Skill Assessments Overarching Issues: Common Concerns, Intended State Approaches, Critical Definitions*. Paper read at the Data Quality Institute, May 19, at Savannah, GA. Accessed August 20, 2010. http://cte.ed.gov/accountability/dqi.cfm.

The Jacob France Institute. 2009, April. *Federal Employment Data Exchange System (FEDES) Fact Sheet*. University of Baltimore Merrick School of Business. Accessed August 12, 2010. http://www.ubalt.edu/jfi/fedes/documents/FEDES-Factsheet-April09.pdf.

Justesen, Troy R. 2007a, March 13. *Student Definitions and Measurement Approaches for the Core Indicators of Performance Under the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV)*. Program Memorandum. Washington, DC: U.S. Department of Education, Office of Vocational and Adult Education. Accessed April 23, 2010. http://cte.ed.gov/docs/nonregulatory/studentdef.pdf.

Justesen, Troy R. 2007b, October 30. *Submission of Five-Year State Plans Under the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).* Program Memorandum. Washington, DC: U.S. Department of Education, Office of Vocational and Adult Education. Accessed August 20, 2010. http://cte.ed.gov/docs/nonregulatory/fiveyear-stateplan.pdf.

Klein, Steven. 2001, June. *Financing Vocational Education: A State Policymaker's Guide.* Berkeley, CA: MPR Associates, Inc.

Klein, Steven, Rosio Pedroso, Sharon Anderson, and Ivan Charner. 2006, September. *Guide for Conducting Perkins Placement Follow-up Surveys.* Berkeley, CA and Washington, DC: MPR Associates, Inc. and Academy for Educational Development.

Kotamraju, Pradeep, Amanda Richards, Jolene Wun, and Steven G. Klein. 2010. *A Common Postsecondary Data Dictionary for Perkins Accountability.* Louisville, KY: National Research Center for Career and Technical Education.

Levesque, Karen, Jennifer Laird, Elisabeth Hensley, Susan P. Choy, Emily Forrest Cataldi, and Lisa Hudson. 2008. *Career and Technical Education in the United States: 1990 to 2005.* NCES 2008-035. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

Lewis, Morgan V., Natalie R. Kosine, and Laura Overman. 2008. *What Will Be the Impact of Programs of Study? A Preliminary Assessment Based on Similar Previous Initiatives, State Plans for Implementation, and Career Development Theory.* Louisville, KY: National Research Center for Career and Technical Education, University of Louisville.

Missouri Department of Elementary and Secondary Education. 2008. *Missouri State Plan for Career Education.* Accessed October 1, 2010. http://www.dese.mo.gov/schoollaw/rulesregs/Inc_By_Ref_Mat/PerkinsIVStatePlan.htm.

MPR Associates, Inc., and Academy for Educational Development. 2003. *Guide for Conducting Perkins Placement Follow-up Surveys.* Prepared for U.S. Department of Education, Office of Vocational and Adult Education.

National Association for Tech Prep Leadership. 2009, February 20. *Tech Prep Indicators of Performance Definitions (Numerators and Denominators).* Accessed October 15, 2010. http://www.natpl.org/docs/mastel-docs2009/04-02/Tech-Prep-Indicators-Definitions-PM-formulas-OVAE-NSWG-2-23-09.pdf.

National Institute for Automotive Service Excellence. 2010. *Work Experience Requirements*. Leesburg, VA: Author. Accessed September 15, 2010. http://www.ase.com/Content/NavigationMenu/Service_Professionals1/Explore_Certification/Work_Experience_Requirements/Work_Experience_Requirements.htm.

National Student Clearinghouse. 2010. *About the National Student Clearinghouse*. Herndon, VA: Author. Accessed August 12, 2010. http://www.studentclearinghouse.org/about/pdfs/Clearinghouse_profile.pdf.

No Child Left Behind Act of 2001 (NCLB), Pub. L. No. 107-110, 115 Stat. 1425 (2002).

Offenstein, Jeremy, and Nancy Shulock. 2009. *Community College Student Outcomes: Limitations of the Integrated Postsecondary Education Data System (IPEDS) and Recommendations for Improvement*. Sacramento, CA: Institute for Higher Education Leadership & Policy.

Office of Management and Budget. n.d. *Program Assessment: Vocational Education State Grants*. ExpectMore.gov. Accessed October 15, 2010. http://www.whitehouse.gov/omb/expectmore/summary/10000212.2002.html.

Richards, Amanda. 2009, April. *OVAE Customized Technical Assistance to States: Recommendations to Improve the Quality of Perkins IV Data in Guam*. Accessed August 22, 2010. http://cte.ed.gov.

Richards, Amanda, and Jim Schoelkopf. 2008, September 29. *Recommendations to Improve the Quality of Perkins IV Data in Alabama*. Accessed August 22, 2010. http://cte.ed.gov/accountability/supporttostates.cfm?&pass_dis=1#ut.

Silverberg, Marsha, Elizabeth Warner, Michael Fong, and David Goodwin. 2004. *National Assessment of Vocational Education: Final Report to Congress*. Washington, DC: Office of the Under Secretary, Policy and Program Studies Service, U.S. Department of Education.

Snyder, Thomas D., and Sally A. Dillow. 2011. *Digest of Education Statistics, 2010*. NCES 2011-015. Washington, DC: National Center for Education Statistics, Institute of Education Sciences, U.S. Department of Education.

South Dakota Board of Education. 2008, March. *Final South Dakota Perkins IV Five-Year State Plan*. Accessed October 1, 2010. http://www.careertech.org/uploaded_files/StatePlanFinal442008.pdf.

Stanley, Pat. 2008. *National Perspectives on Technical Skill Attainment*. Paper read at the Virtual Data Quality Institute, October 2–3. Accessed August 19, 2010. http://cte.ed.gov/downloads/NationalPerspectivesOVAEStanley.pdf.

U.S. Department of Education. n.d. *The Allocation Process for Perkins Vocational and Technical Education Grants*. Accessed October 10, 2010. http://nces.ed.gov/surveys/annualreports/pdf/vocedmanual20030428.pdf.

U.S. Department of Education. 2008, February 28. *Budget History Table: FY 1980–FY 2009 President's Budget*. Accessed October 10, 2010. http://www2.ed.gov/about/overview/budget/history/edhistory.pdf.

U.S. Department of Education. 2010a, January 27. *Fiscal Year 2011 Budget Summary: Detailed Budget Table by Program*. Accessed November 22, 2010. http://www2.ed.gov/about/overview/budget/budget11/summary/appendix4.pdf.

U.S. Department of Education. 2010b, December 3. *Fiscal Year 2010 Congressional Action*. Accessed February 22, 2011. http://www2.ed.gov/about/overview/budget/budget10/10action.pdf.

U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. 2002. *NCES Statistical Standards*. NCES 2003-601R. Washington, DC. Accessed September 3, 2010. http://nces.ed.gov/statprog/2002/glossary.asp.

U.S. Department of Education, Office of Vocational and Adult Education. 2010c. *Carl D. Perkins Career and Technical Education Act of 2006, Report to Congress on State Performance, Program Year 2007–08*. Washington, DC: Author.

U.S. Government Accountability Office. 2009. *States Have Broad Flexibility in Implementing Perkins*. Washington, DC: Author.

White, Robin, Ivan Charner, Gail Promboin, Amy Johnson, Glenn Nyre, and Richard Phelps. 2004. *The Structures and Challenges of Vocational Education Funding and Accountability Systems*. Washington, DC: Academy for Educational Development.

Workforce Investment Act (WIA), Pub. L. No. 105-220, 112 Stat. 936 (1998).

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Glossary

Allocation—The amount of *Perkins* grant money that a state grantee or local subgrantee receives.

Allotment—A state grantee's or local subgrantee's share of *Perkins* funding, determined by grant formula.

Area CTE centers—Secondary institutions that provide career and technical education (CTE) instruction to students who receive all or most of their academic instruction at their home high school. An area CTE center often serves multiple high schools within multiple school districts.

Basic grant—Funds allocated to states under Title I of *Perkins IV*.

Career and technical education (CTE)—"[O]rganized educational activities that—(A) offer a sequence of courses that—(i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions; (ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and (iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and (B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry, including entrepreneurship, of an individual" (Sec. 3(5)).

Consortia—Local education agency (LEAs) and institutions of higher education (IHEs) *Perkins* applicants that do not meet the Title I minimum allocation criteria are required to enter consortia and work together to provide programs that are of sufficient size, scope and quality to be effective, unless the state waives this requirement (Sec. 131(d); Sec. 132(a),(c)). Title II (Tech Prep) funds are awarded to consortia of one or more secondary providers and one or more qualifying postsecondary institutions (Sec. 203(a)).

Eligible agency—"[A] state board designated or created consistent with state law as the sole state agency responsible for the administration of career and technical education in the state or for the supervision of the administration of career and technical education in the state" (Sec. 3(12)).

Eligible recipient—"[A] local educational agency (including a public charter school that operates as a local educational agency), an area career and technical education school, an educational service agency, or a consortium, eligible to receive assistance under section 131; or an eligible institution or consortium of eligible institutions eligible to receive assistance under section 132" (Sec. 3(14)).

Fiscal year—Begins on October 1 of one calendar year and ends on September 30 of the next year and is denoted by the second calendar year. For example, FY 2008 refers to the 12-month period between October 1, 2007, and September 30, 2008.

Institution of higher education (IHE)—According to Sec. 3(18) of *Perkins IV,* this term is defined in Sec. 101 of the *Higher Education Act of 1965* as follows: "[T]he term 'institution of higher education' means an educational institution in any State that—(1) admits as regular students only persons having a certificate of graduation from a school providing secondary education, or the recognized equivalent of such a certificate; (2) is legally authorized within such State to provide a program of education beyond secondary education; (3) provides an educational program for which the institution awards a bachelor's degree or provides not less than a 2-year program that is acceptable for full credit toward such a degree; (4) is a public or other nonprofit institution; and (5) is accredited by a nationally recognized accrediting agency or association, or if not so accredited, is an institution that has been granted preaccreditation status by such an agency or association that has been recognized by the Secretary for the granting of preaccreditation status, and the Secretary has determined that there is satisfactory assurance that the institution will meet the accreditation standards of such an agency or association within a reasonable time" (Sec. 101(a)).

Local director—Refers to the individuals at the secondary and postsecondary education levels who responded to the LEA and IHE surveys conducted for this study.

Local education agency—According to Sec. 3(19) of *Perkins IV*, this term is defined in Sec. 9101 of the *Elementary and Secondary Education Act of 1965* as follows: "[T]he term 'local educational agency' means a public board of education or other public authority legally constituted within a State for either administrative control or direction of, or to perform a service function for, public elementary schools or secondary schools in a city, county, township, school district, or other political subdivision of a State, or of or for a combination of school districts or counties that is recognized in a State as an administrative agency for its public elementary schools or secondary schools" (Sec. 9101(26)).

Nontraditional—"[O]ccupations or fields of work, including careers in computer science, technology, and other current and emerging high skill occupations, for which individuals from one gender comprise less than 25 percent of the individuals employed in each such occupation or field of work" (Sec. 3(20)).

Outlying area—"[T]he United States Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau" (Sec. 3(21)).

Program year—Begins on July 1 of one calendar year and ends on June 30 of the next year and is denoted by the starting and ending years. For example, program year 2007–08 refers to the 12-month period between July 1, 2007, and June 30, 2008.

Programs of study—"[I]ncorporate secondary education and postsecondary education elements; include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, nonduplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and lead to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree" (Sec. 122(1)(a).

Reserve fund—States may reserve not more than 10 percent of the 85 percent of Title I funds to distribute to local programs in rural areas, and areas with high numbers or percentages of CTE students (Sec. 112(a)(1),(c)).

Reporting year—The program year ending on June 30 prior to the December 31 Consolidated Annual Report (CAR) submission deadline. For the December 2010 CAR submission, the reporting year is 2009–10 (July 1, 2009, through June 30, 2010).

State—*Perkins IV* defines a "state" as "each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and each outlying area" (Sec. 3(30)). The term "state" as it is used in this report includes the 50 states of the United States; the District of Columbia; the Commonwealth of Puerto Rico; and the outlying areas of the U.S. Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau.

State director—Refers to the individuals at the secondary and postsecondary education levels who responded to the secondary and postsecondary state director surveys conducted for this study.

Subgrantee—An eligible recipient or eligible institution that receives a *Perkins IV* grant from the state eligible agency.

Tech prep—Refers to the content of Tech Prep programs described in Sec. 3(32) of *Perkins IV*.

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Appendix A. Methodology

Obtaining the array of quantitative and qualitative data needed to address the study topics required the use of a mixed-methods study design. Over the course of this 36-month study, the research team collected original data from state and local career and technical education (CTE) directors, administrators, faculty, and staff, and compiled extant data maintained in U.S. Department of Education (Department) databases and available online. The variety of approaches enabled the research team to collect different types of information, at varying levels of specificity, from individuals with diverse roles and responsibilities in implementing the provisions of the *Carl D. Perkins Career and Technical Education Act of 2006* (*Perkins IV*). This appendix summarizes the research strategies used for the study.

Original Data Sources

The research team relied on existing research whenever possible; however, to meet the specific requirements of the study, the team also collected original data through a series of surveys and site visits (Exhibit A.1). A nationwide survey of state and local CTE directors provided information on the design and implementation of *Perkins IV* fiscal, accountability, and programs of study (POS) systems.[1] Surveys of local directors at a representative sample of local education agencies (LEAs) and institutions of higher education (IHEs) offered insights into local perspectives and systems. In addition to the state director surveys, the study team asked each state to supply data on their *Perkins IV* Title I and Tech Prep grant allocations to local programs. These data enabled the research team to quantify the number, size, and distribution of grants, controlling for provider characteristics and consortia participation.

Concurrent with survey administration, the research team conducted case study visits to six representative states. The case studies were designed to elicit more detailed insights into how *Perkins IV* legislative language was translated into state administrative policies and regulations, and its affect on program operations and staffing. The six states were selected for their geographical distribution and characteristics of POS implementation, including their perceived quality and scope of system adoption and their method of designing programs (cen-

[1] The term "state director" as it is used in this report refers to the individuals at the secondary and postsecondary education levels who responded to the secondary and postsecondary state director surveys. The term "local director" refers to the individuals at LEAs, IHEs, and area CTE centers who responded to the LEA and IHE surveys.

tralized versus decentralized. Study teams visited the eligible agency and three local POS partnerships within each state, selected to be representative of an urban, suburban and rural community. Local visits included interviews with representatives of the secondary LEA, affiliated IHE, and any business, industry, or labor group collaborating to offer a state-approved POS.

The requirement that all local subgrantees offer one or more POS is a significant legislative innovation in *Perkins IV*. To assess the quality of state implementation support to local subgrantees, the researchers convened an expert panel to review state POS guidance and materials gathered from the state director surveys and website searches. During a series of facilitated teleconference calls, expert panelists shared their ratings of state guidance and materials and offered suggestions for improving communications relating to POS design and implementation. For more information about the expert panel's findings, see Appendix B.

Exhibit A.1.
Data sources

Approach	Content area			Source
Original data sources	**Fiscal**	**Account-ability**	**POS**	
Surveys	X	X	X	State directors: Secondary and postsecondary Local directors: Secondary and postsecondary
Financial allocation data	X			State directors: Secondary and postsecondary
Case studies (six states)	X	X	X	Eligible agency State directors: Secondary and postsecondary State administrative staff Local partnerships (three agencies in each state) Local directors: LEA and IHE Teachers and faculty: LEA and IHE Business, industry, and labor partners
Expert panel			X	Websites State guidance and materials
Extant data sources				
Department administrative databases	X			www.perkinsinfo.com www.perkinscar.com
Department sources		X		Nonregulatory guidance Annual *Perkins* reports to Congress Findings from Department-sponsored technical assistance to states
Existing research and online information	X	X	X	State websites Education literature

Exhibit reads: The research team relied upon a variety of original and extant data to address the three content areas of the study.

State and Local Surveys

The study team administered online surveys to the universe of state directors and a representative sample of local directors to gather information on the implementation of *Perkins IV* fiscal, accountability, and POS provisions.[2] Survey data allowed researchers to understand how the Department communicated *Perkins IV* legislative requirements to states and how states interpreted and implemented legislative requirements. Information also was collected on state and local administrative policies, technical assistance support, and student participation and program performance.

It should be noted that survey participants were asked to report on data from the 2008–09 program year. Although this was the second year of *Perkins IV*, it was the first year following states' approval of their five-year plan for offering CTE services. Data collection, therefore, focused on states' initial efforts to implement *Perkins IV*. Further, the survey of state directors represents nearly every state, but the survey of local directors used a random, nationally representative sample of LEAs and IHEs. As a result, local director data offer insight into national perspectives, but may not be descriptive of conditions within a given state.

Survey planning and development

The study team first met with Department representatives to obtain copies of survey instruments and data collection methodologies used in the spring 1992 and summer 2001 National Assessment of Vocational Education (NAVE) surveys. The researchers reviewed these documents to identify questions that could be used to replicate trend analyses contained in earlier national assessments. With few exceptions, these questions were adopted verbatim or with minor textual edits into the 2009 survey instrument.

In November 2008, the researchers met with National Center for Education Statistics (NCES) staff after determining that NCES was planning to survey secondary and postsecondary state directors in early 2009. Because this effort would have overlapped with the timing and content of this study's survey, NCES staff agreed to delay their survey to reduce the state reporting burden and refocus their study effort on a different topic. The researchers also consulted with representatives of the Government Accounting Office (GAO), which was planning to survey secondary state directors in the first quarter of 2009 to assess field perspectives on *Perkins IV* performance and accountability systems. Because this study was being conducted at the request of Congress, it was not possible to delay or cancel it; instead, the researchers consulted with GAO staff and, where appropriate, redesigned this study's surveys to minimize overlapping questions.

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[2] Each state designates a state director of CTE with primary oversight of the federal grant. Typically, this person is located at either a state secondary or postsecondary education agency, board, or commission, though other administrative structures exist. To ensure the collection of comprehensive data, researchers developed and administered separate surveys to the state director and the person charged with CTE oversight at the counterpart secondary or postsecondary education agency.

Survey development began in December 2008. The researchers developed drafts of four survey instruments, two targeting state directors with responsibility for overseeing federal grant activities at the secondary and postsecondary levels, and two targeting local directors located in LEAs and IHEs. In April 2009, the researchers shared preliminary drafts of the survey instruments with Department staff. The researchers also held a listening session at the April 2009 National Association of State Directors of Career and Technical Education (NASDCTEc) annual meeting to solicit feedback from state directors on key issues affecting *Perkins IV* implementation. Feedback was incorporated into the final survey instruments.

The survey instruments were weighted toward collecting information on POS, using an original set of questions to capture states' design and implementation strategies. Nearly all questions were constructed as multiple choice, and many offered respondents the option of answering "Don't Know" or "Other", when appropriate. For many questions, respondents choosing the "Other" category were asked to explain their response. Where appropriate, state directors were asked to upload electronic copies of state guidance and policies, as well as to answer incomplete questions before terminating the survey.

Four former state directors (two secondary and two postsecondary) and four acting local directors (two LEA and two IHE) from eight states—chosen for their geographic, size, and financing characteristics—pilot tested the instrument. The reviewers were selected based on their knowledge of the field. To promote internal consistency, a secondary state director and LEA director in one state and a postsecondary state director and IHE director in another state assessed whether cross-sector conditions within a state might affect survey interpretation.

To guide the review of the instrument, the pilot test volunteers received a standard set of questions that asked about the time required to complete the surveys; their clarity of purpose and organization; the surveys' relevance to the implementation of *Perkins IV*; perceived accessibility of information needed to answer the questions; and any improvements needed to strengthen the instrument. Reviewer feedback was used in final revisions to the survey instruments. Key changes included (1) incorporating web links to permit respondents to provide references to legislative language; (2) refining wording to clarify the meaning of questions; and (3) simplifying reporting for questions on the proportion of students participating in POS.

Survey administration

Survey administration began in late October 2009. State and local directors received three mailings, with the first including a cover letter, credentials for accessing the web survey (an ID and password), and a brochure describing the survey. This packet also included a letter encouraging participation signed by the executive directors of three leading CTE stakeholder

organizations: NASDCTEc, the National Research Center for Career and Technical Education (NRCCTE), and the Association for Career and Technical Education (ACTE).

The study goal was to achieve a unit response rate of at least 85 percent for each of the four populations surveyed (i.e., secondary and postsecondary state directors and LEA and IHE local directors).[3] Nonrespondents received a reminder postcard 7–10 days after the initial mailing. The research team began follow-up efforts immediately after the first mailing, calling potential respondents at approximately 4-, 8-, and 12-day intervals. A third and final survey mailing included a print questionnaire and a stamped self-addressed return envelope. Telephone follow-up continued throughout the survey period, which was extended from its initial closing in mid-December 2009 through March 2010.

Response rates: State directors

In keeping with past national assessment procedures, this study included a universe survey of state directors. Surveys were administered to secondary and postsecondary state directors with responsibility for overseeing CTE programs within states and outlying areas.[4] Of the 57 surveys distributed at the secondary education level, 51 were returned (from 50 states and 1 outlying area). At the postsecondary level, 48 state surveys were returned; outlying areas declined to participate.[5] An item response rate analysis indicated that, with few exceptions, state director responses exceeded the 85 percent item response rate guideline established by NCES. Any question for which the state director response rate fell below the 85 percent response rate threshold is noted in the report.

Response Rates: LEA and IHE directors

The researchers constructed sampling frames using the Common Core of Data (CCD) file to identify eligible LEAs and the Integrated Postsecondary Education Data System (IPEDS) to identify IHEs. Local directors were recruited to participate in the survey through a letter sent to the organizational leader, typically a public school district superintendent or community

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[3] NCES has established a unit response rate threshold of 85 percent for surveys of the type used in this study. Surveys that achieve this minimum level are more likely to be representative of the target population they are intended to assess. See http://nces.ed.gov/statprog/2002/std2_2.asp for more information.

[4] *Perkins IV* defines a "state" as "each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, and each outlying area" (Sec. 3). The term "state" as it is used in this report includes the 50 states of the United States, the District of Columbia, the Commonwealth of Puerto Rico; and the outlying areas of the United States Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, and the Republic of Palau.

[5] This unit response pattern and rate parallels those found in the 2004 NAVE, which reported that complete survey and fiscal data were obtained from 45 states and that the territories declined to participate in the study. If the analysis were based solely on the 50 states and District of Columbia, the 2011 study achieved a unit response rate of 96 percent for the secondary state director survey and 94 percent for the postsecondary state director survey.

college president, with instructions that the survey be forwarded to the individual designated as the on-site *Perkins IV* coordinator or CTE contact person.

SAMPLING FRAME: LEA DIRECTORS

The target population for the LEA survey consisted of those agencies that are open, affiliated with a public school, offer 12th-grade instruction, enroll at least one 9th-, 10th-, 11th-, or 12th-grader, and are located within the 50 states, the District of Columbia, and Puerto Rico. LEAs operated or supported by the Bureau of Indian Affairs (BIA) also were included in the target population.

Eligible LEAs were stratified according to the same criteria used by states to allocate federal *Perkins IV* Title I funds to local providers.[6] Specifically, *Perkins IV* stipulates that 30 percent of Title I funds be allocated based on the number of youth ages 5–17 residing within LEA boundaries and 70 percent be allocated based on the number of youth ages 5–17 from families below the poverty line, compared to the total number of youth within each category who reside within participating LEAs statewide. Accordingly, the sampling strata for the LEA population was based on the cross-classification of agency K–12 membership and the percentage of K–12 membership eligible for free or reduced-priced school lunches.[7]

To ensure that the sample distribution of LEAs reflected the population distribution of LEAs, the sample was allocated proportionally to the sampling strata, in which the proportion was based on the population proportion (Exhibit A.2). Assuming that the population proportion under the null hypothesis is 0.5, a required sample size of 1,136 LEAs from a population of 12,518 LEAs achieved 81 percent power to detect a difference of 0.04 using a two-sided binomial test. The target significance level was 0.05, and the actual significance level achieved by this test was 0.0499. To account for anticipated nonresponse, the required sample size was increased. Based on the expected 85 percent response rate for LEAs, the nonresponse adjusted sample size was increased to 1,337 LEAs. Because not all LEAs eligible to participate in *Perkins IV* actually do so, the nonresponse adjusted sample size also was

[6] The federal *Perkins IV* allocation also includes Title II Tech Prep resources, which are allocated by states to LEAs and IHEs either through a competitive process or by state formula. These funds constitute less than 10 percent of the total state *Perkins IV* allocation. Because state allocation criteria used to distribute Title II resources may differ substantially across states, the sample selection methodology is based on the distribution formula for Title I funds.

[7] High school students qualifying for free or reduced-price school lunches are likely undercounted, because older students are less likely to take advantage of this program. Therefore, LEAs made up of high schools alone may qualify for less *Perkins IV* funding than that for which they might otherwise be eligible. Because this is a systematic bias (i.e., intrastate *Perkins IV* funds distribution also is affected by this condition), there should be no effect on the sampling frame.

increased.[8] Based on an expected 67 percent eligibility rate for LEAs identified in the CCD, the sample size was increased to 1,993 LEAs. Adding in the LEAs in the certainty stratum, the total sample size was 2,041 LEAs. The sample was selected using a stratified simple random sample.[9]

Among LEAs, there is a subset of institutions, called *area CTE centers*, which provide specialized CTE services on a part-time basis to students receiving most or all of their academic instruction at their home high school. These centers typically serve multiple high schools and are administered as stand-alone schools within an LEA. A handful of these centers, however, function as independent LEAs. The LEA sample contained a certainty stratum for the area CTE centers. There were 48 LEAs in this stratum.[10]

UNIT RESPONSE RATE

The LEA survey had a 77 percent weighted unit response rate (Exhibit A.3). This rate was somewhat below the 85 percent unit response rate threshold used by NCES when conducting assessments.[11] Weighted unit response rates varied among sampling strata, with only two strata exceeding the NCES 85 percent response threshold. An item response rate analysis indicates that, with few exceptions, LEA director responses exceeded the 85 percent item response rate guideline established by NCES. Any questions for which the item response rate fell below the 85 percent threshold are noted.

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[8] Although states are required to report annually on their allocation of funding among educational sectors and administrative programs, they are not required to document their number of local subgrants to the Department. The most current statistics on LEAs and IHEs participating in *Perkins* come from the 2004 NAVE, which suggested that roughly two-thirds of eligible LEAs and four-fifths of eligible IHEs were awarded *Perkins* funds in the 2000–01 program year.

[9] While probability proportional to size sampling was considered, with the measure of size being the number of students at the school, it was unclear how correlated these two variables would be. There is no information on the frame for the number of students in CTE. This is one of the questions in the survey.

[10] In developing the area CTE center stratum, the researchers identified 48 stand-alone facilities, based on a review of data contained in Table 2.5 of the NCES publication *Career and Technical Education in the United States: 1990 to 2005* (Levesque et al. 2008). [Accessed September 27, 2010, http://nces.ed.gov/pubs2008/2008035.pdf]. To identify stand-alone facilities, the researchers compared the names of identified centers within states to the list of centers contained in the 2001–02 CCD. The 48 area CTE centers identified for this study were listed as independent LEAs with their own NCES ID number. Remaining area CTE centers were listed as schools within LEAs. These centers were excluded from the study because information on their operations would be obtained from the program director of the LEAs in which they were housed, assuming that the LEAs were randomly selected for study participation. Subsequent to the study, researchers discovered that there were, in fact, 386 stand-alone area CTE centers, of which 72 were included in the sampling frame. As such, the actual sample included in the study covered roughly 19 percent of the actual universe.

[11] See http://nces.ed.gov/statprog/2002/std2_2.asp for *NCES Statistical Standards* (U.S. Department of Education 2002).

Exhibit A.2.
Population and sample counts for LEAs, by LEA size and poverty level: 2006–07

Poverty level	LEA size: Small		Medium		Large		Unknown		Total	
	Pop.	Sample	Pop.	Sample	Pop.	Sample	Pop.	Sample	Pop.	Sample
Total	**3,261**	**519**	**5,863**	**934**	**3,220**	**513**	**174**	**27**	**12,518**	**1,993**
Low	546	87	1,588	253	1,057	168	0	0	3,191	508
Medium	1,308	208	2,586	412	1,155	184	0	0	5,049	804
High	1,200	191	1,600	255	986	157	0	0	3,786	603
Unknown	207	33	89	14	22	4	174	27	492	78

Exhibit reads: The stratification of LEAs based on the relative size and poverty levels indicates that of the 12,518 eligible LEAs, a random sample of 1,993 LEAs was identified to participate in the survey.
NOTE: LEAs with 499 or fewer students were classified as small LEAs; those with 500 to 2,999 students were classified as medium LEAs; and those with 3,000 or more students were classified as large LEAs. Low-poverty LEAs are those with less than 25 percent of students who are eligible to receive free or reduced-price lunches; medium-poverty LEAs are those with between 25 and 50 percent of eligible students; and high-poverty LEAs are those with more than 50 percent of eligible students.
SOURCE: Common Core of Data (CCD), 2006–07.

Exhibit A.3.
Response rates for LEAs, by type of sampling unit and sampling stratum: 2006–07

	Weighted unit response rate (%)
Sampling unit	
Local education agency (LEA)	77
Sampling stratum	
Area CTE center	93
LEAs, enrollment 0–499	
FRL category 0.00–0.25	71
FRL category 0.25–0.50	77
FRL category 0.50 or more	72
FRL category unknown	85
LEAs, enrollment 500–2,999	
FRL category 0.00–0.25	80
FRL category 0.25–0.50	75
FRL category 0.50 or more	79
FRL category unknown	82
LEAs, enrollment 3,000 or more	
FRL category 0.00–0.25	76
FRL category 0.25–0.50	80
FRL category 0.50 or more	78
FRL category unknown	100
Size unknown, FRL category unknown	73

Exhibit reads: Weighted response rates indicate that 77.1 percent of eligible LEAs would have responded to the survey.
NOTE: "FRL" refers to students who are eligible for free or reduced-price lunches.

SAMPLING FRAME: IHE DIRECTORS

The target population for the IHE survey consisted of postsecondary institutions that were open, eligible for Title I funding, serving undergraduate students, and one of three institution types: public less-than-two-year postsecondary institutions, public two-year colleges, or tribally controlled colleges. Public four-year colleges, area or regional schools funded with postsecondary resources, adult schools, private nonprofit colleges, and other unidentified institutions were excluded.[12]

Perkins IV postsecondary Title I funds are allocated based on the number of individuals attending an eligible institution who are Pell Grant recipients or recipients of BIA assistance, relative to the total number of such individuals enrolled within participating institutions throughout the state. The IHE sample was stratified based on the percentage of federal grant aid recipients within each IHE and by institution type.[13] To ensure that the sample distribution of IHEs resembled the population distribution of IHEs, the sample was allocated proportionally to the sampling strata, with the proportion of the sample in a sampling stratum based on the population proportion for the sampling stratum.

Assuming that the population proportion under the null hypothesis is 0.5, a required sample size of 684 IHEs from a population of 1,423 IHEs achieves 81 percent power to detect a difference of 0.04 using a two-sided binomial test (Exhibit A.4). The target significance level is 0.05, and the actual significance level achieved by this test is 0.0438. To account for anticipated nonresponse, the required sample size was increased. Based on the expected 85 percent response rate for IHEs, the nonresponse adjusted sample size was increased to 805 IHEs. Because only about four-fifths of IHEs are actually awarded a grant, the nonresponse adjusted sample size also was increased to account for anticipated ineligible IHEs. Based on

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[12] While *Perkins IV* defines eligible institutions to include public or nonprofit IHEs (as defined in Title IV of the *Higher Education Act of 1965*), LEAs and area CTE centers providing education at the postsecondary level, and colleges receiving BIA funding, findings from the 2004 NAVE indicate that a disproportionate share of federal postsecondary CTE resources flow to public less-than-two-year postsecondary institutions and two-year colleges (20 percent and 68 percent of all postsecondary *Perkins* funds, respectively). Public four-year colleges and universities accounted for just 4.3 percent of postsecondary *Perkins* funds distributed in the 2000–01 program year. Although *Perkins IV* expands federal resource eligibility to include baccalaureate-granting institutions, Department staff report that the number of four-year colleges and universities participating in *Perkins IV* has remained relatively constant over time. Given the low likelihood that a random sample of public four-year or private nonprofit colleges and universities would include *Perkins* grantees, researchers excluded this group. Researchers also excluded area schools funded with postsecondary resources due to difficulties in identifying agencies receiving postsecondary funds.

[13] IPEDS does not distinguish Pell Grant recipients from other recipients of financial aid and is limited to first-time, full-time freshmen. In practice, IHEs report the number of their Pell Grant and BIA Grant recipients to the state, which distributes resources based on submitted data. IPEDS provides the best standardized national data on the percentage of students within IHEs who are eligible for student aid.

the expected 80 percent eligibility rate for IHEs, the final sample size was increased to 1,006 IHEs. The sample was selected using stratified simple random sampling.

Exhibit A.4.
Population and sample counts for IHEs, by institution type and level of financial need: 2006–07

Level of financial need	Institution type: Public less-than-two-year		Public two-year		Tribal		Total	
	Pop.	Sample	Pop.	Sample	Pop.	Sample	Pop.	Sample
Total	**265**	**187**	**1,126**	**797**	**32**	**22**	**1,423**	**1,006**
Low	28	20	189	134	3	2	220	156
Medium	133	94	872	617	12	8	1,017	719
High	61	43	62	44	17	12	140	99
Unknown	43	30	3	2	0	0	46	32

Exhibit reads: The stratification of IHEs based on institution type and the financial needs of enrolled students indicates that of the 1,423 eligible IHEs, a random sample of 1,006 IHEs was identified to participate in the survey.
NOTE: "Level of financial need" represents the percentage of first-time, full-time students receiving federal grant aid within an IHE, compared to the total population of students within the IHE. Low financial need IHEs are those with less than 25 percent of students receiving federal grant aid; medium financial need IHEs are those with between 25 and 75 percent of such students; and high financial need IHEs are those with more than 75 percent of such students.
SOURCE: Integrated Postsecondary Education Data System (IPEDS), 2006–07 and 2007–08.

UNIT RESPONSE RATE

The IHE survey had a 91 percent weighted unit response rate (Exhibit A.5), which exceeded the 85 percent response rate threshold established by NCES. Weighted unit response rates varied among sampling strata, with all but two strata exceeding the 85 percent response threshold. An item response rate analysis indicates that, with few exceptions, IHE director responses exceeded the 85 percent item response rate guideline. Any questions for which the item response rate fell below the 85 percent threshold are noted.

Exhibit A.5.
Response rates for IHEs, by type of sampling unit and sampling stratum: 2006–07

	Weighted unit response rate (%)
Sampling unit	
Institutions of higher education (IHE)	91
Sampling stratum	
Public less-than-two-year	
Financial need category 0.00–0.25	100
Financial need category 0.25–0.75	97
Financial need category 0.75 or more	94
Financial need category unknown	93
Public two-year	
Financial need category 0.00–0.25	94
Financial need category 0.25–0.75	89
Financial need category 0.75 or more	80
Financial need category unknown	50
Tribal	
Financial need category 0.25–0.75	75
Financial need category 0.75 or more.	100

Exhibit reads: Weighted response rates indicate that 90.6 percent of eligible IHEs would have responded to the survey.

Nonresponse bias analysis

Response rates show some differential responses across the sampling strata. Because the sampling strata were thought to be associated with important outcome variables, differential response across the sampling strata can introduce bias into the estimates because of nonresponse. Consequently, the sampling stratum was one variable used in the weighted adjustment process for LEA and IHE data to minimize the potential for nonresponse bias. To further investigate the potential for nonresponse bias, the researchers used information gathered during the survey administration process.

For the LEA data, the researchers used a tree-based model to investigate the level of effort variable, represented by the total number of comments recorded by follow-up staff, and a monetary reimbursement variable, based on the incentives offered to potential participants, which ranged from $0, $50, or $100. The total number of comments was taken from the Institutional Contacting System (ICS) and serves as a proxy for the number of telephone contacts attempted or completed for each potential respondent.

Using the tree-based methodology, the researchers looked for the best split along the continuum of the total number of comments or among the different incentive levels (Exhibit

A.6). This split would partition the data into two groups of IHEs with different response propensities for each group. Then within each group, the researchers used the tree-based methodology to look for the best split again to further differentiate the response propensities for each group. The tree split the LEAs based on the total number of comments at 9.5 and, within the highest number of comments group, by whether or not reimbursement was provided. Therefore, the three groups of LEAs were created based on the total number of comments, and monetary reimbursements were as follows: a group with 9.5 total comments or fewer, with a response propensity of 86.8 percent; a group with more than 9.5 total comments but no incentive, with a response propensity of 42.8 percent; and a group with more than 9.5 total comments and an incentive, with a response propensity of 100.0 percent.

Exhibit A.6.
Classification tree for LEA response propensity

Class	No. cases	% cases
Eligible, noninterview	322	22.6
Interview	1,105	77.4
Total	1,427	

Total Comments ≤ 9.50

Class = Interview

Class	No. cases	% cases
Eligible, noninterview	140	13.2
Interview	919	86.8
Total	1,059	

Total Comments > 9.50

Class	No. cases	% cases
Eligible, noninterview	182	49.5
Interview	186	50.5
Total	368	

No fiscal incentive

Class = Eligible, noninterview

Class	No. cases	% cases
Eligible, noninterview	182	57.2
Interview	136	42.8
Total	318	

Fiscal incentive provided

Class = Interview

Class	No. cases	% cases
Eligible, noninterview	0	0.0
Interview	50	100.0
Total	50	

Exhibit reads: Among the 1,427 eligible LEAs, 1,059 were contacted 9.5 times or fewer, with 86.8 percent responding to the survey; 318 were contacted more than 9.5 times but not offered an incentive, with 42.8 percent responding to the survey; and 50 were contacted more than 9.5 times and offered an incentive, with 100.0 percent responding to the survey.

For the IHE data, the researchers investigated a level of effort variable—the total number of comments—using a tree-based model (Exhibit A.7). Using the tree-based methodology, the researchers looked for the best split along the continuum of the total number of comments. This split would partition the data into two groups of IHEs with different response propensities for each group. The tree-based methodology split the IHEs based on the total number of comments at 7.5 comments. Therefore, the two groups of IHEs created based on the total number of comments were a group with less than or equal to 7.5 total comments, with a response propensity of 95.7 percent, and a group with greater than 7.5 total comments, with a response propensity of 75.0 percent.

Exhibit A.7.
Classification tree for IHE response propensity

Class	No. cases	% cases
Eligible, noninterview	81	9.4
Interview	782	90.6
Total	863	

Total Comments ≤ 7.50

Class = Interview

Class	No. cases	% cases
Eligible, noninterview	28	4.3
Interview	623	95.7
Total	651	

Total Comments > 7.50

Class = Interview

Class	No. cases	% cases
Eligible, noninterview	53	25.0
Interview	159	75.0
Total	212	

Exhibit reads: Among the 863 eligible IHEs, 651 were contacted 7.5 times or fewer, with 95.7 percent responding to the survey, and 212 were contacted more than 7.5 times, with 75.0 percent responding to the survey.

Nonresponse adjustment factor

The nonresponse adjustment was a ratio adjustment within each weighting class created by the cross-classification of the stratum variable and the groups identified by the nonresponse bias analysis (i.e., two groups for the IHE data and three groups for the LEA data). In each weighting class, the nonresponse adjustment factor is the sum of the design weights for the eligible cases in the weighting class divided by the sum of the design weights for the responding cases in the weighting class. That is, the nonresponse adjustment factor for the g^{th} weighting class, a_g, is

$$a_g = \frac{\sum_{e \in E_g} d_e}{\sum_{r \in C_g} d_r},$$

where g is the weighting class, E_g is the set of eligible cases in the g^{th} weighting class, C_g is the set of responding cases in the g^{th} weighting class, and d_i is the design weight for the i^{th} case.

Analysis weight

The analysis weight, or nonresponse adjusted weight, is the product of the nonresponse adjustment factor and design weight for responding cases and zero for the eligible nonresponding cases. That is, the analysis weight, w_i, is

$$w_i = \begin{cases} a_g \cdot d_i, \textit{ responding cases} \\ 0, \textit{ nonresponding cases} \end{cases}$$

where a_g is the nonresponse adjustment factor for the g^{th} weighting class and d_i is the design weight for the i^{th} case.

To account for the stratified simple random sample design and differential weighting, point estimates and standard errors for descriptive statistics of categorical and continuous variables were calculated. All comparisons of the IHE and LEA survey data were tested for statistical significance using the Student's *t*-statistic, and all differences cited are statistically significant at the $p < .05$ level.

State Fiscal Allocation Surveys

The researchers collected *Perkins IV* FY 2009 allocation data from eligible agencies to assess state distribution of federal resources to LEAs and IHEs and to extend trend analyses reported in the 2004 NAVE.[14] To collect data, the research team sent secondary and postsecondary state directors a letter containing instructions for compiling allocation records and a requested file format for electronic submissions. States using an alternative formula to allocate funds were asked to send the allocation formula or criteria along with their state allocations.

State directors also were asked about their uses of funds for state administration and leadership purposes. Comparison of these data with those maintained by the Department revealed some differences in states' reported uses of funds. After accounting for rounding and errors

[14] Data for the 2008–09 program year correspond to the second year of *Perkins IV*. Previous NAVE studies reported on data for FY 1992, corresponding to the first year of *Perkins II* (1990 reauthorization), and on data for FY 2001, corresponding to the second year of *Perkins III* (1998 reauthorization).

in state submissions, the researchers identified differences ranging from a few thousand to a few hundred thousand dollars in roughly one-third of states. After consulting with state directors and the Department, the research team determined that federal administrative data offered the most accurate depiction of the uses of funds by eligible agencies for state-level activities, and state-reported data was most appropriate for assessing states' allocation of Title I funds to LEAs and IHEs.

Response rates

The study goal was to achieve a survey participation rate of 100 percent. The fiscal data request was mailed approximately two weeks following the initiation of the online state director surveys. In addition to reminder mailings and phone calls during the online study effort, the researchers followed up with individual state directors, where necessary, to encourage their participation in the fiscal analysis. File submissions were made electronically via email, with supporting documentation provided in electronic or hardcopy formats.

Of the 52 surveys distributed to secondary state directors, 51 were returned with fiscal allocation records documenting Title I resource allocations.[15] Of the 52 surveys distributed to postsecondary state directors, 51 surveys were returned. A total of 50 fiscal allocation records documenting Tech Prep funding were returned.

While the researchers successfully secured high unit response rates, not all states provided complete data for all fields. For example, some states were unable to provide information on the number of LEAs or IHEs participating in consortia. When this occurred, the researchers deleted these states for the given analysis, noting the deletion in the notes on the accompanying exhibit. To replicate trend analyses published in the 2004 national assessment, the researchers also deleted states for indicated exhibits that had not responded in the 1992 and 2004 study years.

Case Studies

The study team conducted site visits in six states to collect quantitative and qualitative data on state and local experiences in developing finance, accountability, and POS systems. The six participating states were recommended by national experts and selected to provide diversity in size, geography, and organizational structure. States also were selected based on experts' perceptions of their relative success in implementing POS, with two states judged as "advanced," two states as "average," and two states as "lagging." Finally, to assess changes across the *Carl D. Perkins Vocational and Applied Technology Education Act of 1998* (*Perkins III*) and *Perkins IV*, the researchers selected two states that had been visited as part of the 2004

[15] Surveys were distributed to the 50 states, the District of Columbia, and the Commonwealth of Puerto Rico. Outlying areas were not included in this study component.

national assessment. Participants were assured that all information gathered would remain confidential, and any examples or quotations included in the final report would not be directly attributed to any state or individual.

Each site visit began with an interview with the state directors at the secondary and postsecondary education levels to gather their perspectives on the state's progress in implementing *Perkins IV* and any challenges encountered in the process.[16] The researchers subsequently met with state staff members responsible for the accountability and finance provisions of *Perkins IV*, as well those responsible for the design and implementation of POS. Researchers also visited three randomly selected local POS partnerships to collect data at the secondary and postsecondary levels. For case study purposes, a partnership was defined as a school district or area CTE center and its postsecondary affiliate. Information obtained at the state level was used to provide both context and a knowledge base for the local community site visits. In addition, researchers collected feedback from business, industry, and labor representatives at the local level.

The research team used a standardized set of protocols, tailored to the roles and responsibilities of state and local administrators, to ensure the collection of consistent data across sites. (These protocols are presented at the end of this Appendix.) Before initiating site visits, the research team held a full-day training session for case study visit teams to review the purposes of the study, to train researchers on case study methodology and facilitation skills, and to role-play the use of the protocol at the state and local levels.

Case study teams were composed of two or three site visitors, one of whom served as the state lead and the others as co-facilitator or note-taker. State and local visits typically were conducted over the course of two—or, in one case, three—separate trips, and four senior staff with extensive case study experience were assigned to cover the six states. Each served as the team leader on all visits to one state and the local communities within it. Thus, team leaders were the "constant" on all visits to their states, working closely with state and local administrators to develop site visit agendas and arrange interviews with key respondents.

Each case study visit also was digitally recorded and transcribed. A set of guidelines for note transcription and report writing were developed to structure and coordinate information processing. All case study team visitors also met via teleconference immediately following the first case study visit to debrief on the use of the protocol and field experiences. Subsequently, team members held bi-weekly calls to review field experiences and share recommendations and lessons learned. Site visits were conducted between March and May 2010.

[16] State-level visits typically occurred over two days, with researchers returning to the state to conduct a one-day visit at each local provider.

Expert Panel Review

An expert panel assessed the quality of guidance and materials developed by states to assist local agencies in their POS design and implementation efforts. The expert panelists were selected based on their knowledge of POS development and implementation, nominations from Department staff and education stakeholders, and research team members' knowledge of the field. During a series of teleconference calls, panelists' shared ratings of state guidance and materials. For more information about the expert panel's findings, see Appendix B.

Expert panelists

Stacy Edds-Ellis
Director, Discover College
Owensboro Community &
Technical College, Kentucky

Mark A. Elgart
President/CEOAdvancED*

Donna Elmore
Associate Vice President
Orangeburg-Calhoun Technical
College, South Carolina

Kimberly Green
Executive Director
National Association of State
Directors of CTE

Ray Hasart
Regional CTE Coordinator
High Desert ESD, Oregon

Tom Houlihan
Consultant
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Expert panelists' roles and responsibilities

State materials were reviewed independently by two panelists, randomly paired for each state assignment, with each panelist reviewing materials from 10 states. To structure their work, the panelists received a rubric with criteria for evaluating state POS guidance, based on a list of 10 components of high-quality POS issued by the Department in January 2010 (i.e., the *POS Design Framework*).

An initial webinar was held to train the panelists on the use of the scoring rubric. The panelists were instructed to (1) categorize identified documents and websites as relating to one or

more of the 10 components in the Department's design framework; (2) provide a justification for this categorization; and (3) rate the usefulness of the document in guiding local CTE providers to develop and implement POS.

The panelists were directed to avoid ranking states when using the rubric; review activities instead were intended to determine whether states had addressed each of the components and to assess the perceived quality and usefulness of the materials. Panel members also were asked to identify specific documents, tools, and resources developed by states that could serve as models for each component of the design framework. Following their review, the panelists submitted their scoring commentary to the researchers, who compiled ratings and feedback before sharing them with the group.

During five facilitated webinars in May 2010, the panelists shared their completed rubrics and discussed their rationale for assigning ratings. Each webinar was audio-recorded and transcribed. Following the webinars, the researchers analyzed the panelists' ratings, using the scoring rubrics and webinar transcripts to distill common themes and develop a set of preliminary findings. These themes and findings were presented to the expert panelists for feedback during two conference calls in June 2010. Draft results then were revised based on the panel's feedback. A final webinar was held to review the final study report and debrief panel members. For detailed expert panel findings, refer to Appendix B.

Collection of POS materials

In March 2010, each state director received an e-mailed letter, co-signed by the study director and the chair of the expert panel, explaining the purpose of the expert panel review and requesting POS guidance materials. The letter referred to the information requested as part of the state director survey and offered an opportunity for states to provide any materials they had not included as part of their survey response. The letter also requested contact information for the staff responsible for sending these materials. Several follow-up emails and phone calls were made either to the state director or the designated staff person in April 2010 to collect missing materials. Twenty-three states responded by sending documents or website URLs that could be used to access the requested materials.

In addition, the researchers reviewed websites maintained by secondary and postsecondary state agencies in all 50 states to identify guidance and materials posted for public use. State information—including documents submitted by states, website URLs, and other correspondence to the researchers—was distributed to the expert panel for review, along with the rubric template and instructions.

Extant Data Sources

To take advantage of existing information sources, the researchers accessed Department administrative databases to obtain historical data on state' use of *Perkins IV* resources. This study is the first to make use of these online databases, which did not exist when the 2004 national assessment was conducted. The researchers also conducted a series of informal information-gathering activities. These included conducting online searches of state and stakeholder websites, reviewing the existing CTE research literature, and seeking input from the CTE field.

Department Administrative Databases

Technological advances have changed how the federal government collects, administers, and stores state data submitted for annual *Perkins*-reporting purposes. Earlier national assessments of CTE relied primarily on nationwide surveys of state directors to compile fiscal data on states' uses of federal funds for state administration, leadership, and other activities. These data are now available through a secure website.[17] Because states are not required to report on the allocation of Title I funds to local providers, federal databases could not be used to assess local allocations.

States submit fiscal and accountability data to the Department annually, using a web-based submission instrument. The Department maintains the data online, in a password-protected website.[18]

Online Searches

The research team members reviewed state websites and the online literature to identify documents and materials describing states' design and implementation of *Perkins IV* finance, accountability, and POS systems. This task included accessing state five-year plans for *Perkins IV*, along with state websites. The researchers also reviewed websites of professional associations and research groups, such as the NASDCTEc, NRCCTE, and ACTE.

Field Communications

To assess perspectives from the field, the researchers participated in a series of listening sessions with state directors and their staff at several national meetings. This included sharing information on the study with state directors at the spring 2009 annual NASDCTEc confer-

[17] The researchers accessed the *Perkins* Database located at www.perkinscar.com (accessed September 27, 2010) to obtain information submitted by states as part of their annual state plan submissions and states' uses of federal fiscal allotments.

[18] The researchers accessed annual finance data from the *Perkins* CAR database available at www.perkinscar.com (September 27, 2010).

ence and the Department's Data Quality Meeting in December 2009. The researchers also presented updates on study progress and solicited input from state directors and administrators as part of Department-sponsored quarterly conference calls in May 2009 and July 2010.

State Director Survey—Secondary

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Welcome/Contact_info

Welcome to the Web-based National Assessment of Career and Technical Education survey (NACTE) sponsored by the U.S. Department of Education.

Please take a moment and complete the contact information below before proceeding with the survey.

First Name:

Last Name:

Title:

Phone (XXX-XXX-XXXX):

Email:

Address:

Address 2 (optional):

City:

State: -Select one-

Zip code:

Welcome/Confidentiality

Uses of the Data:
This study is being conducted for the U.S. Department of Education, which has contracted with MPR Associates, Inc., and RTI International (RTI). The purpose of this study is to collect information relating to the implementation of the *Carl D. Perkins Career and Technical Education Act of 2006* during the 2008-09 academic year. Because a limited number of institutions have been selected, we would very much like for you to participate on behalf of your educational institution.

Confidentiality
As a matter of policy, The U.S. Department of Education is concerned with protecting the privacy of participants in voluntary surveys.
We want to let you know that:

- Your responses will be merged with those of other respondents and will not be identified as the agency you represent, except as required by law.
- You may skip questions you do not wish to answer; however, we encourage you to answer as many questions as possible, because incomplete data will reduce the value of the information provided to Congress.
- Your answers may be used only for statistical purposes. Participation is voluntary and will not affect any aid or other benefits that your state agency, LEA, or institution may receive.

If you have questions about the study, you may contact:

- the NACTE Help Desk at (866) 434-4718
- Steven Klein, the study's director, at (503) 963-3757 or sklein@mprinc.com, or
- Michael Fong, the U.S. Department of Education's Project Officer, at (202) 401-7462, Michael.Fong@ed.gov.

If you have questions about your rights as a study participant, you may contact RTI's Office of Research Protection toll free at (866) 214-2043.

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Welcome/Definitions

Definitions:
Some questions in the survey include a hyperlink (a word or group of words in blue font that is underlined) that, when clicked on, brings up a definition.

For example,
Career and Technical Education (CTE): The term 'career and technical education (CTE)' means organized educational activities that—
(A) offer a sequence of courses that—
(i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions;
(ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and
(iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and
(B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry,including entrepreneurship, of an individual.

Programs of Study (POS): Programmatic coursework that meets the following: incorporates both secondary and postsecondary education elements; includes coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary eduction to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and leads to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Welcome/Navigation_Instructions

Instructions and Navigation:

NACTE Help Desk: 866-434-4718

To navigate through the survey you will notice two buttons in the lower left hand corner of each screen titled "Previous" and "Next". You can select either button at anytime to move through the survey.

Alternately, you can also use the navigation panel located on the left-hand side of the screen. You may jump to any question in navigation panel simply by clicking on the question number.

- The questions in the navigation panel will turn green once they have been viewed/answered and have passed preliminary validation.
- If a question does not pass preliminary validation either because of incomplete information or errors with the response, the question in the navigation panel will turn yellow.
- Questions in the navigation menu that are grey, and have a strike through are not applicable to you (e.g., ~~Q62~~).

The "Save & Exit" button located in the lower right-hand corner of the screen allows you to exit the survey at any time. The next time you login to the survey you will return to the same question.

Also, located in the lower right-hand corner of the screen is the "Help" button. It contains information regarding recommended browsers, and contains definitions for the survey response items (i.e., drop-down boxes, checkboxes, and hyperlinks).

At the end of the survey, please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses.

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Programs of Study/Intro

The following questions in this survey address career and technical education (CTE) programs offered in your state that qualify as Programs of Study (POS).

Programs of Study/Q1

Has your state passed legislation supporting the development and/or implementation of Programs of Study (POS) since the reauthorization of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins)?

- ○ Yes, in response to the 2006 Perkins reauthorization
- ○ Yes, for reasons other than the 2006 Perkins reauthorization
- ○ No, already have supporting legislation in place
- ○ No
- ○ Don't know

Programs of Study/Q1_upload

Please attach a copy of the legislation supporting the development and/or implementation of POS or provide web link.

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

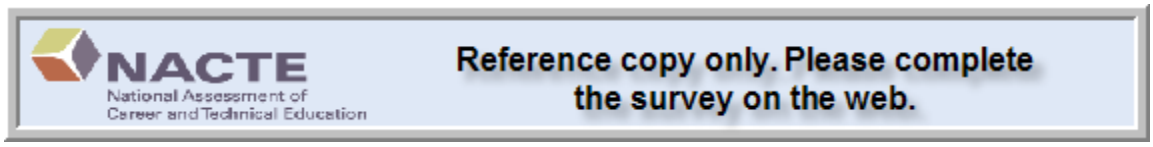
Please attach a copy of the legislation or provide a web link: _____

☐ Do not have electronic copy of legislation

Programs of Study/Q2

Has your state modified or expanded its administrative policies supporting POS development and/or implementation since the reauthorization of the 2006 Perkins Act?

- ○ Yes, in response to the 2006 Perkins reauthorization
- ○ Yes, for reasons other than the 2006 Perkins reauthorization
- ○ No, already have supporting legislation in place
- ○ No
- ○ Don't know



Programs of Study/Q2_upload

Please attach a copy of the policies supporting POS development and/or implementation or provide web link

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach a copy of the policies or provide a web link:

☐ Do not have electronic copy of legislation

Programs of Study/Q3

Is state approval required for all POS offered within Local Educational Agencies (LEAs)?

- ○ Yes, state approval is required for all POS
- ○ No, state approval is only required for a subset of POS
- ○ No, state approval is required only for the one (1) POS required of each local agency
- ○ No, state approval is not required
- ○ Don't know

Programs of Study/Q4

Does state administrative policy require that all career and technical education (CTE) programs in your state eventually become POS?

- ○ Yes, during the lifetime of the Perkins Act of 2006
- ○ Yes, no timeline specified
- ○ No
- ○ Don't know

Programs of Study/Q5

How many state-approved POS offered in your state in the 2008-09 program year were developed either at the state agency or LEA level?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Mark If Estimate	Don't Know
State developed POS		☐	☐
State-approved, locally developed POS, *using state template or guidance*		☐	☐
State-approved, locally developed POS (i.e., no state guidance provided to LEA)		☐	☐
Total			

Programs of Study/Q6

What percentage of secondary students participating in CTE in your state were enrolled in coursework that was part of a state-approved POS in the 2008-09 program year?

- ○ None
- ○ Less than 25%
- ○ Between 26 to 50%
- ○ Between 51 to 75%
- ○ Between 76 to 99%
- ○ All
- ○ Don't know

NACTE
National Assessment of Career and Technical Education

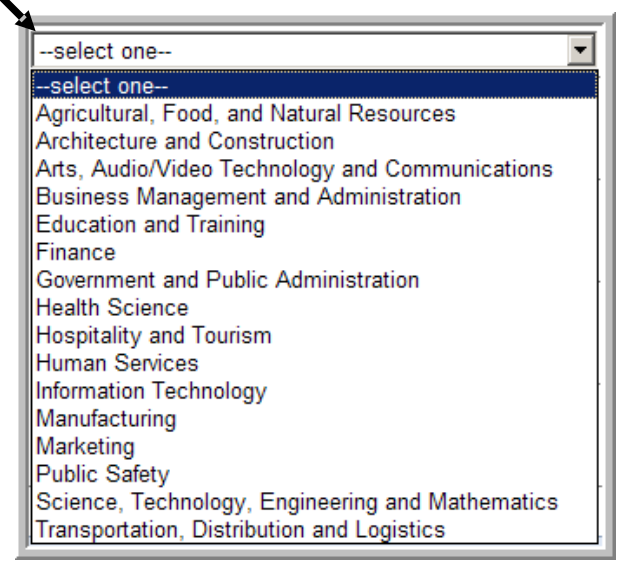
Reference copy only. Please complete the survey on the web.

Programs of Study/Q7

In the following table, please list the five (5) POS *with the highest enrollments* in your state in the 2008-09 program year and the number of students enrolling in each. If you have less than five POS then please list them all. *Please do not include any POS that did not receive state approval.*

Type in the name of the POS (or name that best describes the POS offerings at the local level) in the first box, code it into the corresponding Career Cluster area (or closest corresponding area) by clicking on the second box, and enter the number of students enrolling in the POS in the third box. Mark 'Don't Know' if you do not have access to this information.

	Name of state-approved POS NOTE: Please crosswalk your POS to the appropriate cluster using the pull-down menu provided	Number of students enrolled in coursework in the POS in the 2008-2009 program year	
1	--select one--		☐ Don't Know
2	--select one--		☐ Don't Know
3	--select one--		☐ Don't Know
4	--select one--		☐ Don't Know
5	--select one--		☐ Don't Know



Programs of Study/Q8A

Which of the following elements of a POS does your state require LEAs to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Standards

	Required	Not Required	Don't Know
Align with state postsecondary standards or requirements for program completion.	○	○	○
Align with technical standards that were... a. state-developed	○	○	○
b. industry-developed	○	○	○
c. national based on 16 career clusters	○	○	○
d. locally developed	○	○	○
e. other *(specify)* _____	○	○	○
Align with state college-ready standard	○	○	○
Align with state work-ready standard	○	○	○

Programs of Study/Q8B

Which of the following elements of a POS does your state require LEAs to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Curriculum

	Required	Not Required	Don't Know
Uses a curriculum that is... a. state-developed	○	○	○
b. industry-developed	○	○	○
c. third-party (e.g., vendor) developed	○	○	○
d. locally developed	○	○	○
e. other *(specify)*	○	○	○
Uses a curriculum that spans the secondary and postsecondary levels	○	○	○
Uses a curriculum that is non-duplicative across secondary and postsecondary levels	○	○	○
Is part of an articulation agreement with a postsecondary institution	○	○	○
Is covered by a state-wide articulation agreement	○	○	○
Offers secondary CTE courses that earn academic credit toward HS diploma	○	○	○
Offers secondary CTE courses that provide postsecondary credit through dual or concurrent enrollment	○	○	○

Programs of Study/Q8C

Which of the following elements of a POS does your state require LEAs to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Assessments

	Required	Not Required	Don't Know
Assesses technical skill attainment through... a. state-developed exams that are... (i) aligned with state technical standards	○	○	○
(ii) aligned with national 16 career cluster standards	○	○	○
(iii) aligned with industry standards	○	○	○
(iv) other *(specify)* _____	○	○	○
b. industry-developed exams	○	○	○
c. national licensing or credentialing exams	○	○	○
d. state licensing or credentialing exams	○	○	○
e. locally developed exams that are... (i) aligned with state standards	○	○	○
(ii) aligned with national 16 career cluster standards	○	○	○
(iii) aligned with industry standards	○	○	○
(iv) aligned with other *(specify)* _____	○	○	○
f. G.P.A. instead of exam	○	○	○
g. course or program completion	○	○	○
h. other *(specify)* _____	○	○	○

Programs of Study/Q8D_sec

Which of the following elements of a POS does your state require LEAs to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Credentials

	Required	Not Required	Don't Know
Leads to a credential with special recognition on high school diploma or transcript	○	○	○

Other features

	Required	Not Required	Don't Know
Respond to local high skill, high demand, high pay occupational area	○	○	○
Career guidance must be available	○	○	○

Programs of Study/Q9

What action has your state taken to ensure that POS development by LEAs aligns with the core elements identified in the Perkins legislation?

Mark all that apply

- ☐ Creating POS models or templates
- ☐ Developing curriculum guides and other materials
- ☐ Designing guides for aligning CTE content with academic standards or learning outcomes
- ☐ Designing guides for aligning CTE content with technical standards
- ☐ Requiring LEAs to provide evidence of alignment in their local plans
- ☐ Securing secondary/postsecondary agreement on specific POS elements
- ☐ Consulting the career clusters developed by the States' Career Clusters Initiative
- ☐ Providing training and professional development to LEA staff
- ☐ Creating/created state "college ready" or "work ready" standards for graduation
- ☐ Other

Programs of Study/Q10A_sec

To what extent did representatives from the following stakeholder groups participate in state agency efforts to develop state-approved POS?

	Not at all	Some	A lot	Don't know
Secondary academic teachers	○	○	○	○
Secondary CTE teachers	○	○	○	○
Secondary guidance counselors	○	○	○	○
Secondary LEA administrators	○	○	○	○
National industry/union groups or professional associations	○	○	○	○
Postsecondary academic faculty	○	○	○	○
Postsecondary CTE faculty	○	○	○	○
Postsecondary administrators	○	○	○	○
Local business and/or unions	○	○	○	○
Local chamber of commerce	○	○	○	○

Programs of Study/Q11

On which of the following topics did your state introduce new **technical assistance** activities to help LEAs develop state-approved POS during the 2007-08 and/or 2008-09 program years?

Mark all that apply

- ☐ POS templates or guidelines
- ☐ Career clusters
- ☐ CTE content standards
- ☐ CTE curriculum development guidelines
- ☐ Academic and CTE curriculum integration
- ☐ Secondary and postsecondary curriculum alignment
- ☐ Technical skill assessments
- ☐ Career guidance and counseling
- ☐ Data systems for monitoring student progress
- ☐ Aligning standards and assessments
- ☐ Other

Programs of Study/Q12_sec

What types of **professional development** did your state offer to the following groups involved in the development and implementation of state-approved POS during the 2007-08 and /or 2008-09 program years?

Mark all that apply for each group. If your state offered other types of professional development, specify the type(s) of professional development in textbox(es) in the "Other" column below.

	Statewide or Regional Conferences	Local Workshops	Online Electronic Workshop/ Webinars	Individualized Assistance	Other *(specify)*	None	Don't Know
Secondary administrators	☐	☐	☐	☐		☐	☐
Secondary counselors	☐	☐	☐	☐		☐	☐
Secondary academic teachers	☐	☐	☐	☐		☐	☐
Secondary CTE teachers	☐	☐	☐	☐		☐	☐
Postsecondary administrators	☐	☐	☐	☐		☐	☐
Postsecondary counselors	☐	☐	☐	☐		☐	☐
Postsecondary faculty	☐	☐	☐	☐		☐	☐

Programs of Study/Q13

Indicate whether you agree or disagree with the following statements that describe your state agency's efforts to develop state-approved POS.

	Strongly Disagree		No Opinion		Strongly Agree	Does not Apply
A shortage of state staff has limited POS development	○	○	○	○	○	○
State staff have technical expertise in designing POS	○	○	○	○	○	○
There is adequate federal funding to support POS development	○	○	○	○	○	○
There is adequate federal guidance to support POS development	○	○	○	○	○	○
State staff have adequate time to support POS development	○	○	○	○	○	○
Lack of statewide technical content standards has hindered POS development	○	○	○	○	○	○
Lack of statewide curricular materials has hindered POS development	○	○	○	○	○	○
Lack of technical skill assessments has hindered POS development	○	○	○	○	○	○
State staff have little influence at the local level	○	○	○	○	○	○

Continued on next page…

Programs of Study/Q13

Indicate whether you agree or disagree with the following statements that describe your state agency's efforts to develop state-approved POS.

Continued…

	Strongly Disagree		No Opinion		Strongly Agree	Does not Apply
Secondary CTE teachers have a good understanding of POS	○	○	○	○	○	○
Secondary academic teachers have a good understanding of POS	○	○	○	○	○	○
Secondary CTE teachers and postsecondary CTE instructors lack the necessary skills or time to integrate academic and technical standards to design curricula	○	○	○	○	○	○
Secondary CTE and academic teachers within LEAs are cooperating to create POS	○	○	○	○	○	○
Secondary teachers and postsecondary instructors are cooperating to create POS	○	○	○	○	○	○
Secondary and postsecondary administrators are cooperating to create POS	○	○	○	○	○	○
Secondary and postsecondary state staff are cooperating to implement POS	○	○	○	○	○	○

Programs of Study/Q14

How are CTE content standards developed for the state-approved POS offered in your state?

Mark all that apply

- ☐ State develops secondary CTE standards
- ☐ State adopts industry-based standards
- ☐ State adopts 16 career clusters standards
- ☐ Local instructors develop content standards based on state criteria
- ☐ Local instructors develop their own standards
- ☐ Local instructors adopt standards created by industry groups
- ☐ Local instructors consult with business or advisory council to develop or select standards
- ☐ No standards exist
- ☐ Don't know

Programs of Study/Q15

What proportion of the state-approved POS offered in your state used each of the following sources for CTE content standards in the 2008-09 program year?

	None	Some	Many	All	Don't Know
State-developed CTE standards	○	○	○	○	○
Locally developed CTE standards	○	○	○	○	○
Industry-developed standards	○	○	○	○	○
National standards for the 16 career clusters	○	○	○	○	○
Postsecondary developed CTE standards	○	○	○	○	○
No CTE standards are required or exist	○	○	○	○	○

Programs of Study/Q16

What share of POS approved by your state incorporated each of the following levels of CTE content standards in the 2008-09 program year?

	None	Some	Many	All	Don't Know
Foundation-level skills (e.g., work readiness)	○	○	○	○	○
Cluster level skills (i.e., 16 national career clusters)	○	○	○	○	○
Pathway level skills (i.e., 79 national pathways)	○	○	○	○	○
Occupational level skills (e.g., job-specific)	○	○	○	○	○

Programs of Study/Q17

How many of the state-approved POS offered by LEAs in your state used the following tools to assess students' technical skill attainment in the 2008-09 program year?

	None	Some	Many	All	Don't Know
State developed secondary CTE skill exam	○	○	○	○	○
Locally-developed CTE skill exams	○	○	○	○	○
Industry-developed, employer validated exams	○	○	○	○	○
National licensing or credentialing exams	○	○	○	○	○
State licensing or credentialing exams	○	○	○	○	○
Commercially-developed exams (e.g., NOCTI)	○	○	○	○	○
Grade point average (GPA)	○	○	○	○	○
Course or program completion	○	○	○	○	○

Programs of Study/Q18_sec

For what proportion of state-approved POS are the following available at the secondary level?

	None	Some	Many	All	Don't Know
Academic credit for CTE coursework that may be applied toward graduation	○	○	○	○	○
A secondary CTE certificate or credential that is noted on the high school transcript or diploma	○	○	○	○	○
Postsecondary CTE course credit	○	○	○	○	○
Postsecondary academic course credit	○	○	○	○	○

Programs of Study/Q19A

How are LEAs monitored by the state to ensure they are offering state-approved POS?

Mark all that apply

- ☐ State agency staff visit individual sites
- ☐ LEA administrators visit individual sites
- ☐ Through state reporting requirements for POS
- ☐ Other approach
- ☐ Not applicable/Not done

Programs of Study/Q19B

How are POS offered within LEAs evaluated to assess whether these programs are accomplishing the goals for which they are intended?

Mark all that apply

- ☐ State agency staff visit individual sites
- ☐ LEA administrators visit individual sites
- ☐ Through state reporting requirements for POS
- ☐ Other approach
- ☐ Not applicable/Not done

Programs of Study/Q20A

Who is responsible for monitoring the implementation of state-approved POS for Perkins compliance?

Mark all that apply

- ☐ State agency staff
- ☐ LEA administrators of CTE
- ☐ Secondary teachers or administrators
- ☐ Postsecondary faculty or administrators
- ☐ Advisory committees
- ☐ Other agency or individual
- ☐ Not applicable/Not done

Programs of Study/Q20B

What changes or additions to the Perkins legislation regarding POS would you recommend that Congress consider for the next reauthorization?

Accountability/AccountabilityIntro

The questions in the remainder of this survey address ALL of the CTE programs offered in your state irrespective of whether or not they qualify as a POS.

Accountability/Q21

Overall, how important were the following issues in negotiating your state performance benchmarks and targets with the U.S. Department of Education?

	Not Important		Somewhat Important		Very Important	Don't Know
State program performance goals for Perkins measures	○	○	○	○	○	○
Past state performance on Perkins measures	○	○	○	○	○	○
Anticipated changes in state conditions, *excluding* funding	○	○	○	○	○	○
Anticipated changes in CTE program offerings	○	○	○	○	○	○
Anticipated changes in student populations participating in CTE programs	○	○	○	○	○	○
Anticipated change in state and/or local funding	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

Accountability/Q22

How difficult was it to reach agreement when negotiating with the U.S. Department of Education to establish annual performance benchmarks and targets for your state?

	Not Difficult		Somewhat Difficult		Very Difficult	Don't Know
Transition year performance benchmarks	○	○	○	○	○	○
Annual FAUPL performance targets	○	○	○	○	○	○

Accountability/Q23

When negotiating with the U.S. Department of Education to establish annual performance benchmarks and targets for your state what were the reasons for encountering difficulty?

Mark all that apply

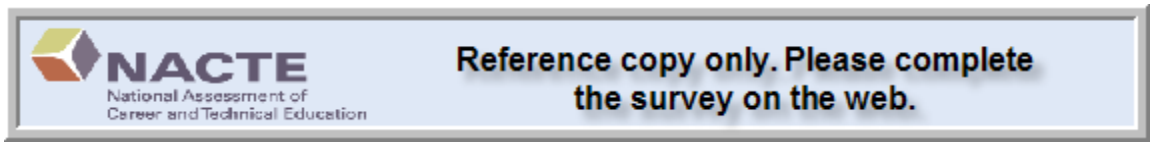
- ☐ Insufficient baseline data upon which to negotiate targets
- ☐ Lack of clear guidance from the Department on what constitutes continuous improvement
- ☐ Anticipated difficulty in gathering and submitting required data
- ☐ Anticipated difficulty in negotiating similar performance targets with local grantees
- ☐ Concern over the repercussions of the state failing to meet performance targets
- ☐ Other

Accountability/Q24

What percentage of LEAs in your state have negotiated performance improvement targets differing from your state-established targets on one or more performance measures in 2008-09?

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Enter Percentage	Mark If Estimate	Don't Know
Performance levels and improvement targets are individually negotiated for what percentage of LEA?		☐	☐



Accountability/Q25

How important were the following factors when negotiating performance targets with LEAs?

	Not Important		Somewhat Important		Very Important	Don't Know
Program performance goals on Perkins measures	○	○	○	○	○	○
Past performance on Perkins measures	○	○	○	○	○	○
Anticipated changes in local conditions	○	○	○	○	○	○
Anticipated changes in CTE program offerings	○	○	○	○	○	○
Anticipated changes in student populations participating in CTE programs	○	○	○	○	○	○
Anticipated changes in state and/or local funding	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

Accountability/Q26_sec

OVAE issued non-regulatory guidance to assist states in developing their accountability systems for the 2006 Perkins Act. How did your state make use of the OVAE guidance in crafting each of the following?

Identifying Populations

	Did Not Use	Consulted	Used Verbatim	Don't Know
CTE participants	○	○	○	○
CTE concentrators	○	○	○	○

Constructing Accountability Measures

	Did Not Use	Consulted	Used Verbatim	Don't Know
Academic attainment (1S1, 1S2)	○	○	○	○
Technical skill attainment (2S1)	○	○	○	○
Secondary school completion (3S1)	○	○	○	○
Graduation rates (4S1)	○	○	○	○
Placement into employment, advanced education, and the military (5S1)	○	○	○	○
Nontraditional participation (6S1)	○	○	○	○
Nontraditional completion (6S2)	○	○	○	○

Accountability/Q27

Which of the following types of technical assistance did your state provide to assist LEAs in implementing accountability measures and reporting during the 2008-2009 program year?

Mark all that apply

- ☐ Issued guidance on data collection
- ☐ Statewide training on data collection and reporting
- ☐ Local site visits
- ☐ Help line (telephone or email)
- ☐ Provided individualized technical assistance
- ☐ Other
- ☐ Did not provide any technical assistance

Accountability/Q28

Does the database you use for Perkins reporting purposes enable you to:

	Yes	No	Don't Know
Monitor individual students through grade 12	○	○	○
Monitor individual students through college	○	○	○
Access non-CTE-related information contained in students' academic records	○	○	○
Link students to teachers or instructors	○	○	○
Link high school records to administrative records for students enrolling in in-state community colleges	○	○	○
Link high school records to administrative records for students enrolling in in-state four-year colleges or universities	○	○	○
Link high schools records to administrative records for students enrolling in out-of-state community colleges, four-year colleges, or universities	○	○	○
Permit you to report disaggregated performance outcomes for populations referenced in the Elementary and Secondary Education Act (ESEA), also known as the No Child Left Behind Act	○	○	○

Accountability/Q29

What types of quality control measures has your state adopted to ensure the validity and reliability of locally reported data?

Mark all that apply

- ☐ Conduct desk audit of LEA data to identify inaccurate information
- ☐ Use electronic error checking strategies to identify inaccurate data
- ☐ Provides technical assistance and/or guidelines to LEAs on data collection and editing procedures
- ☐ State compares totals to prior year reports
- ☐ Other
- ☐ No quality control measures have been adopted

Accountability/Q30_sec

How confident are you that the data you are collecting from LEAs for each of the following Perkins core indicators of performance accurately reflect local performance?

Core Indicator 1

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Academic attainment	○	○	○	○	○	○	○

Core Indicator 2

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Technical skill attainment	○	○	○	○	○	○	○

Continued on next page…

Continued…

Accountability/Q30_sec

How confident are you that the data you are collecting from LEAs for each of the following Perkins core indicators of performance accurately reflect local performance?

Core Indicator 3

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Secondary school diploma	○	○	○	○	○	○	○
GED	○	○	○	○	○	○	○
Other state-recognized equivalent	○	○	○	○	○	○	○
Proficiency credential, certificate, or degree	○	○	○	○	○	○	○

Core Indicator 4

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Student ESEA graduation rate	○	○	○	○	○	○	○

Core Indicator 5

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Placement in postsecondary education or advanced training	○	○	○	○	○	○	○
Placement in the military	○	○	○	○	○	○	○
Placement in employment	○	○	○	○	○	○	○

Core Indicator 6

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Non-traditional participation	○	○	○	○	○	○	○
Non-traditional completion	○	○	○	○	○	○	○

Accountability/Q31

How confident are you that LEAs can report -- complete and accurate data for the following special populations, as defined by ESEA?

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Individuals with disabilities	○	○	○	○	○	○	○
Individuals from economically disadvantaged families, including foster children	○	○	○	○	○	○	○
Individuals preparing for nontraditional fields	○	○	○	○	○	○	○
Single parents, including single pregnant women	○	○	○	○	○	○	○
Displaced homemakers	○	○	○	○	○	○	○
Individuals with limited English proficiency	○	○	○	○	○	○	○
Migrant students	○	○	○	○	○	○	○

Accountability/Q32_sec

What proportion of LEAs in your state were unable to achieve their negotiated performance target for each of the following Perkins accountability measures during the 2008-09 program year?

	None	1-10%	11-20%	21-30%	>30%	Don't Know
Academic attainment – Reading/Language arts (1S1)	○	○	○	○	○	○
Academic attainment – Mathematics (1S2)	○	○	○	○	○	○
Technical skill attainment (2S1)	○	○	○	○	○	○
Secondary school completion (3S1)	○	○	○	○	○	○
Student graduation rates (4S1)	○	○	○	○	○	○
Placement in employment, higher education, or the military (5S1)	○	○	○	○	○	○
Non-traditional participation (6S1)	○	○	○	○	○	○
Non-traditional completion (6S2)	○	○	○	○	○	○

Accountability/Q34

How many LEAs in your state are required to develop a Perkins program improvement plan for 2009-10 on the basis of performance data that were generated in the 2008-09 program year?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
LEAs in need of improvement		☐

Accountability/Q35A

In what ways and to what extent does your state currently use Perkins secondary core indicator data?

	Used to a great extent	Used quite a bit	Used somewhat	Used not very much	Used not at all
To reward LEAs that are performing well	○	○	○	○	○
To sanction low-performing LEAs	○	○	○	○	○
To identify programs in need of improvement	○	○	○	○	○
To provide targeted technical assistance	○	○	○	○	○
To provide additional resources for program improvement	○	○	○	○	○
To identify unusually effective programs	○	○	○	○	○
To identify special populations not being adequately served	○	○	○	○	○
Other *(specify)* _____	○	○	○	○	○

Accountability/Q35B

On the previous question you indicated your district did not use its prior year Perkins accountability data in 2008-09 in the following ways. Are there plans to use the data for these purposes in the next two years?

	Yes	No	Don't Know
To reward LEAs that are performing well	○	○	○
To sanction low-performing LEAs	○	○	○
To identify programs in need of improvement	○	○	○
To provide targeted technical assistance	○	○	○
To provide additional resources for program improvement	○	○	○
To identify unusually effective programs	○	○	○
To identify special populations not being adequately served	○	○	○
Other (if specified)	○	○	○

Accountability/Q36

What types of consequences do existing state policies impose on LEAs that do not meet one or more of their Perkins IV accountability performance targets?

Mark all that apply

- ☐ Consequences exist but are unlikely to be imposed
- ☐ Develop a local program improvement plan
- ☐ Additional accountability reporting requirements
- ☐ Loss of, or decrease in, state or Perkins funding
- ☐ Restrictions or loss of flexibility in the use of Perkins funds
- ☐ Other
- ☐ No consequences exist
- ☐ Don't know

Accountability/Q37

How far along is your state in the development of technical skills assessments?

Mark all that apply

- ☐ Created state-developed technical skills assessment *covering all* CTE programs
- ☐ Created state-developed technical skills assessment *covering a subset of* CTE programs
- ☐ Adopted commercial technical skills assessment *covering all* CTE programs
- ☐ Adopted commercial technical skills assessment *covering a subset of* CTE programs
- ☐ Approved list of technical skills assessments for local use
- ☐ In process of designing or transitioning to CTE technical skills assessment system
- ☐ Considering development options
- ☐ Other
- ☐ No plans to develop an assessment system at this time

Accountability/Q38

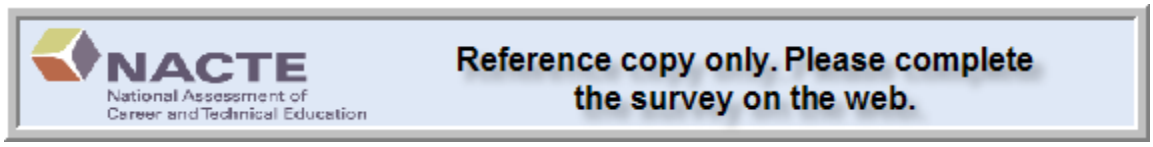
How many of the LEAs in your state used the following tools to assess students' technical skill attainment in the 2008-09 program year?

	None	Some	Many	All	Don't Know
State developed secondary CTE skill exam(s)	○	○	○	○	○
Locally developed CTE skill exam(s)	○	○	○	○	○
Industry developed, employer validated exam(s)	○	○	○	○	○
National licensing or credentialing exam(s)	○	○	○	○	○
State licensing or credentialing exam(s)	○	○	○	○	○
Commercially developed exam (s) (e.g., NOCTI)	○	○	○	○	○
Grade point average (GPA)	○	○	○	○	○
CTE course or program completion	○	○	○	○	○

Accountability/Q39

What percentage of CTE concentrators reported in your state's technical skill assessment measure were assessed using a state or industry developed technical skill assessment, national or state licensing or credentialing, or commercially developed exam in the 2008-09 program year?

	None	Less than 25%	Between 26 to 50%	Between 51 to 75%	Between 76 to 99%	All	Don't know
State developed technical skill assessment	○	○	○	○	○	○	○
Industry developed technical skill assessment	○	○	○	○	○	○	○
National licensing or credentialing exam	○	○	○	○	○	○	○
State licensing or credentialing exam	○	○	○	○	○	○	○
Commercially developed exam	○	○	○	○	○	○	○



Accountability/Q40

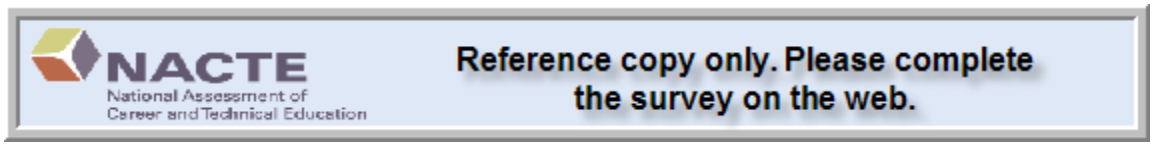
For each of the following data sources, indicate whether your state uses this source to collect placement data and, if not in use, whether state legal restrictions prevent your state in using this approach?

	In Use By State	Legal Restrictions Prohibit Use	Not in Use
National Student Clearinghouse	○	○	○
State Unemployment Insurance wage records	○	○	○
Federal Employment Data Exchange System (FEDES)	○	○	○
Wage Record Information System (WRIS)	○	○	○
State higher education student database	○	○	○

Accountability/Q41

How does each of the following impact your state's capacity to report placement data?

	No Impact		Some Impact		Great Impact	Don't Know
Access to Social Security numbers for students	○	○	○	○	○	○
Cost of conducting follow-up studies of students who have left high school	○	○	○	○	○	○
Cost for record matching with other agencies	○	○	○	○	○	○
Getting an adequate response rate	○	○	○	○	○	○
Collecting data on self-employed individuals	○	○	○	○	○	○
Collecting data on those employed out-of-state	○	○	○	○	○	○
Collecting data on those attending an in-state 2-year public postsecondary institution	○	○	○	○	○	○
Collecting data on those attending an in-state 4-year public postsecondary institution	○	○	○	○	○	○
Collecting data on those attending an in-state private postsecondary institution	○	○	○	○	○	○
Collecting data on those attending an out-of-state public or private postsecondary institution	○	○	○	○	○	○



Accountability/Q41B

Does your state agency provide LEAs with feedback on their performance on the Perkins accountability measures to permit them to assess their performance with others in the state, and if so, what type of information is shared?

Mark all that apply

- ☐ Statewide performance outcomes averaged across all LEA are shared
- ☐ Performance outcomes are shared, controlling for LEA characteristics similar to one another
- ☐ Performance outcomes are shared for all individual LEA
- ☐ Performance outcomes that are shared are posted on the internet for viewing
- ☐ No data on LEA performance are shared

Accountability/Q41C

What changes or additions to the Perkins legislation regarding state or local accountability would you recommend that Congress consider for the next reauthorization?

Finance/FinanceIntro

The following questions ask you to report on financial information relating to the implementation of Perkins.

Please provide **allocation** (rather than expenditure) amounts.

Finance/Q42

How much of your Perkins funds were allocated to the secondary and postsecondary sectors in your state in each of the following fiscal years? If Tech Prep is merged with the Basic Grant, report all funds in Title I Basic Grant.

*Enter **dollar amount** (whole numbers only, do not include $, commas, or other non-numeric characters)*

	Title I Basic Grant 2006-07 (Perkins III)	**Title I Basic Grant** 2008-09 (Perkins IV)	**Title II Tech Prep** 2006-07 (Perkins III)	**Title II Tech Prep** 2008-09 (Perkins IV)	**State Leadership** 2006-07 (Perkins III)	**State Leadership** 2008-09 (Perkins IV)
Secondary						
Postsecondary						

Finance/Q43

If your state changed the percentage split in its allocation of Title I funds to secondary and postsecondary education since the adoption of Perkins IV, what factors brought about this action?

Mark all that apply

- ☐ Change in state legislative policies or priorities
- ☐ Adoption of state economic development initiative
- ☐ Increased focus on academics over CTE instruction at secondary level
- ☐ Increased focus in providing CTE instruction in one sector over the other
- ☐ Change in state financing of CTE using non-federal funds
- ☐ Other
- ☐ Not applicable, state has not changed its funding split
- ☐ Don't Know

Finance/Q44

Is your state planning to make any changes to the amounts of funding allocated to secondary and postsecondary sectors for the remainder of Perkins IV?

- ○ Yes, increase secondary sector share of funding
- ○ Yes, increase postsecondary sector share of funding
- ○ No
- ○ Don't Know

Finance/Q45

How many local applications for 2008-09 program year Perkins IV, Title I funding did your state agency receive, and how many of these were approved or disapproved?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
Total number received		☐
Number approved as originally submitted		☐
Number approved after revision and re-submission		☐
Number disapproved		☐

Finance/Q46

What were the *principal reasons for disapproval*?

Mark all that apply

- ☐ No description or inadequate description of local plans for allocating funds
- ☐ No description or inadequate description of local plans for collecting accountability data
- ☐ Failed to provide accountability data in the past
- ☐ Poor past performance
- ☐ Failed to agree on negotiated performance target in the past
- ☐ Program determined to lack sufficient quality
- ☐ Other

Finance/Q47_sec

What amount of your state's 2008-2009 Perkins IV, Title I *secondary* funds went to each of the following types of programs? [Note: if your state consolidated its Title II Tech Prep funds into its Title I Basic Grant, report all funds in the Title I category]

*Enter **dollar amount** (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information*

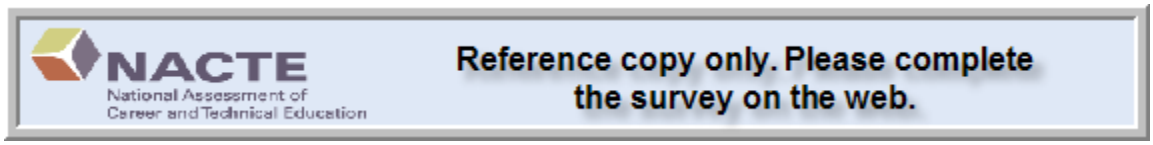
	Dollars	Don't Know
Grades 9-12 in comprehensive high schools		☐
Grades 9-12 in specialized facilities (such as area career centers, ROP, or BOCES)		☐
Grades 7 and/or 8		☐
Secondary CTE in Bureau of Indian Affairs (BIA) funded secondary schools		☐
Other		☐

Finance/Q48_sec

In addition to services offered in comprehensive high schools, CTE may be offered in dedicated area centers or technical high schools serving one or more LEAs. Please indicate the number of schools or agencies in your state that offered secondary CTE instruction in a setting other than the comprehensive high school in the 2008-09 academic year.

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
Technical high schools serving one or more LEA(s) (excluding charter schools)		☐
Regional or area centers serving one or more LEA(s)		☐
Public charter schools		☐
Other		☐



Finance/Q49

For the 2008-09 program year, did your state waive the **minimum allocation rule** ($15,000 per substate grantee) for any grantees? *[Reference: Section 132(a) (4) and 132(c) (1)]*

- ○ Yes
- ○ No

Finance/Q50_sec

How many waivers were granted for each of the following reasons?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
LEA is in a rural, sparsely populated area		☐
LEA is a public charter school		☐
LEA is unable to enter into a consortium		☐
Other		☐

Finance/Q52

For the 2008-09 program year, did your state use the option to create a **reserve fund** to allocate resources to LEAs through a means **other than the statutory formula**?

- ○ Yes
- ○ No

Finance/Q53

How much money was placed into the state ***reserve fund*** for distribution to secondary LEAs for the 2008-09 program year?

Enter dollar amount (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Amount	Don't Know
Reserve fund amount		☐

Finance/Q54

What amount of your reserve funds were awarded to LEAs located in the following areas?

Enter dollar amount (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Amount	Don't Know
Rural areas		☐
Areas with high percentages of CTE students		☐
Areas with high numbers of CTE students		☐
Other *(specify)*		☐

Finance/Q55

How many tribally-controlled or Bureau of Indian Affairs (BIA)-funded LEAs received Perkins grants in 2008-09 as noted?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
As an individual agency		☐
As a member of a consortia		☐

Finance/Q56

Of the funds used at the secondary level, on average, what percentage of your state's 2008-09 **State Leadership Funds** were allocated for the following **required uses** referenced in Section 124 of the Perkins Act?
[NOTE: Percentages need not total to 100%]

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Enter Percentage	Don't Know
Assessing CTE programs		☐
Expanding the use of technology in CTE programs		☐
Providing professional development		☐
Strengthening the integration of academic and CTE instruction		☐
Preparing individuals for nontraditional employment		☐
Supporting partnerships among secondary, postsecondary, adult education, and other local institutions		☐
Serving individuals in state institutions, such as state correctional and institutions serving disabled students		☐
Supporting programs that prepare special education students for entry into high skill, high wage, high demand occupations		☐
Technical assistance for eligible recipients		☐

Finance/Q57

How much of the 10 percent State Leadership funding was made available in 2008-09 for secondary services that prepare individuals for nontraditional fields (i.e., of the not less than $60,000 and not more than $150,000 earmarked for the purpose)?

Enter dollar amount (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Amount	Don't Know
Nontraditional funding		☐

Finance/Q58

What percentage of your State Leadership funds for secondary education in 2008-09 was used to support POS development or implementation?

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Enter Percentage	Don't Know
POS development		☐
POS implementation		☐

Finance/Q59A

Indicate whether your state has a gender equity coordinator at the secondary level and the job status of their position.

- ○ None
- ○ Full-time
- ○ Part-time

Finance/Q59B

Indicate whether your state has a special populations coordinator at the secondary level and the job status of their position.

- ○ None
- ○ Full-time
- ○ Part-time

Finance/Q60

From what funding source(s) were the gender equity and special populations coordinator positions funded in 2008-09?

Mark all that apply

- ☐ Perkins State Leadership funds
- ☐ Perkins State Administration funds
- ☐ State funds
- ☐ Other

Finance/Q60B

What changes or additions to the Perkins legislation regarding finance would you recommend that Congress consider for the next reauthorization?

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Finance/Q61_INTRO

The following questions pertain to your **state's** funding system for secondary CTE. **Do not** include Perkins funds or resources used for your state Perkins match in this section.

Finance/Q61

Did your state provide categorical funding for CTE services offered in secondary schools in the 2008-09 program year?

- ○ Yes
- ○ No

Finance/Q61_upload

Please attach state CTE funding formula or web link

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach state CTE funding formula

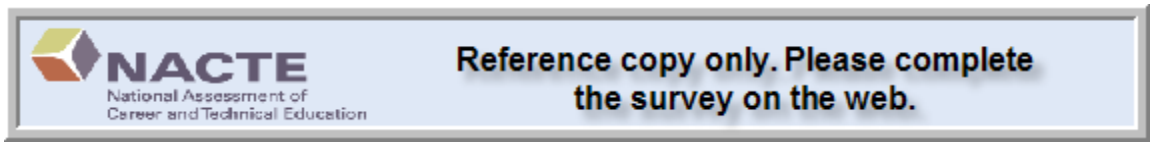
or provide a web link: _____

Finance/Q62

What percentage of the categorical statewide support for secondary CTE offered in your state in 2008-09 would you estimate came from the following sources: (Must total 100 %)

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Percentage	Don't Know
Federal sources (excluding Perkins)		☐
State sources		☐
Local sources		☐
Other *(specify)* _____		☐
Total		



Finance/Q63

Does your state use performance-based allocations (e.g., rewards and/or sanctions) for **state** secondary CTE funds?

- ○ Yes
- ○ No

Finance/Q63_upload

Please attach description of state performance-based funding allocation formula or web link

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach description of state performance-based funding allocation formula

or provide a web link:

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Tech Prep/TechPrepIntro

The following questions in this survey address tech prep programs offered in your state.

Tech Prep/Q64

Did your state choose to merge its Tech Prep funds into its Title I basic grant during or prior to the 2009-010 program year?

- ○ Yes
- ○ No

Tech Prep/Q65

What are the reasons that your state opted to merge its Tech Prep funding with its basic grant funds?

Mark all that apply

- ☐ Desire to incorporate Tech Prep into all CTE programs
- ☐ Due to the similarity between Tech Prep and POS
- ☐ Avoid data burden associated with collecting new Tech Prep measures
- ☐ Difficulty identifying Tech Prep students from other CTE students
- ☐ Difficulty collecting data on Tech Prep students
- ☐ Other

Tech Prep/Q66

Is your state planning to consolidate its Tech Prep funds into its Title I basic grant prior to the end of the Perkins IV Act, and if so, when?

- ○ State has no plans to consolidate funding
- ○ 2010-11 program year
- ○ 2011-12 program year
- ○ Don't know

Tech Prep/Q67

How did your state allocate grants to local Tech Prep Consortia in 2008-09 from funds not merged?

- ○ Through a competitive application and award process
- ○ By formula
- ○ Both competition and formula
- ○ Other *(specify)*

Tech Prep/Q67_upload

Please attach the guidelines or criteria used to allocate grants to local Tech Prep Consortia in 2008-09 from funds not merged.

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach the guidelines or criteria used.

Tech Prep/Q68

How many local applications for 2008-09 program year Perkins IV, Title II Tech Prep funding did your state agency receive, and how many of these were approved or disapproved?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
Total number received		☐
Number approved as originally submitted		☐
Number approved after revision and re-submission		☐
Number disapproved		☐

Tech Prep/Q69

What were the *principal reasons for disapproval*?

Mark all that apply

- ☐ No plan submitted or inadequate plan for local allocation of funds
- ☐ No plan submitted or inadequate plan for collection of accountability data
- ☐ Poor past performance
- ☐ Program determined to lack sufficient quality
- ☐ Other

Tech Prep/Q70

Which, if any, of the following obstacles does your state face in tracking Tech Prep students as they transition between the secondary and postsecondary education sectors?

Mark all that apply

- ☐ Secondary and postsecondary sectors do not share a common student identifier
- ☐ Secondary and postsecondary sectors do not have a means of sharing data
- ☐ Secondary Tech Prep students do not self-identify (or know they are a Tech Prep student) when matriculating at a postsecondary institution
- ☐ Postsecondary institutions do not attempt to identify incoming secondary Tech Prep students
- ☐ Other

Tech Prep/Q71

The 2006 Perkins introduced a new set of accountability measures for Tech Prep students. Indicate your level of agreement or disagreement with each of the following statements:

	Strongly Disagree		No Opinion		Strongly Agree	Don't Know
New measures impose a substantial data burden on the state	○	○	○	○	○	○
The new measures will support program improvement efforts undertaken at the *state* level	○	○	○	○	○	○
The new measures will support program improvement efforts undertaken at the *local* level	○	○	○	○	○	○
The existence of the new measures will likely cause my state to merge its Title I and Title II funds	○	○	○	○	○	○
My state is able to collect accurate data on all measures	○	○	○	○	○	○
My state would like OVAE to issue nonregulatory guidance to support my state in developing Tech Prep measures	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

END

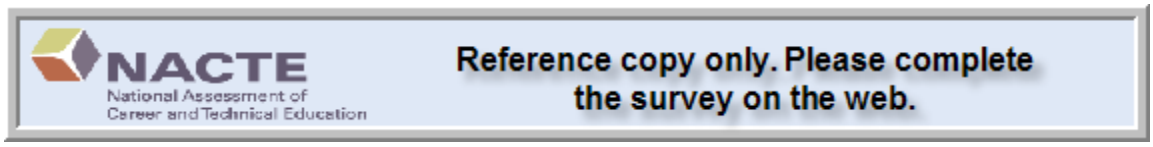
Please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses. If there are errors present, simply select the question from the validation summary list to take you directly to the question to correct your data. Once you have corrected the data, go to the navigation panel on the left side of the screen and select the form titled END.

You have completed the Survey of State Directors of Secondary Career-Technical Education. To mark your survey complete and submit your data, click on the validate button and then select the Mark Complete button.

Thank you very much for taking the time to participate in this important study.

If you have any questions or comments about this study, please contact Steven Klein (MPR) at 503-963-3757.

Local Education Agency (LEA) Survey



Welcome/Contact_info

Welcome to the Web-based National Assessment of Career and Technical Education survey (NACTE) sponsored by the U.S. Department of Education.

Please take a moment and complete the contact information below before proceeding with the survey.

First Name:

Last Name:

Title:

Phone (XXX-XXX-XXXX):

Email:

Address:

Address 2 (optional):

City:

State: -Select one-

Zip code:

Welcome/Confidentiality

Uses of the Data:
This study is being conducted for the U.S. Department of Education, which has contracted with MPR Associates, Inc., and RTI International (RTI). The purpose of this study is to collect information relating to the implementation of the *Carl D. Perkins Career and Technical Education Act of 2006* during the 2008-09 academic year. Because a limited number of institutions have been selected, we would very much like for you to participate on behalf of your educational institution.

Confidentiality
As a matter of policy, The U.S. Department of Education is concerned with protecting the privacy of participants in voluntary surveys.
We want to let you know that:

- Your responses will be merged with those of other respondents and will not be identified as the agency you represent, except as required by law.
- You may skip questions you do not wish to answer; however, we encourage you to answer as many questions as possible, because incomplete data will reduce the value of the information provided to Congress.
- Your answers may be used only for statistical purposes. Participation is voluntary and will not affect any aid or other benefits that your state agency, LEA, or institution may receive.

If you have questions about the study, you may contact:

- the NACTE Help Desk at (866) 434-4718
- Steven Klein, the study's director, at (503) 963-3757 or sklein@mprinc.com, or
- Michael Fong, the U.S. Department of Education's Project Officer, at (202) 401-7462, Michael.Fong@ed.gov.

If you have questions about your rights as a study participant, you may contact RTI's Office of Research Protection toll free at (866) 214-2043.

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Welcome/Definitions

Definitions:
Some questions in the survey include a hyperlink (a word or group of words in blue font that is underlined) that, when clicked on, brings up a definition.

For example,
Career and Technical Education (CTE): The term 'career and technical education (CTE)' means organized educational activities that—
(A) offer a sequence of courses that—
(i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions;
(ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and
(iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and
(B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry,including entrepreneurship, of an individual.

Programs of Study (POS): Programmatic coursework that meets the following: incorporates both secondary and postsecondary education elements; includes coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary eduction to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and leads to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Welcome/Navigation_Instructions

Instructions and Navigation:

NACTE Help Desk: 866-434-4718

To navigate through the survey you will notice two buttons in the lower left hand corner of each screen titled "Previous" and "Next". You can select either button at anytime to move through the survey.

Alternately, you can also use the navigation panel located on the left-hand side of the screen. You may jump to any question in navigation panel simply by clicking on the question number.

- The questions in the navigation panel will turn green once they have been viewed/answered and have passed preliminary validation.
- If a question does not pass preliminary validation either because of incomplete information or errors with the response, the question in the navigation panel will turn yellow.
- Questions in the navigation menu that are grey, and have a strike through are not applicable to you (e.g., ~~Q62~~).

The "Save & Exit" button located in the lower right-hand corner of the screen allows you to exit the survey at any time. The next time you login to the survey you will return to the same question.

Also, located in the lower right-hand corner of the screen is the "Help" button. It contains information regarding recommended browsers, and contains definitions for the survey response items (i.e., drop-down boxes, checkboxes, and hyperlinks).

At the end of the survey, please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses.

Programs of Study/Q1

Did your Local Education Agency (LEA) receive a federal Perkins Title I and/or Title II grant in the 2008-09 program year?

	Yes	No	Don't know
Title I: Basic Grant	○	○	○
Title II: Tech Prep	○	○	○

Programs of Study/Q2

Did your LEA receive a federal Perkins Title I and/or Title II grant through participation in a consortium in the 2008-09 program year?

	Yes	No	Don't know
Title I: Basic Grant	○	○	○
Title II: Tech Prep	○	○	○

Programs of Study/Q2C_sec

Where are secondary career technical education (CTE) services delivered in your LEA?

(Mark all that apply)

- ☐ Comprehensive high school(s)
- ☐ Regional or area CTE center(s)
- ☐ Full-time technical high school(s)
- ☐ Co-location of programs with a postsecondary institution
- ☐ Other

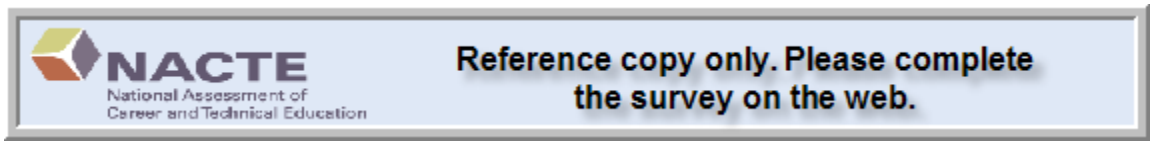
Programs of Study/Q2D_sec

In the 2008-09 program year, what was your LEA's total...

Secondary enrollment (include all students in grades 9–12 regardless of CTE participation) _____

Number of CTE participants in Perkins-eligible programs _____

Number of CTE concentrators in Perkins-eligible programs _____



Programs of Study/Q3

How many Programs of Study (POS) offered in your LEA in the 2008-09 program year were developed at the state or local level?

(Mark "Don't Know" if you do not have this information)

	Enter Number	Don't Know
State developed POS		☐
Locally developed POS, using state template or guidance and... State approval *required and obtained*		☐
State approval required *and not yet obtained*		☐
State approval *not required*		☐
Locally developed POS without state guidance and... State approval *required and obtained*		☐
State approval required *and not yet obtained*		☐
State approval *not required*		☐
Total		

Programs of Study/Q4

Are any of the POS offered in your LEA described on a Web site?

- ○ Yes
- ○ No

Programs of Study/Q4_url

Please provide the web address (url) of a website describing one of the POS offered in your LEA.

What is the URL? [ ]

NACTE
National Assessment of Career and Technical Education

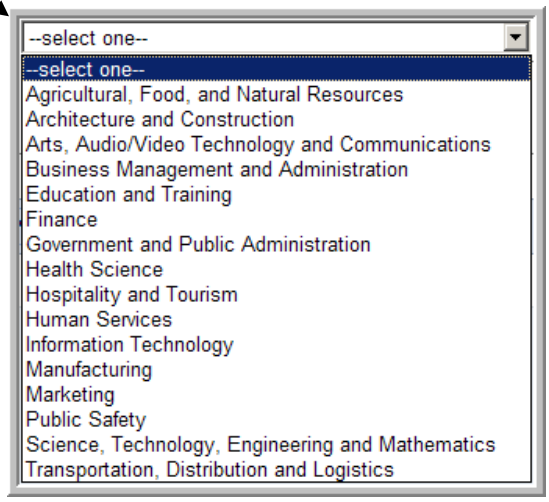
Reference copy only. Please complete the survey on the web.

Programs of Study/Q5

In the following table, please list the five (5) POS *with the highest enrollments* in your LEA in the 2008-09 program year and the number of students in each. If you have less than five POS then please list them all. *Please do not include any POS that did not receive state approval.*

Type in the name of the POS in the first box, code it into the corresponding Career Cluster area (or closest corresponding area) by clicking on the second box, and enter the number of students in the third box. Mark 'Don't Know' if you do not have access to this information.

	Name of state-approved POS NOTE: Please crosswalk your POS to the appropriate cluster using the pull-down menu provided	Number of students enrolled in coursework in the POS in the 2008-2009 program year	
1	--select one--		☐ Don't Know
2	--select one--		☐ Don't Know
3	--select one--		☐ Don't Know
4	--select one--		☐ Don't Know
5	--select one--		☐ Don't Know



Programs of Study/Q6A

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Standards

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Aligned with state secondary academic standards	○	○	○	○	○	○	○
Aligned with state postsecondary standards or requirements for program completion	○	○	○	○	○	○	○
Aligned with technical standards that were… a. state-developed	○	○	○	○	○	○	○
b. industry-developed	○	○	○	○	○	○	○
c. national based on 16 career clusters	○	○	○	○	○	○	○
d. locally developed	○	○	○	○	○	○	○
e. other *(specify)*	○	○	○	○	○	○	○
Aligned with state college-ready standard	○	○	○	○	○	○	○
Aligned with state work-ready standard	○	○	○	○	○	○	○

Programs of Study/Q6B

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Curriculum

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Uses a curriculum that is... a. state-developed	○	○	○	○	○	○	○
b. industry-developed	○	○	○	○	○	○	○
c. third-party (e.g., vendor) developed	○	○	○	○	○	○	○
d. locally developed	○	○	○	○	○	○	○
e. other *(specify)*	○	○	○	○	○	○	○
Uses a curriculum that spans secondary and postsecondary levels	○	○	○	○	○	○	○
Uses a curriculum that is non-duplicative across secondary and postsecondary levels	○	○	○	○	○	○	○
Is part of an articulation agreement with ONLY one local postsecondary institution	○	○	○	○	○	○	○
Is part of an articulation agreement with TWO or more local postsecondary institution (in-state or out-of-state)	○	○	○	○	○	○	○
Is covered by a state-wide articulation agreement	○	○	○	○	○	○	○
Offers secondary CTE courses that earn academic credit toward HS diploma	○	○	○	○	○	○	○
Offers secondary CTE courses that earn postsecondary credit (dual or concurrent credit at secondary and postsecondary levels)	○	○	○	○	○	○	○

Programs of Study/Q6C

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Assessments

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Assesses technical skill attainment through..... a. state-developed exams aligned with technical standards	○	○	○	○	○	○	○
b. industry-developed exams	○	○	○	○	○	○	○
c. national licensing or credentialing exams	○	○	○	○	○	○	○
d. state licensing or credentialing exams	○	○	○	○	○	○	○
e. locally developed exams that are... (i) aligned with state standards	○	○	○	○	○	○	○
(ii) aligned with national 16 career cluster standards	○	○	○	○	○	○	○
(iii) aligned with industry standards	○	○	○	○	○	○	○
(iv) other *(specify)*	○	○	○	○	○	○	○
f. other *(specify)*	○	○	○	○	○	○	○

Programs of Study/Q6D_sec

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Credentials

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Leads to a credential... a. with special recognition on high school diploma or transcript	○	○	○	○	○	○	○
b. that is Industry-recognized or sponsored	○	○	○	○	○	○	○
c. at Postsecondary level, including... (i) certificate	○	○	○	○	○	○	○
(ii) associate degree	○	○	○	○	○	○	○
(iii) bachelor's degree	○	○	○	○	○	○	○

Programs of Study/Q6E

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Other Features

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Responds to high skill, high wage, high demand occupational areas identified by the state or LEA	○	○	○	○	○	○	○
Career guidance must be, or is, available	○	○	○	○	○	○	○
All secondary CTE students required to select a POS	○	○	○	○	○	○	○
Was previously part of Tech Prep program	○	○	○	○	○	○	○

Programs of Study/Q7A

On which of the following topics did your state offer technical assistance to help LEA in your state in developing POS for state-approval?

(Mark all that apply)

- ☐ POS templates or guidelines
- ☐ Career clusters
- ☐ CTE content standards
- ☐ CTE curriculum development guidelines
- ☐ Academic and CTE curriculum integration
- ☐ Secondary and postsecondary curriculum alignment
- ☐ Technical skill assessments
- ☐ Career guidance and counseling
- ☐ Data systems for monitoring student progress
- ☐ Aligning standards and assessments
- ☐ Other

Programs of Study/Q7B

In which of the following areas (identified in Question 7A) did your LEA staff participate during the 2007-08 or 2008-09 program years?

(Mark all that apply)

- ☐ POS templates or guidelines
- ☐ Career clusters
- ☐ CTE content standards
- ☐ CTE curriculum development guidelines
- ☐ Academic and CTE curriculum integration
- ☐ Secondary and postsecondary curriculum alignment
- ☐ Technical skill assessments
- ☐ Career guidance and counseling
- ☐ Data systems for monitoring student progress
- ☐ Aligning standards and assessments

Programs of Study/Q8

What types of professional development does your state **offer** AND in what types of activities did your LEA staff **participate** in to support the development and implementation of POS?

(Mark all that apply for each group. If your state offered other types of professional development, specify the type(s) of professional development in textbox(es) in the "Other" column below.)

	State/ regional conferences	Local workshops	Online electronic workshop/ webinars	One-on-one support	Other *(specify)*	None	Don't Know
Teachers --State offered	☐	☐	☐	☐		☐	☐
--Locals participated	☐	☐	☐	☐		☐	☐
Administrators --State offered	☐	☐	☐	☐		☐	☐
--Locals participated	☐	☐	☐	☐		☐	☐
Counselors --State offered	☐	☐	☐	☐		☐	☐
--Locals participated	☐	☐	☐	☐		☐	☐

Programs of Study/Q9A_sec

To what extent did each of the following **stakeholder groups** participate in your LEA's efforts to *develop* POS?

	Not at all	Some	A lot	Don't know
Secondary academic teachers	○	○	○	○
Secondary CTE teachers	○	○	○	○
Counselors	○	○	○	○
LEA administrators	○	○	○	○
Building administrators	○	○	○	○
Postsecondary academic instructors	○	○	○	○
Postsecondary CTE instructors	○	○	○	○
Postsecondary administrators	○	○	○	○
National industry/union groups or professional associations	○	○	○	○
Local businesses and/or unions	○	○	○	○
Local chamber of commerce	○	○	○	○

Programs of Study/Q9B_sec

To what extent did each of the following **stakeholder groups** participate in your LEA's efforts to *implement* POS?

	Not at all	Some	A lot	Don't know
Secondary academic teachers	○	○	○	○
Secondary CTE teachers	○	○	○	○
Counselors	○	○	○	○
LEA administrators	○	○	○	○
Building administrators	○	○	○	○
Postsecondary academic instructors	○	○	○	○
Postsecondary CTE instructors	○	○	○	○
Postsecondary administrators	○	○	○	○
National industry/union groups or professional associations	○	○	○	○
Local businesses and/or unions	○	○	○	○
Local chamber of commerce	○	○	○	○

Programs of Study/Q10A

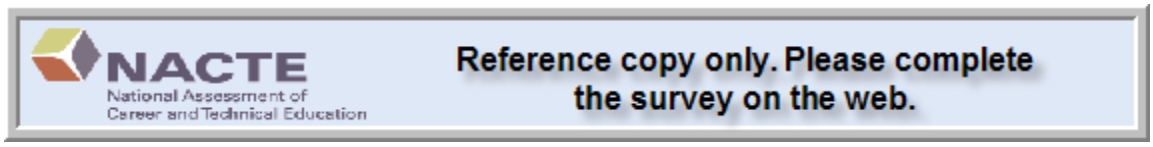
To what extent has each of the following barriers limited your LEA's efforts to *develop* POS?

	Not at all	Some	A lot	Don't know
Shortage of LEA CTE staff	○	○	○	○
Shortage of state CTE staff	○	○	○	○
Lack of CTE technical content standards	○	○	○	○
Lack of curricular materials	○	○	○	○
Lack of CTE state assessment instruments	○	○	○	○
Lack of technical expertise	○	○	○	○
Lack of cooperation by secondary CTE faculty	○	○	○	○
Lack of cooperation by secondary academic faculty	○	○	○	○
Lack of cooperation by secondary administrators	○	○	○	○
Lack of cooperation from postsecondary faculty or administrators	○	○	○	○
Lack of cooperation by state level staff	○	○	○	○
Resistance to state influence at local level	○	○	○	○
Shortage of funds	○	○	○	○
Shortage of time	○	○	○	○
Conflicts between relevant individuals	○	○	○	○
Cannot find or hire qualified instructors	○	○	○	○
Lack of assistance from the state	○	○	○	○
Lack of state leadership	○	○	○	○

Programs of Study/Q10B

To what extent has each of the following barriers limited your LEA's efforts to *implement* POS?

	Not at all	Some	A lot	Don't know
Shortage of LEA CTE staff	○	○	○	○
Shortage of state CTE staff	○	○	○	○
Lack of CTE technical content standards	○	○	○	○
Lack of curricular materials	○	○	○	○
Lack of CTE state assessment instruments	○	○	○	○
Lack of technical expertise	○	○	○	○
Lack of cooperation by secondary CTE faculty	○	○	○	○
Lack of cooperation by secondary academic faculty	○	○	○	○
Lack of cooperation by secondary administrators	○	○	○	○
Lack of cooperation from postsecondary faculty or administrators	○	○	○	○
Lack of cooperation by state level staff	○	○	○	○
Resistance to state influence at local level	○	○	○	○
Shortage of funds	○	○	○	○
Shortage of time	○	○	○	○
Conflicts between relevant individuals	○	○	○	○
Cannot find or hire qualified instructors	○	○	○	○
Lack of assistance from the state	○	○	○	○
Lack of state leadership	○	○	○	○



Programs of Study/Q10C_sec

Please indicate the **earliest grade level** at which each of the following types of career guidance is offered to students participating in state-approved POS in your LEA.

Career days (with guest speakers)	--select one--
Career fairs (with local business represented)	--select one--
Job shadowing	--select one--
Internships/Co-ops	--select one--
Counselor meetings with individual students and parents to discuss career preparation and course selection	--select one--
Student development of a written plan of courses (e.g., an individual graduation plan)	--select one--
Student written selection of a POS	--select one--
Student completion of a career interest assessment	--select one--

--select one--
7th grade or earlier
8th grade
9th grade
10th grade
11th grade
12th grade
Not offered
Don't know

Programs of Study/Q10D_sec

Please indicate whether each of the following types of career guidance activities is *required* of students at any point in their program.

	Yes	No
Career days (with guest speakers)	○	○
Career fairs (with local business represented)	○	○
Job shadowing	○	○
Internships/Co-ops	○	○
Counselor meetings with individual students and parents to discuss career preparation and course selection	○	○
Student development of a written plan of courses (e.g., an individual graduation plan)	○	○
Student written selection of a POS	○	○
Student completion of a career interest assessment	○	○

Accountability/ACC_INTRO

The questions in the remainder of this survey address all of the CTE programs offered in your LEA irrespective of whether or not they qualify as a state-approved POS.

Accountability/Q11_sec

How difficult was it for your LEA to reach agreement with your state agency on performance benchmarks and targets for each of your Perkins accountability measures?

	Not Difficult		Somewhat Difficult		Very Difficult	Don't Know
Academic attainment (1S1, 1S2)	○	○	○	○	○	○
Technical skill attainment (2S1)	○	○	○	○	○	○
Secondary school completion (3S1)	○	○	○	○	○	○
Student graduation rates (4S1)	○	○	○	○	○	○
Placement in employment, higher education, or the military (5S1)	○	○	○	○	○	○
Non-traditional participation (6S1)	○	○	○	○	○	○
Non-traditional completion (6S2)	○	○	○	○	○	○

Accountability/Q11B

When negotiating with your state education agency to establish annual performance benchmarks and targets for your LEA, what were the reasons for encountering difficulty?

(Mark all that apply)

- ☐ Insufficient baseline data upon which to negotiate targets
- ☐ Lack of clear guidance from the state on what constitutes continuous improvement
- ☐ Anticipated difficulty in gathering and submitting required data
- ☐ Anticipated difficulty in being able to meet proposed performance targets
- ☐ Concern over the repercussions of your LEA failing to meet performance targets
- ☐ Other

Accountability/Q12

How do you identify students meeting the CTE concentrator threshold for Perkins accountability purposes?

(Mark all that apply)

- ☐ Students self-report concentrator status
- ☐ Teachers identify students based on course taking
- ☐ Administrators identify students using local management information system
- ☐ State identifies students using statewide database; no action at LEA level
- ☐ Other
- ☐ Don't know

Accountability/Q13

How do you ensure that the accountability data you collect for the Perkins accountability measures are valid and reliable?

(Mark all that apply)

- ☐ Follow state guidance on measure development
- ☐ Provide technical assistance to teachers
- ☐ Require teachers or administrators to review or spot-check data submissions
- ☐ Administrators or program chairs conduct an internal review of data
- ☐ Use a software program that automatically flags errors
- ☐ Other
- ☐ No steps taken to ensure data accuracy
- ☐ Don’t know

Accountability/Q14_sec

How confident are you that the data you are collecting for each of the following Perkins core indicators of performance provides an accurate measure of your LEA's actual performance?

CTE Populations

	Not Confident		Somewhat Confident		Very Confident	Don't Know
CTE participants	○	○	○	○	○	○
CTE concentrators	○	○	○	○	○	○

Core Indicator 1

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Academic attainment	○	○	○	○	○	○

Core Indicator 2

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Technical skill attainment	○	○	○	○	○	○

Core Indicator 3

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Secondary school diploma	○	○	○	○	○	○
GED	○	○	○	○	○	○
Other state-recognized equivalent	○	○	○	○	○	○
Proficiency credential/certificate/degree	○	○	○	○	○	○

Continued on next page…

Accountability/Q14_sec

How confident are you that the data you are collecting for each of the following Perkins core indicators of performance provides an accurate measure of your LEA's actual performance?

Continued….

Core Indicator 4

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Student ESEA (NCLB) graduation rate	○	○	○	○	○	○

Core Indicator 5

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Placement in postsecondary education or advanced training	○	○	○	○	○	○
Placement in the military	○	○	○	○	○	○
Placement in employment	○	○	○	○	○	○

Core Indicator 6

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Non-traditional participation	○	○	○	○	○	○
Non-traditional completion	○	○	○	○	○	○

Accountability/Q15

How confident are you that the data you are collecting for each of the Perkins special population categories provides an accurate measure of the actual performance of these populations?

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Individuals with disabilities	○	○	○	○	○	○
Individuals from economically disadvantaged families, including foster children	○	○	○	○	○	○
Individuals preparing for nontraditional fields	○	○	○	○	○	○
Single parents, including single pregnant women	○	○	○	○	○	○
Displaced homemakers	○	○	○	○	○	○
Individuals with limited English proficiency	○	○	○	○	○	○
Migrant students	○	○	○	○	○	○

Accountability/Q16A

In what ways and to what extent did your LEA use its prior year Perkins accountability data in the 2008-09 program year?

	Used not at all	Used not very much	Used somewhat	Used quite a bit	Used to a great extent
To identify programs in need of improvement	○	○	○	○	○
To make program funding decisions	○	○	○	○	○
To provide targeted technical assistance	○	○	○	○	○
To identify special population students not being adequately served	○	○	○	○	○
Other *(specify)* _____	○	○	○	○	○
Overall, how useful are the Perkins data you collect for your local program improvement efforts?	○	○	○	○	○

Accountability/Q16B

In the previous question you indicated that your LEA did not use its prior year Perkins accountability data in the following ways in the 2008-09 program year. Are there plans to use the data for any of these purposes in the next two years?

	Yes	No	Don't know
To identify programs in need of improvement	○	○	○
To make program funding decisions	○	○	○
To provide targeted technical assistance	○	○	○
To identify special population students not being adequately served	○	○	○
Other	○	○	○

Accountability/Q17A

What type of feedback does your state agency provide you on your LEA's performance on the Perkins accountability measures?

(Mark all that apply)

- ☐ No data on my LEA performance is shared
- ☐ Statewide average performance outcomes for all LEAs are shared
- ☐ Performance outcomes are shared for LEAs with characteristics similar to my own
- ☐ Performance outcomes are shared for all individual LEAs

Accountability/Q17B

If your LEA were to fail to meet its Perkins performance targets, does your state have a policy for the type of corrective action you must take to address the accountability deficiencies?

(Mark all that apply)

- ☐ Not applicable, no state policy exists
- ☐ Develop a program improvement plan
- ☐ Provide professional development to staff of underperforming programs
- ☐ Consult with state or local business or industry experts in the field
- ☐ Eliminate underperforming programs
- ☐ Restrict student access to programs
- ☐ Restructure or redesign existing CTE programs
- ☐ Other *(specify)*
- ☐ Don't know

Accountability/Q18

What proportion of the students participating in state-approved CTE programs within your LEA were assessed using one of the following methods to measure their technical skill attainment in the 2008-09 program year?

	None	Some	Most	All	Don't know
State-developed secondary CTE skill exam	○	○	○	○	○
Locally developed exam	○	○	○	○	○
Industry-developed, employer validated exams	○	○	○	○	○
National licensing or credentialing exams	○	○	○	○	○
State licensing or credentialing exams	○	○	○	○	○
Commercially developed exams (e.g., NOCTI)	○	○	○	○	○
Grade point average (GPA)	○	○	○	○	○
Course or program completion	○	○	○	○	○
Other *(specify)*	○	○	○	○	○

Accountability/Q20

The 2006 Perkins Act introduced a new set of accountability requirements for Tech Prep students. Indicate your level of agreement or disagreement with each of the following statements:

	Strongly Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Strongly Agree	Don't know
New measures impose a substantial data burden	○	○	○	○	○	○
The new measures will support program improvement efforts at the *State* level	○	○	○	○	○	○
The new measures will support program improvement efforts at the *local* level	○	○	○	○	○	○
Data collected for the measures are of high quality	○	○	○	○	○	○
The advantages of the new measures outweigh their disadvantages	○	○	○	○	○	○
My LEA is able to collect data on all measures	○	○	○	○	○	○
My LEA would benefit from obtaining state guidance on collecting data for the Tech Prep measures	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

Finance/Q21

How much of the total budget for CTE offered in your LEA in the 2008–09 program year came from each of the following sources?

(If none, enter "0", Mark "Don't Know" if you do not have this information)

	Dollar Amount	Don't Know
Local funds:		☐
State funds: Formula (must be spent on CTE)		☐
Discretionary		☐
Other *(specify)*		☐
Federal funds: Perkins Title I		☐
Perkins Reserve Fund		☐
Tech Prep Title II		☐
Other federal funds *(specify)*		☐

Finance/Q22

For which of the following permissible uses referenced in Section 135(c) of the 2006 Perkins Act did you use your 2008–09 Title I basic grant funds?

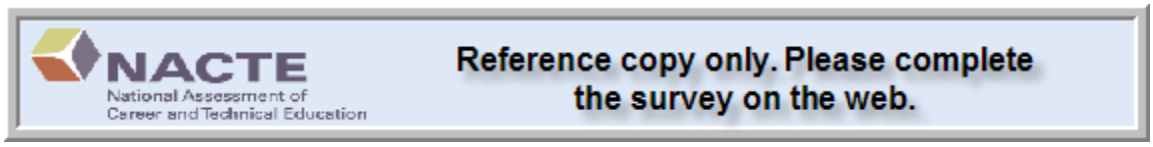
(Mark all that apply)

- ☐ Involving business and labor in designing, implementing, and evaluating CTE programs covered by the Act
- ☐ Providing career guidance and academic counseling
- ☐ Promoting work-related experiences for students
- ☐ Promoting industry experiences for teachers
- ☐ Providing programs for special populations
- ☐ Assisting CTE student organizations
- ☐ Offering mentoring and related support services
- ☐ Leasing, purchasing, upgrading, or adapting equipment
- ☐ Supporting teacher preparation programs
- ☐ Entrepreneurship education and training
- ☐ Developing new CTE courses
- ☐ Offering continuing education or job referral services
- ☐ Supporting nontraditional training and activities
- ☐ Providing training programs in automotive technologies
- ☐ Improving accountability data collection and reporting
- ☐ Implementing CTE programs of study
- ☐ Other

Finance/Q23

What impact has each of the following changes introduced in the 2006 Perkins Act had on the administration and implementation of CTE programs in your LEA?

	Very Negative Impact	Somewhat Negative Impact	No Impact	Somewhat Positive Impact	Very Positive Impact
Requirement to offer at least one POS to obtain funds	○	○	○	○	○
Requirement to dedicate funds to support special populations in preparing for high wage/skill/demand jobs	○	○	○	○	○
New allowable use of funds to support auto technologies	○	○	○	○	○
New allowable use of funds to form consortia to maximize investment and encourage innovation	○	○	○	○	○
Requirement to report disaggregated performance outcomes for populations referenced in the Elementary and Secondary Education Act (ESEA), also known as the No Child Left Behind Act	○	○	○	○	○
Requirement to negotiate performance benchmarks with the State agency to qualify for funds	○	○	○	○	○
Sanctions for failing to meet state negotiated performance benchmarks	○	○	○	○	○



Finance/Q24_sec

If your LEA was unable to enter into a consortium and received a state waiver for the ***minimum allocation rule*** ($15,000 per substate grantee) in 2008-09, why was it granted? *[Reference: Section 131 (c) (1) and (2)]*

- ○ Not applicable, no waiver granted
- ○ Rural, sparsely populated area
- ○ Public charter school
- ○ Other *(specify)*
- ○ Don't know

END

Please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses. If there are errors present, simply select the question from the validation summary list to take you directly to the question to correct your data. Once you have corrected the data, go to the navigation panel on the left side of the screen and select the form titled END.

You have completed the Survey of Secondary School Districts Offering Career-Technical Education. To mark your survey complete and submit your data, click on the validate button and then select the Mark Complete button.

Thank you very much for taking the time to participate in this important study.

If you have any questions or comments about this study, please contact Steven Klein (MPR) at 503-963-3757

State Director Survey—Postsecondary

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Welcome/Contact_info

Welcome to the Web-based National Assessment of Career and Technical Education survey (NACTE) sponsored by the U.S. Department of Education.

Please take a moment and complete the contact information below before proceeding with the survey.

First Name:

Last Name:

Title:

Phone (XXX-XXX-XXXX):

Email:

Address:

Address 2 (optional):

City:

State: -Select one-

Zip code:

Welcome/Confidentiality

Uses of the Data:
This study is being conducted for the U.S. Department of Education, which has contracted with MPR Associates, Inc., and RTI International (RTI). The purpose of this study is to collect information relating to the implementation of the *Carl D. Perkins Career and Technical Education Act of 2006* during the 2008-09 academic year. Because a limited number of institutions have been selected, we would very much like for you to participate on behalf of your educational institution.

Confidentiality
As a matter of policy, The U.S. Department of Education is concerned with protecting the privacy of participants in voluntary surveys.
We want to let you know that:

- Your responses will be merged with those of other respondents and will not be identified as the agency you represent, except as required by law.
- You may skip questions you do not wish to answer; however, we encourage you to answer as many questions as possible, because incomplete data will reduce the value of the information provided to Congress.
- Your answers may be used only for statistical purposes. Participation is voluntary and will not affect any aid or other benefits that your state agency, LEA, or institution may receive.

If you have questions about the study, you may contact:

- the NACTE Help Desk at (866) 434-4718
- Steven Klein, the study's director, at (503) 963-3757 or sklein@mprinc.com, or
- Michael Fong, the U.S. Department of Education's Project Officer, at (202) 401-7462, Michael.Fong@ed.gov.

If you have questions about your rights as a study participant, you may contact RTI's Office of Research Protection toll free at (866) 214-2043.

Welcome/Definitions

Definitions:
Some questions in the survey include a hyperlink (a word or group of words in blue font that is underlined) that, when clicked on, brings up a definition.

For example,
Career and Technical Education (CTE): The term 'career and technical education (CTE)' means organized educational activities that—
(A) offer a sequence of courses that—
(i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions;
(ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and
(iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and
(B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry,including entrepreneurship, of an individual.

Programs of Study (POS): Programmatic coursework that meets the following: incorporates both secondary and postsecondary education elements; includes coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary eduction to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and leads to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Welcome/Navigation_Instructions

Instructions and Navigation:

NACTE Help Desk: 866-434-4718

To navigate through the survey you will notice two buttons in the lower left hand corner of each screen titled "Previous" and "Next". You can select either button at anytime to move through the survey.

Alternately, you can also use the navigation panel located on the left-hand side of the screen. You may jump to any question in navigation panel simply by clicking on the question number.

- The questions in the navigation panel will turn green once they have been viewed/answered and have passed preliminary validation.
- If a question does not pass preliminary validation either because of incomplete information or errors with the response, the question in the navigation panel will turn yellow.
- Questions in the navigation menu that are grey, and have a strike through are not applicable to you (e.g., ~~Q62~~).

The "Save & Exit" button located in the lower right-hand corner of the screen allows you to exit the survey at any time. The next time you login to the survey you will return to the same question.

Also, located in the lower right-hand corner of the screen is the "Help" button. It contains information regarding recommended browsers, and contains definitions for the survey response items (i.e., drop-down boxes, checkboxes, and hyperlinks).

At the end of the survey, please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses.

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Programs of Study/Intro

The following questions in this survey address career and technical education (CTE) programs offered in your state that qualify as Programs of Study (POS).

Programs of Study/Q1

Has your state passed legislation supporting the development and/or implementation of Programs of Study (POS) since the reauthorization of the Carl D. Perkins Career and Technical Education Improvement Act of 2006 (Perkins)?

- ○ Yes, in response to the 2006 Perkins reauthorization
- ○ Yes, for reasons other than the 2006 Perkins reauthorization
- ○ No, already have supporting legislation in place
- ○ No
- ○ Don't know

Programs of Study/Q1_upload

Please attach a copy of the legislation supporting the development and/or implementation of POS or provide web link.

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach a copy of the legislation or provide a web link:

☐ Do not have electronic copy of legislation

Programs of Study/Q2

Has your state modified or expanded its administrative policies supporting POS development and/or implementation since the reauthorization of the 2006 Perkins Act?

- ○ Yes, in response to the 2006 Perkins reauthorization
- ○ Yes, for reasons other than the 2006 Perkins reauthorization
- ○ No, already have supporting legislation in place
- ○ No
- ○ Don't know

Programs of Study/Q2_upload

Please attach a copy of the policies supporting POS development and/or implementation or provide web link

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach a copy of the policies or provide a web link:

☐ Do not have electronic copy of legislation

Programs of Study/Q3

Is state approval required for all POS offered within postsecondary institutions?

- ○ Yes, state approval is required for all POS
- ○ No, state approval is only required for a subset of POS
- ○ No, state approval is required only for the one (1) POS required of each local agency
- ○ No, state approval is not required
- ○ Don't know

Programs of Study/Q4

Does state administrative policy require that all career and technical education (CTE) programs in your state eventually become POS?

- ○ Yes, during the lifetime of the Perkins Act of 2006
- ○ Yes, no timeline specified
- ○ No
- ○ Don't know

Programs of Study/Q5

How many state-approved POS offered in your state in the 2008-09 program year were developed either at the state agency or institutional level?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Mark If Estimate	Don't Know
State developed POS		☐	☐
State-approved, locally developed POS, *using state template or guidance*		☐	☐
State-approved, locally developed POS (i.e., no state guidance provided to institutions)		☐	☐
Total			

Programs of Study/Q6

What percentage of postsecondary students participating in CTE in your state were enrolled in coursework that was part of a state-approved POS in the 2008-09 program year?

- ○ None
- ○ Less than 25%
- ○ Between 26 to 50%
- ○ Between 51 to 75%
- ○ Between 76 to 99%
- ○ All
- ○ Don't know

Programs of Study/Q7

In the following table, please list the five (5) POS *with the highest enrollments* in your state in the 2008-09 program year and the number of students enrolling in each. If you have less than five POS then please list them all. *Please do not include any POS that did not receive state approval.*

Type in the name of the POS (or name that best describes the POS offerings at the local level) in the first box, code it into the corresponding Career Cluster area (or closest corresponding area) by clicking on the second box, and enter the number of students enrolling in the POS in the third box. Mark 'Don't Know' if you do not have access to this information.

	Name of state-approved POS NOTE: Please crosswalk your POS to the appropriate cluster using the pull-down menu provided	Number of students enrolled in coursework in the POS in the 2008-2009 program year	
1	--select one--		Don't Know
2	--select one--		Don't Know
3	--select one--		Don't Know
4	--select one--		Don't Know
5	--select one--		Don't Know

Programs of Study/Q8A

Which of the following elements of a POS does your state require institutions to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Standards

	Required	Not Required	Don't Know
Align with technical standards that were... a. state-developed	○	○	○
b. industry-developed	○	○	○
c. national based on 16 career clusters	○	○	○
d. locally developed	○	○	○
e. other *(specify)*	○	○	○

Programs of Study/Q8B

Which of the following elements of a POS does your state require institutions to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Curriculum

	Required	Not Required	Don't Know
Uses a curriculum that is... a. state-developed	○	○	○
b. industry-developed	○	○	○
c. third-party (e.g., vendor) developed	○	○	○
d. locally developed	○	○	○
e. other *(specify)*	○	○	○
Uses a curriculum that spans the secondary and postsecondary levels	○	○	○
Uses a curriculum that is non-duplicative across secondary and postsecondary levels	○	○	○
Is part of an articulation agreement with a secondary institution	○	○	○
Is covered by a state-wide articulation agreement	○	○	○
Offers postsecondary credit to secondary students participating in dual or concurrent enrollment programs	○	○	○

Programs of Study/Q8C

Which of the following elements of a POS does your state require institutions to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Assessments

	Required	Not Required	Don't Know
Assesses technical skill attainment through... a. state-developed exams that are... (i) aligned with state technical standards	○	○	○
(ii) aligned with national 16 career cluster standards	○	○	○
(iii) aligned with industry standards	○	○	○
(iv) other *(specify)* _____	○	○	○
b. industry-developed exams	○	○	○
c. national licensing or credentialing exams	○	○	○
d. state licensing or credentialing exams	○	○	○
e. locally developed exams that are... (i) aligned with state standards	○	○	○
(ii) aligned with national 16 career cluster standards	○	○	○
(iii) aligned with industry standards	○	○	○
(iv) aligned with other *(specify)* _____	○	○	○
f. G.P.A. instead of exam	○	○	○
g. course or program completion	○	○	○
h. other *(specify)* _____	○	○	○

Programs of Study/Q8D_postsec

Which of the following elements of a POS does your state require institutions to adopt as part of a state-approved POS? (Note: These elements are not specifically defined within the Perkins legislation, but may be required by states as part of a locally developed POS.)

Other features

	Required	Not Required	Don't Know
Respond to local high skill, high demand, high pay occupational area	○	○	○
Career guidance must be available	○	○	○

Programs of Study/Q9

What action has your state taken to ensure that POS development at the institutional level aligns with the core elements identified in the Perkins legislation?

Mark all that apply

☐ Creating POS models or templates

☐ Developing curriculum guides and other materials

☐ Designing guides for aligning CTE content with academic standards or learning outcomes

☐ Designing guides for aligning CTE content with technical standards

☐ Requiring institutions to provide evidence of alignment in their local plans

☐ Securing secondary/postsecondary agreement on specific POS elements

☐ Consulting the career clusters developed by the States' Career Clusters Initiative

☐ Providing training and professional development to institutional staff

Programs of Study/Q10A_postsec

To what extent did representatives from the following stakeholder groups participate in state agency efforts to develop state-approved POS?

	Not at all	Some	A lot	Don't know
Postsecondary academic faculty	○	○	○	○
Postsecondary CTE faculty	○	○	○	○
Postsecondary administrators	○	○	○	○
Secondary academic teachers	○	○	○	○
Secondary CTE teachers	○	○	○	○
Secondary guidance counselors	○	○	○	○
Secondary Local Educational Agency (LEA) administrators	○	○	○	○
National industry/union groups or professional associations	○	○	○	○
Local business and/or unions	○	○	○	○
Local chamber of commerce	○	○	○	○

Programs of Study/Q10B_postsec

Were representatives of the following stakeholder groups required to participate or had the option to participate in institutional efforts to develop state-approved POS?

	Required	Optional
Postsecondary academic faculty	○	○
Postsecondary CTE faculty	○	○
Postsecondary administrators	○	○
Secondary academic teachers	○	○
Secondary CTE teachers	○	○
Secondary guidance counselors	○	○
Secondary LEA administrators	○	○
National industry/union groups or professional associations	○	○
Local business and/or unions	○	○
Local chamber of commerce	○	○

Programs of Study/Q11

On which of the following topics did your state introduce new **technical assistance** activities to help institutions develop state-approved POS during the 2007-08 and/or 2008-09 program years?

Mark all that apply

- ☐ POS templates or guidelines
- ☐ Career clusters
- ☐ CTE content standards
- ☐ CTE curriculum development guidelines
- ☐ Academic and CTE curriculum integration
- ☐ Secondary and postsecondary curriculum alignment
- ☐ Technical skill assessments
- ☐ Career guidance and counseling
- ☐ Data systems for monitoring student progress
- ☐ Aligning standards and assessments
- ☐ Other

Programs of Study/Q12_postsec

What types of **professional development** did your state offer to the following groups involved in the development and implementation of state-approved POS during the 2007-08 and /or 2008-09 program years?

Mark all that apply for each group. If your state offered other types of professional development, specify the type(s) of professional development in textbox(es) in the "Other" column below.

	Statewide or Regional Conferences	Local Workshops	Online Electronic Workshop/ Webinars	One-on-one Assistance	Other *(specify)*	None	Don't Know
Postsecondary administrators	☐	☐	☐	☐		☐	☐
Postsecondary counselors	☐	☐	☐	☐		☐	☐
Postsecondary faculty	☐	☐	☐	☐		☐	☐
Secondary administrators	☐	☐	☐	☐		☐	☐
Secondary counselors	☐	☐	☐	☐		☐	☐
Secondary academic teachers	☐	☐	☐	☐		☐	☐
Secondary CTE teachers	☐	☐	☐	☐		☐	☐

Programs of Study/Q13

Indicate whether you agree or disagree with the following statements that describe your state agency's efforts to develop state-approved POS.

	Strongly Disagree		No Opinion		Strongly Agree	Does not Apply
A shortage of state staff has limited POS development	○	○	○	○	○	○
State staff have technical expertise in designing POS	○	○	○	○	○	○
There is adequate federal funding to support POS development	○	○	○	○	○	○
There is adequate federal guidance to support POS development	○	○	○	○	○	○
State staff have adequate time to support POS development	○	○	○	○	○	○
Lack of statewide technical content standards has hindered POS development	○	○	○	○	○	○
Lack of statewide curricular materials has hindered POS development	○	○	○	○	○	○
Lack of technical skill assessments has hindered POS development	○	○	○	○	○	○
State staff have little influence at the local level	○	○	○	○	○	○

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Programs of Study/Q13

Indicate whether you agree or disagree with the following statements that describe your state agency's efforts to develop state-approved POS.

	Strongly Disagree		No Opinion		Strongly Agree	Does not Apply
Postsecondary CTE faculty have a good understanding of POS	○	○	○	○	○	○
Postsecondary academic faculty have a good understanding of POS	○	○	○	○	○	○
Secondary CTE teachers and postsecondary CTE instructors lack the necessary skills or time to integrate academic and technical standards to design curricula	○	○	○	○	○	○
CTE and academic instructors within postsecondary institutions are cooperating to create POS	○	○	○	○	○	○
Secondary teachers and postsecondary instructors are cooperating to create POS	○	○	○	○	○	○
Secondary and postsecondary local administrators are cooperating to create POS	○	○	○	○	○	○
Secondary and postsecondary state staff are cooperating to implement POS	○	○	○	○	○	○

Programs of Study/Q14

How are CTE content standards developed for the state-approved POS offered in your state?

Mark all that apply

- ☐ State develops postsecondary CTE standards
- ☐ State adopts industry-based standards
- ☐ State adopts 16 career clusters standards
- ☐ Local instructors develop content standards based on state criteria
- ☐ Local instructors develop their own standards
- ☐ Local instructors adopt standards created by industry groups
- ☐ Local instructors consult with business or advisory council to develop or select standards
- ☐ No standards exist
- ☐ Don't know

Programs of Study/Q15

What proportion of the state-approved POS offered in your state used each of the following sources for CTE content standards in the 2008-09 program year?

	None	Some	Many	All	Don't Know
State-developed CTE standards	○	○	○	○	○
Locally developed CTE standards	○	○	○	○	○
Industry-developed standards	○	○	○	○	○
National standards for the 16 career clusters	○	○	○	○	○
Postsecondary developed CTE standards	○	○	○	○	○
No CTE standards are required or exist	○	○	○	○	○

Programs of Study/Q16

What share of POS approved by your state incorporated each of the following levels of CTE content standards in the 2008-09 program year?

	None	Some	Many	All	Don't Know
Foundation-level skills (e.g., work readiness)	○	○	○	○	○
Cluster level skills (i.e., 16 national career clusters)	○	○	○	○	○
Pathway level skills (i.e., 79 national pathways)	○	○	○	○	○
Occupational level skills (e.g., job-specific)	○	○	○	○	○

Programs of Study/Q17

How many of the state-approved POS offered by institutions in your state used the following tools to assess students' technical skill attainment in the 2008-09 program year?

	None	Some	Many	All	Don't Know
State developed postsecondary CTE skill exam	○	○	○	○	○
Locally-developed CTE skill exams	○	○	○	○	○
Industry-developed, employer validated exams	○	○	○	○	○
National licensing or credentialing exams	○	○	○	○	○
State licensing or credentialing exams	○	○	○	○	○
Commercially-developed exams (e.g., NOCTI)	○	○	○	○	○
Grade point average (GPA)	○	○	○	○	○
Course or program completion	○	○	○	○	○

Programs of Study/Q19A

How are institutions monitored by the state to ensure they are offering state-approved POS?

Mark all that apply

- ☐ State agency staff visit individual sites
- ☐ Secondary LEA administrators of CTE visit individual sites
- ☐ Through state reporting requirements for POS
- ☐ Other approach
- ☐ Not applicable/Not done

Programs of Study/Q19B

How are POS offered within institutions evaluated to assess whether these programs are accomplishing the goals for which they are intended?

Mark all that apply

- ☐ State agency staff visit individual sites
- ☐ Secondary district office staff visit individual sites
- ☐ Through state reporting requirements for POS
- ☐ Other approach
- ☐ Not applicable/Not done

Programs of Study/Q20A

Who is responsible for monitoring the implementation of state-approved POS for Perkins compliance?

Mark all that apply

- ☐ State agency staff
- ☐ LEA administrators of CTE
- ☐ Secondary teachers or administrators
- ☐ Postsecondary faculty or administrators
- ☐ Advisory committees
- ☐ Other agency or individual
- ☐ Not applicable/Not done

Programs of Study/Q20B

What changes or additions to the Perkins legislation regarding POS would you recommend that Congress consider for the next reauthorization?

Accountability/AccountabilityIntro

The questions in the remainder of this survey address ALL of the CTE programs offered in your state irrespective of whether or not they qualify as a POS.

Accountability/Q21

Overall, how important were the following issues in negotiating your state performance benchmarks and targets with the U.S. Department of Education?

	Not Important		Somewhat Important		Very Important	Don't Know
State program performance goals for Perkins measures	○	○	○	○	○	○
Past state performance on Perkins measures	○	○	○	○	○	○
Anticipated changes in state conditions, *excluding* funding	○	○	○	○	○	○
Anticipated changes in CTE program offerings	○	○	○	○	○	○
Anticipated changes in student populations participating in CTE programs	○	○	○	○	○	○
Anticipated change in state and/or local funding	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

Accountability/Q22

How difficult was it to reach agreement when negotiating with the U.S. Department of Education to establish annual performance benchmarks and targets for your state?

	Not Difficult		Somewhat Difficult		Very Difficult	Don't Know
Transition year performance benchmarks	○	○	○	○	○	○
Annual FAUPL performance targets	○	○	○	○	○	○

Accountability/Q23

When negotiating with the U.S. Department of Education to establish annual performance benchmarks and targets for your state what were the reasons for encountering difficulty?

Mark all that apply

☐ Insufficient baseline data upon which to negotiate targets

☐ Lack of clear guidance from the Department on what constitutes continuous improvement

☐ Anticipated difficulty in gathering and submitting required data

☐ Anticipated difficulty in negotiating similar performance targets with local grantees

☐ Concern over the repercussions of the state failing to meet performance targets

☐ Other

Accountability/Q24

What percentage of institutions in your state have negotiated performance improvement targets differing from your state-established targets on one or more performance measures in 2008-09?

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Enter Percentage	Mark If Estimate	Don't Know
Performance levels and improvement targets are individually negotiated for what percentage of institutions?		☐	☐

Accountability/Q25

How important were the following factors when negotiating performance targets with institutions?

	Not Important		Somewhat Important		Very Important	Don't Know
Program performance goals on Perkins measures	○	○	○	○	○	○
Past performance on Perkins measures	○	○	○	○	○	○
Anticipated changes in local conditions	○	○	○	○	○	○
Anticipated changes in CTE program offerings	○	○	○	○	○	○
Anticipated changes in student populations participating in CTE programs	○	○	○	○	○	○
Anticipated changes in state and/or local funding	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

Accountability/Q26_postsec

OVAE issued non-regulatory guidance to assist states in developing their accountability systems for the 2006 Perkins Act. How did your state make use of the OVAE guidance in crafting each of the following?

Identifying Populations

	Did Not Use	Consulted	Used Verbatim	Don't Know
CTE participants	○	○	○	○
CTE concentrators	○	○	○	○

Constructing Accountability Measures

	Did Not Use	Consulted	Used Verbatim	Don't Know
Technical skill attainment (1P1)	○	○	○	○
Attainment of an industry-recognized credential certificate, or degree (2P1)	○	○	○	○
Retention in postsecondary education or transfer to a baccalaureate degree program (3P1)	○	○	○	○
Placement into an apprenticeship program, the military, or employment (4P1)	○	○	○	○
Non-traditional participation (5P1)	○	○	○	○
Non-traditional completion (5P2)	○	○	○	○

Accountability/Q27

Which of the following types of technical assistance did your state provide to assist institutions in implementing accountability measures and reporting during the 2008-2009 program year?

Mark all that apply

- ☐ Issued guidance on data collection
- ☐ Statewide training on data collection and reporting
- ☐ Local site visits
- ☐ Help line (telephone or email)
- ☐ Provided individualized technical assistance
- ☐ Other
- ☐ Did not provide any technical assistance

Accountability/Q28

Does the database you use for Perkins reporting purposes enable you to:

	Yes	No	Don't Know
Monitor individual students over time	○	○	○
Access non-CTE-related information contained in student transcripts	○	○	○
Link students to teachers or instructors	○	○	○
Link high school records to administrative records for students enrolling in in-state community colleges	○	○	○
Link high school records to administrative records for students enrolling in in-state four-year colleges or universities	○	○	○
Link high schools records to administrative records for students enrolling in out-of-state community colleges, four-year colleges, or universities	○	○	○
Link in-state community college records to in-state 4-year colleges or universities	○	○	○

Accountability/Q29

What types of quality control measures has your state adopted to ensure the validity and reliability of institutionally reported data?

Mark all that apply

- ☐ Conduct desk audit of local data to identify inaccurate information
- ☐ Use electronic error checking strategies to identify inaccurate data
- ☐ Provides technical assistance and/or guidelines to locals on data collection and editing procedures
- ☐ State compares totals to prior year reports
- ☐ Other
- ☐ No quality control measures have been adopted

Accountability/Q30_postsec

How confident are you that the data you are collecting from institutions for each of the following Perkins core indicators of performance accurately reflect local performance?

Core Indicator 1

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Technical skill attainment	○	○	○	○	○	○	○

Core Indicator 2

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Industry recognized credential/certificate /degree	○	○	○	○	○	○	○

Core Indicator 3

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Retention in postsecondary education	○	○	○	○	○	○	○
Transfer to a baccalaureate degree program	○	○	○	○	○	○	○

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Accountability/Q30_postsec

How confident are you that the data you are collecting from institutions for each of the following Perkins core indicators of performance accurately reflect local performance?

Core Indicator 4

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Placement in the military	○	○	○	○	○	○	○
Placement in apprenticeship	○	○	○	○	○	○	○
Placement in employment	○	○	○	○	○	○	○

Core Indicator 5

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Non-traditional participation	○	○	○	○	○	○	○
Non-traditional completion	○	○	○	○	○	○	○

Accountability/Q31

How confident are you that LEAs can report -- complete and accurate data for the following special populations, as defined by ESEA?

	Not Confident		Somewhat Confident		Very Confident	Don't Know	Not Applicable
Individuals with disabilities	○	○	○	○	○	○	○
Individuals from economically disadvantaged families, including foster children	○	○	○	○	○	○	○
Individuals preparing for nontraditional fields	○	○	○	○	○	○	○
Single parents, including single pregnant women	○	○	○	○	○	○	○
Displaced homemakers	○	○	○	○	○	○	○
Individuals with limited English proficiency	○	○	○	○	○	○	○

Accountability/Q32_postsec

What proportion of institutions in your state were unable to achieve their negotiated performance target for each of the following Perkins accountability measures during the 2008-09 program year?

	None	1-10%	11-20%	21-30%	>30%	Don't Know
Technical skill attainment (1P1)	○	○	○	○	○	○
Attainment of an industry-recognized credential certificate, or degree (2P1)	○	○	○	○	○	○
Retention in postsecondary education or transfer to a baccalaureate degree program (3P1)	○	○	○	○	○	○
Placement into an apprenticeship program, the military, or employment (4P1)	○	○	○	○	○	○
Non-traditional participation (5P1)	○	○	○	○	○	○
Non-traditional completion (5P2)	○	○	○	○	○	○

Accountability/Q34

How many institutions in your state are required to develop a Perkins program improvement plan for 2009-10 on the basis of performance data that were generated in the 2008-09 program year?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
Institutions in need of improvement		☐

Accountability/Q35A

In what ways and to what extent does your state currently use Perkins postsecondary core indicator data?

	Used to a great extent	Used quite a bit	Used somewhat	Used not very much	Used not at all
To reward institutions that are performing well	○	○	○	○	○
To sanction low-performing institutions	○	○	○	○	○
To identify programs in need of improvement	○	○	○	○	○
To provide targeted technical assistance	○	○	○	○	○
To provide additional resources for program improvement	○	○	○	○	○
To identify unusually effective programs	○	○	○	○	○
To identify special populations not being adequately served	○	○	○	○	○
Other *(specify)*	○	○	○	○	○

Accountability/Q35B

On the previous question you indicated your institution did not use its prior year Perkins accountability data in 2008-09 in the following ways. Are there plans to use the data for these purposes in the next two years?

	Yes	No	Don't Know
To reward institutions that are performing well	○	○	○
To sanction low-performing institutions	○	○	○
To identify programs in need of improvement	○	○	○
To provide targeted technical assistance	○	○	○
To provide additional resources for program improvement	○	○	○
To identify unusually effective programs	○	○	○
To identify special populations not being adequately served	○	○	○
Other (if specified)	○	○	○

Accountability/Q36

What types of consequences do existing state policies impose on institutions that do not meet one or more of their Perkins IV accountability performance targets?

Mark all that apply

☐ Consequences exist but are unlikely to be imposed

☐ Develop a local program improvement plan

☐ Additional accountability reporting requirements

☐ Loss of, or decrease in, state or Perkins funding

☐ Restrictions or loss of flexibility in the use of Perkins funds

☐ Other

☐ No consequences exist

☐ Don't know

Accountability/Q37

How far along is your state in the development of technical skills assessments?

Mark all that apply

- ☐ Created state-developed technical skills assessment *covering all* CTE programs
- ☐ Created state-developed technical skills assessment *covering a subset of* CTE programs
- ☐ Adopted commercial technical skills assessment *covering all* CTE programs
- ☐ Adopted commercial technical skills assessment *covering a subset of* CTE programs
- ☐ Approved list of technical skills assessments for local use
- ☐ In process of designing or transitioning to CTE technical skills assessment system
- ☐ Considering development options
- ☐ Other
- ☐ No plans to develop an assessment system at this time

Accountability/Q38

How many of the institutions in your state used the following tools to assess students' technical skill attainment in the 2008-09 program year?

	None	Some	Many	All	Don't Know
State developed postsecondary CTE skill exam(s)	○	○	○	○	○
Institutionally developed CTE skill exam(s)	○	○	○	○	○
Industry developed, employer validated exam(s)	○	○	○	○	○
National licensing or credentialing exam(s)	○	○	○	○	○
State licensing or credentialing exam(s)	○	○	○	○	○
Commercially developed exam(s) (e.g., NOCTI)	○	○	○	○	○
Grade point average (GPA)	○	○	○	○	○
CTE course or program completion	○	○	○	○	○

Accountability/Q39

What percentage of CTE concentrators reported in your state's technical skill assessment measure were assessed using a state or industry developed technical skill assessment, national or state licensing or credentialing, or commercially developed exam in the 2008-09 program year?

	None	Less than 25%	Between 26 to 50%	Between 51 to 75%	Between 76 to 99%	All	Don't know
State developed technical skill assessment	○	○	○	○	○	○	○
Industry developed technical skill assessment	○	○	○	○	○	○	○
National licensing or credentialing exam	○	○	○	○	○	○	○
State licensing or credentialing exam	○	○	○	○	○	○	○
Commercially developed exam	○	○	○	○	○	○	○

Accountability/Q40

For each of the following data sources, indicate whether your state uses this source to collect placement data and, if not in use, whether state legal restrictions prevent your state in using this approach?

	In Use By State	Legal Restrictions Prohibit Use	Not in Use
National Student Clearinghouse	○	○	○
State Unemployment Insurance wage records	○	○	○
Federal Employment Data Exchange System (FEDES)	○	○	○
Wage Record Information System (WRIS)	○	○	○
State higher education student database	○	○	○

Accountability/Q41

How does each of the following impact your state's capacity to report placement data?

	No Impact		Some Impact		Great Impact	Don't Know
Access to Social Security numbers for students	○	○	○	○	○	○
Cost of conducting follow-up studies of students who have left high school	○	○	○	○	○	○
Cost for record matching with other agencies	○	○	○	○	○	○
Getting an adequate response rate	○	○	○	○	○	○
Collecting data on self-employed individuals	○	○	○	○	○	○
Collecting data on those employed out-of-state	○	○	○	○	○	○
Collecting data on those attending an in-state 2-year public postsecondary institution	○	○	○	○	○	○
Collecting data on those attending an in-state 4-year public postsecondary institution	○	○	○	○	○	○
Collecting data on those attending an in-state private postsecondary institution	○	○	○	○	○	○
Collecting data on those attending an out-of-state public or private postsecondary institution	○	○	○	○	○	○

Accountability/Q41B

Does your state agency provide institutions with feedback on their performance on the Perkins accountability measures to permit them to assess their performance with others in the state, and if so, what type of information is shared?

Mark all that apply

- ☐ Statewide performance outcomes averaged across all institutions are shared
- ☐ Performance outcomes are shared, controlling for institutional characteristics
- ☐ Performance outcomes are shared for all individual institutions
- ☐ Performance outcomes that are shared are posted on the internet for viewing
- ☐ No data on institutional performance are shared

Accountability/Q41C

What changes or additions to the Perkins legislation regarding state or local accountability would you recommend that Congress consider for the next reauthorization?

Finance/FinanceIntro

The following questions ask you to report on financial information relating to the implementation of Perkins.

Finance/Q42

How much of your Perkins funds were allocated to the secondary and postsecondary sectors in your state in each of the following fiscal years? If Tech Prep is merged with the Basic Grant, report all funds in Title I Basic Grant.

Enter dollar amount (whole numbers only, do not include $, commas, or other non-numeric characters)

	Title I Basic Grant 2006-07 (Perkins III)	**Title I Basic Grant** 2008-09 (Perkins IV)	**Title II Tech Prep** 2006-07 (Perkins III)	**Title II Tech Prep** 2008-09 (Perkins IV)	**State Leadership** 2006-07 (Perkins III)	**State Leadership** 2008-09 (Perkins IV)
Secondary						
Postsecondary						

Finance/Q43

If your state changed the percentage split in its allocation of Title I funds to secondary and postsecondary education since the adoption of Perkins IV, what factors brought about this action?

Mark all that apply

- ☐ Change in state legislative policies or priorities
- ☐ Adoption of state economic development initiative
- ☐ Increased focus on academics over CTE instruction at secondary level
- ☐ Increased focus in providing CTE instruction in one sector over the other
- ☐ Change in state financing of CTE using non-federal funds
- ☐ Other
- ☐ Not applicable, state has not changed its funding split
- ☐ Don't Know

Finance/Q44

Is your state planning to make any changes to the amounts of funding allocated to secondary and postsecondary sectors for the remainder of Perkins IV?

- ○ Yes, increase secondary sector share of funding
- ○ Yes, increase postsecondary sector share of funding
- ○ No
- ○ Don't Know

Finance/Q45

How many local applications for 2008-09 program year Perkins IV, Title I funding did your state agency receive, and how many of these were approved or disapproved?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
Total number received		☐
Number approved as originally submitted		☐
Number approved after revision and re-submission		☐
Number disapproved		☐

Finance/Q46

What were the *principal reasons for disapproval*?

Mark all that apply

- ☐ No description or inadequate description of local plans for allocating funds
- ☐ No description or inadequate description of local plans for collecting accountability data
- ☐ Failed to provide accountability data in the past
- ☐ Poor past performance
- ☐ Failed to agree on negotiated performance target in the past
- ☐ Program determined to lack sufficient quality
- ☐ Other

Finance/Q47_postsec

What amount of your state's 2008-2009 Perkins IV, Title I *postsecondary* funds went to each of the following types of providers? [Note: if your state consolidated its Title II Tech Prep funds into its Title I Basic Grant, report all funds in the Title I category]

*Enter **dollar amount** (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information*

	Dollars	Don't Know
Area or regional schools serving postsecondary students		☐
Adult programs located in secondary LEAs		☐
Public one- or two-year technical colleges or institutes		☐
Public community colleges		☐
Public four-year colleges or universities		☐
Private, non-profit or independent postsecondary providers		☐
Tribally-controlled or Bureau of Indian Affairs (BIA) funded colleges		☐
Other *(specify)*		☐

Finance/Q48_postsec

Did your state allocate postsecondary grants in 2008-09 under a *waiver* of the required Perkins formula (i.e., Section 132 (b) of the Perkins IV Act)?

○ Yes
○ No

Finance/Q48_upload

Please attach the waiver formula (for allocation of postsecondary grants in 2008-09)

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach the waiver formula (for allocation of postsecondary grants in 2008-09).

Finance/Q49

For the 2008-09 program year, did your state waive the **minimum allocation rule** ($50,000 per substate grantee) for any grantees? *[Reference: Section 132(a) (4) and 132(c) (1)]*

- ○ Yes
- ○ No

Finance/Q50_postsec

How many waivers were granted for each of the following reasons?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
Institution is in a rural, sparsely populated area		☐
Other		☐

Finance/Q51_postsec

Did your state use the special rule for a **minimal allocation** of Perkins IV, Title I funds at the postsecondary level in the 2008-09 program year? *[Reference: Section 133 (a) (1) and (2)]*
Note: Perkins IV permits a state that allocates less than 15% of its basic grant funds to the postsecondary sector to allocate resources using a competitive process or alternative method determined by the state agency.

- ○ Yes
- ○ No, were eligible but did not use the rule for minimal allocation
- ○ No, were not eligible to use the minimal allocation

Finance/Q52

For the 2008-09 program year, did your state use the option to create a **reserve fund** to allocate resources to LEAs through a means **other than the statutory formula**?

- ○ Yes
- ○ No

Finance/Q53

How much money was placed into the state ***reserve fund*** for distribution to postsecondary institutions for the 2008-09 program year?

Enter dollar amount (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Amount	Don't Know
Reserve fund amount		☐

Finance/Q54

What amount of your reserve funds were awarded to postsecondary institutions located in the following areas?

Enter dollar amount (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Amount	Don't Know
Rural areas		☐
Areas with high percentages of CTE students		☐
Areas with high numbers of career and education students		☐
Other *(specify)*		☐

Finance/Q55

How many tribally-controlled or Bureau of Indian Affairs (BIA)-funded LEAs received Perkins grants in 2008-09 as noted?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
As an individual agency		☐
As a member of a consortia		☐

Finance/Q56

Of the funds used at the postsecondary level, on average, what percentage of your state's 2008-09 **State Leadership Funds** were allocated for the following **required uses** referenced in Section 124 of the Perkins Act?
[NOTE: Percentages need not total to 100%]

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Enter Percentage	Don't Know
Assessing CTE programs		☐
Expanding the use of technology in CTE programs		☐
Providing professional development		☐
Strengthening the integration of academic and CTE instruction		☐
Preparing individuals for nontraditional employment		☐
Supporting partnerships among secondary, postsecondary, adult education, and other local institutions		☐
Serving individuals in state institutions, such as state correctional and institutions serving disabled students		☐
Supporting programs that prepare special education students for entry into high skill, high wage, high demand occupations		☐
Technical assistance for eligible recipients		☐

Finance/Q57

How much of the 10 percent State Leadership funding was made available in 2008-09 for postsecondary services that prepare individuals for nontraditional fields (i.e., of the not less than $60,000 and not more than $150,000 earmarked for the purpose)?

Enter dollar amount (whole numbers only, do not include $, commas, or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Amount	Don't Know
Nontraditional funding		☐

Finance/Q58

What percentage of your State Leadership funds for postsecondary education in 2008-09 was used to support POS development or implementation?

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Enter Percentage	Don't Know
POS development		☐
POS implementation		☐

Finance/Q59A

Indicate whether your state has a gender equity coordinator at the postsecondary level and the job status of their position.

- ○ None
- ○ Full-time
- ○ Part-time

Finance/Q59B

Indicate whether your state has a special populations coordinator at the postsecondary level and the job status of their position.

- ○ None
- ○ Full-time
- ○ Part-time

Finance/Q60

From what funding source(s) were the gender equity and special populations coordinator positions funded in 2008-09?

Mark all that apply

☐ Perkins State Leadership funds

☐ Perkins State Administration funds

☐ Non-Perkins State funds

☐ Other

Finance/Q60B

What changes or additions to the Perkins legislation regarding finance would you recommend that Congress consider for the next reauthorization?

Finance/Q61_INTRO

The following questions pertain to your **state's** funding system for secondary CTE. **Do not** include Perkins funds or resources used for your state Perkins match in this section.

Finance/Q61

Did your state provide categorical funding for CTE services offered in postsecondary institutions in the 2008-09 program year?

○ Yes
○ No

Finance/Q61_upload

Please attach state CTE funding formula or web link

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach state CTE funding formula

or provide a web link:

Finance/Q62

What percentage of the categorical statewide support for postsecondary CTE offered in your state in 2008-09 would you estimate came from the following sources: (Must total 100 %)

Enter percentage (whole numbers only, do not include % or other non-numeric characters) or mark "Don't Know" if you do not have this information

	Percentage	Don't Know
Federal sources (excluding Perkins)		☐
State sources		☐
Local sources		☐
Other *(specify)*		☐
Total		

Finance/Q63

Does your state use performance-based allocations (e.g., rewards and/or sanctions) for **state** postsecondary CTE funds?

- ○ Yes
- ○ No

Finance/Q63_upload

Please attach description of state performance-based funding allocation formula or web link

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach description of state performance-based funding allocation formula

or provide a web link:

Tech Prep/TechPrepIntro

The following questions in this survey address tech prep programs offered in your state.

Tech Prep/Q64

Did your state choose to merge its Tech Prep funds into its Title I basic grant during or prior to the 2009-010 program year?

- ○ Yes
- ○ No

Tech Prep/Q65

What are the reasons that your state opted to merge its Tech Prep funding with its basic grant funds?

Mark all that apply

- ☐ Desire to incorporate Tech Prep into all CTE programs
- ☐ Due to the similarity between Tech Prep and POS
- ☐ Avoid data burden associated with collecting new Tech Prep measures
- ☐ Difficulty identifying Tech Prep students from other CTE students
- ☐ Difficulty collecting data on Tech Prep students
- ☐ Other

Tech Prep/Q66

Is your state planning to consolidate its Tech Prep funds into its Title I basic grant prior to the end of the Perkins IV Act, and if so, when?

- ○ State has no plans to consolidate funding
- ○ 2010-11 program year
- ○ 2011-12 program year
- ○ Don't know

Tech Prep/Q67

How did your state allocate grants to local Tech Prep Consortia in 2008-09 from funds not merged?

- ○ Through a competitive application and award process
- ○ By formula
- ○ Both competition and formula
- ○ Other *(specify)*

Tech Prep/Q67_upload

Please attach the guidelines or criteria used to allocate grants to local Tech Prep Consortia in 2008-09 from funds not merged.

Provide your file in one of these formats: .doc, .xls, .csv, .dat, .txt, .pdf. If you have some other file type, please call our help desk at 866-434-4718.

Please attach the guidelines or criteria used.

Tech Prep/Q68

How many local applications for 2008-09 program year Perkins IV, Title II Tech Prep funding did your state agency receive, and how many of these were approved or disapproved?

Enter number (whole numbers only, do not include commas or other non-numeric characters), mark "Don't Know" if you do not have this information

	Enter Number	Don't Know
Total number received		☐
Number approved as originally submitted		☐
Number approved after revision and re-submission		☐
Number disapproved		☐

Tech Prep/Q69

What were the *principal reasons for disapproval*?

Mark all that apply

- ☐ No plan submitted or inadequate plan for local allocation of funds
- ☐ No plan submitted or inadequate plan for collection of accountability data
- ☐ Poor past performance
- ☐ Program determined to lack sufficient quality
- ☐ Other

Tech Prep/Q70

Which, if any, of the following obstacles does your state face in tracking Tech Prep students as they transition between the secondary and postsecondary education sectors?

Mark all that apply

- ☐ Secondary and postsecondary sectors do not share a common student identifier
- ☐ Secondary and postsecondary sectors do not have a means of sharing data
- ☐ Secondary Tech Prep students do not self-identify (or know they are a Tech Prep student) when matriculating at a postsecondary institution
- ☐ Postsecondary institutions do not attempt to identify incoming secondary Tech Prep students
- ☐ Other

Tech Prep/Q71

The 2006 Perkins introduced a new set of accountability measures for Tech Prep students. Indicate your level of agreement or disagreement with each of the following statements:

	Strongly Disagree		No Opinion		Strongly Agree	Don't Know
New measures impose a substantial data burden on the state	○	○	○	○	○	○
The new measures will support program improvement efforts undertaken at the *state* level	○	○	○	○	○	○
The new measures will support program improvement efforts undertaken at the *local* level	○	○	○	○	○	○
The existence of the new measures will likely cause my state to merge its Title I and Title II funds	○	○	○	○	○	○
My state is able to collect accurate data on all measures	○	○	○	○	○	○
My state would like OVAE to issue nonregulatory guidance to support my state in developing Tech Prep measures	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

END

Please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses. If there are errors present, simply select the question from the validation summary list to take you directly to the question to correct your data. Once you have corrected the data, go to the navigation panel on the left side of the screen and select the form titled END.

You have completed the Survey of State Directors of Secondary Career-Technical Education. To mark your survey complete and submit your data, click on the validate button and then select the Mark Complete button.

Thank you very much for taking the time to participate in this important study.

If you have any questions or comments about this study, please contact Steven Klein (MPR) at 503-963-3757.

Institution of Higher Education (IHE) Survey

NACTE
National Assessment of Career and Technical Education

Reference copy only. Please complete the survey on the web.

Welcome/Contact_info

Welcome to the Web-based National Assessment of Career and Technical Education survey (NACTE) sponsored by the U.S. Department of Education.

Please take a moment and complete the contact information below before proceeding with the survey.

First Name:

Last Name:

Title:

Phone (XXX-XXX-XXXX):

Email:

Address:

Address 2 (optional):

City:

State: -Select one-

Zip code:

Welcome/Confidentiality

Uses of the Data:
This study is being conducted for the U.S. Department of Education, which has contracted with MPR Associates, Inc., and RTI International (RTI). The purpose of this study is to collect information relating to the implementation of the *Carl D. Perkins Career and Technical Education Act of 2006* during the 2008-09 academic year. Because a limited number of institutions have been selected, we would very much like for you to participate on behalf of your educational institution.

Confidentiality
As a matter of policy, The U.S. Department of Education is concerned with protecting the privacy of participants in voluntary surveys.
We want to let you know that:

- Your responses will be merged with those of other respondents and will not be identified as the agency you represent, except as required by law.
- You may skip questions you do not wish to answer; however, we encourage you to answer as many questions as possible, because incomplete data will reduce the value of the information provided to Congress.
- Your answers may be used only for statistical purposes. Participation is voluntary and will not affect any aid or other benefits that your state agency, LEA, or institution may receive.

If you have questions about the study, you may contact:

- the NACTE Help Desk at (866) 434-4718
- Steven Klein, the study's director, at (503) 963-3757 or sklein@mprinc.com, or
- Michael Fong, the U.S. Department of Education's Project Officer, at (202) 401-7462, Michael.Fong@ed.gov.

If you have questions about your rights as a study participant, you may contact RTI's Office of Research Protection toll free at (866) 214-2043.

Welcome/Definitions

Definitions:
Some questions in the survey include a hyperlink (a word or group of words in blue font that is underlined) that, when clicked on, brings up a definition.

For example,
Career and Technical Education (CTE): The term 'career and technical education (CTE)' means organized educational activities that—
(A) offer a sequence of courses that—
(i) provides individuals with coherent and rigorous content aligned with challenging academic standards and relevant technical knowledge and skills needed to prepare for further education and careers in current or emerging professions;
(ii) provides technical skill proficiency, an industry-recognized credential, a certificate, or an associate degree; and
(iii) may include prerequisite courses (other than a remedial course) that meet the requirements of this subparagraph; and
(B) include competency-based applied learning that contributes to the academic knowledge, higher-order reasoning and problem-solving skills, work attitudes, general employability skills, technical skills, and occupation-specific skills, and knowledge of all aspects of an industry,including entrepreneurship, of an individual.

Programs of Study (POS): Programmatic coursework that meets the following: incorporates both secondary and postsecondary education elements; includes coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary eduction to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and leads to an industry-recognized credential or certificate at the postsecondary level, or an associate or baccalaureate degree.

Welcome/Navigation_Instructions

Instructions and Navigation:

NACTE Help Desk: 866-434-4718

To navigate through the survey you will notice two buttons in the lower left hand corner of each screen titled "Previous" and "Next". You can select either button at anytime to move through the survey.

Alternately, you can also use the navigation panel located on the left-hand side of the screen. You may jump to any question in navigation panel simply by clicking on the question number.

- The questions in the navigation panel will turn green once they have been viewed/answered and have passed preliminary validation.
- If a question does not pass preliminary validation either because of incomplete information or errors with the response, the question in the navigation panel will turn yellow.
- Questions in the navigation menu that are grey, and have a strike through are not applicable to you (e.g., ~~Q62~~).

The "Save & Exit" button located in the lower right-hand corner of the screen allows you to exit the survey at any time. The next time you login to the survey you will return to the same question.

Also, located in the lower right-hand corner of the screen is the "Help" button. It contains information regarding recommended browsers, and contains definitions for the survey response items (i.e., drop-down boxes, checkboxes, and hyperlinks).

At the end of the survey, please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses.

Programs of Study/Q1

Did your institution receive a federal Perkins Title I and/or Title II grant in the 2008-09 program year?

	Yes	No	Don't know
Title I: Basic Grant	○	○	○
Title II: Tech Prep	○	○	○

Programs of Study/Q2

Did your institution receive a federal Perkins Title I and/or Title II grant through participation in a consortium in the 2008-09 program year?

	Yes	No	Don't know
Title I: Basic Grant	○	○	○
Title II: Tech Prep	○	○	○

Programs of Study/Q3

How many Programs of Study (POS) offered in your institution in the 2008-09 program year were developed at the state or local level?

(Mark "Don't Know" if you do not have this information)

	Enter Number	Don't Know
State developed POS		☐
Locally developed POS, using state template or guidance and... State approval *required and obtained*		☐
State approval required *and not yet obtained*		☐
State approval *not required*		☐
Locally developed POS without state guidance and... State approval *required and obtained*		☐
State approval required *and not yet obtained*		☐
State approval *not required*		☐
Total		

Programs of Study/Q4

Are any of the POS offered in your institution described on a Web site?

○ Yes
○ No

Programs of Study/Q4_url

Please provide the web address (url) of a website describing one of the POS offered in your institution.

What is the URL?

Programs of Study/Q5

In the following table, please list the five (5) POS *with the highest enrollments* in you institution in the 2008-09 program year and the number of students in each. If you have less than five POS then please list them all. *Please do not include any POS that did not receive state approval.*

Type in the name of the POS in the first box, code it into the corresponding Career Cluster area (or closest corresponding area) by clicking on the second box, and ente the number of students in the third box. Mark 'Don't Know' if you do not have acces to this information.

	Name of state-approved POS NOTE: Please crosswalk your POS to the appropriate cluster using the pull-down menu provided	Number of students enrolled in coursework in the POS in the 2008-2009 program year	
1	--select one--		Don't Know
2	--select one--		Don't Know
3	--select one--		Don't Know
4	--select one--		Don't Know
5	--select one--		Don't Know

Programs of Study/Q6A

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Standards

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Aligned with state postsecondary standards or requirements for program completion	○	○	○	○	○	○	○
Aligned with technical standards that were... a. state-developed	○	○	○	○	○	○	○
b. industry-developed	○	○	○	○	○	○	○
c. national based on 16 career clusters	○	○	○	○	○	○	○
d. locally developed	○	○	○	○	○	○	○
e. other *(specify)*	○	○	○	○	○	○	○

Programs of Study/Q6B

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Curriculum

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Uses a curriculum that is... a. state-developed	○	○	○	○	○	○	○
b. industry-developed	○	○	○	○	○	○	○
c. third-party (e.g., vendor) developed	○	○	○	○	○	○	○
d. locally developed	○	○	○	○	○	○	○
e. other *(specify)*	○	○	○	○	○	○	○
Uses a curriculum that spans secondary and postsecondary levels	○	○	○	○	○	○	○
Uses a curriculum that is non-duplicative across secondary and postsecondary levels	○	○	○	○	○	○	○
Is part of an articulation agreement with ONLY one secondary district	○	○	○	○	○	○	○
Is part of an articulation agreement with TWO or more secondary district (in-state or out-of-state)	○	○	○	○	○	○	○
Is covered by a state-wide articulation agreement	○	○	○	○	○	○	○
Offers postsecondary credit to secondary students through (dual or concurrent credit)	○	○	○	○	○	○	○

Programs of Study/Q6C

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Assessments

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Assesses technical skill attainment through..... a. state-developed exams aligned with technical standards	○	○	○	○	○	○	○
b. industry-developed exams	○	○	○	○	○	○	○
c. national licensing or credentialing exams	○	○	○	○	○	○	○
d. state licensing or credentialing exams	○	○	○	○	○	○	○
e. locally developed exams that are... (i) aligned with state standards	○	○	○	○	○	○	○
(ii) aligned with national 16 career cluster standards	○	○	○	○	○	○	○
(iii) aligned with industry standards	○	○	○	○	○	○	○
(iv) other *(specify)*	○	○	○	○	○	○	○
f. other *(specify)*	○	○	○	○	○	○	○

Programs of Study/Q6D_postsec

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Credentials

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Leads to a credential... a. that is Industry-recognized or sponsored	○	○	○	○	○	○	○
b. at Postsecondary level, including... (i) certificate	○	○	○	○	○	○	○
(ii) associate degree	○	○	○	○	○	○	○
(iii) bachelor's degree	○	○	○	○	○	○	○

Programs of Study/Q6E

How many of the five POS with the highest enrollments (listed in Q5) incorporated each of the following characteristics of a POS?

Other Features

(Select "Don't Know" if you do not have this information)

	0	1	2	3	4	5	Don't know
Responds to high skill, high wage, high demand occupational areas identified by the state or LEA	○	○	○	○	○	○	○
Career guidance must be, or is, available	○	○	○	○	○	○	○
Was previously part of Tech Prep program	○	○	○	○	○	○	○

Programs of Study/Q7A

On which of the following topics did your state offer technical assistance to help institutions in your state in developing POS for state-approval?

(Mark all that apply)

- ☐ POS templates or guidelines
- ☐ Career clusters
- ☐ CTE content standards
- ☐ CTE curriculum development guidelines
- ☐ Academic and CTE curriculum integration
- ☐ Secondary and postsecondary curriculum alignment
- ☐ Technical skill assessments
- ☐ Career guidance and counseling
- ☐ Data systems for monitoring student progress
- ☐ Aligning standards and assessments
- ☐ Other

Programs of Study/Q7B

In which of the following areas (identified in Question 7A) did your institutional staff participate during the 2007-08 or 2008-09 program years?

(Mark all that apply)

- ☐ POS templates or guidelines
- ☐ Career clusters
- ☐ CTE content standards
- ☐ CTE curriculum development guidelines
- ☐ Academic and CTE curriculum integration
- ☐ Secondary and postsecondary curriculum alignment
- ☐ Technical skill assessments
- ☐ Career guidance and counseling
- ☐ Data systems for monitoring student progress
- ☐ Aligning standards and assessments
- ☐ Other (if specified)

Programs of Study/Q8

What types of professional development does your state **offer** AND in what types of activities did your institutional staff **participate** in to support the development and implementation of POS?

(Mark all that apply for each group. If your state offered other types of professional development, specify the type(s) of professional development in textbox(es) in the "Other" column below.)

	State/ regional conferences	Local workshops	Online electronic workshop/ webinars	One-on-one support	Other *(specify)*	None	Don't Know
Faculty --State offered	☐	☐	☐	☐		☐	☐
--Locals participated	☐	☐	☐	☐		☐	☐
Administrators --State offered	☐	☐	☐	☐		☐	☐
--Locals participated	☐	☐	☐	☐		☐	☐
Advisors --State offered	☐	☐	☐	☐		☐	☐
--Locals participated	☐	☐	☐	☐		☐	☐

Programs of Study/Q9A_postsec

To what extent did each of the following **stakeholder groups** participate in your institution's efforts to *develop* POS?

	Not at all	Some	A lot	Don't know
Postsecondary academic instructors	○	○	○	○
Postsecondary CTE instructors	○	○	○	○
Postsecondary administrators	○	○	○	○
Secondary academic teachers	○	○	○	○
Secondary CTE teachers	○	○	○	○
Advisors	○	○	○	○
LEA administrators	○	○	○	○
Building administrators	○	○	○	○
National industry/union groups or professional associations	○	○	○	○
Local businesses and/or unions	○	○	○	○
Local chamber of commerce	○	○	○	○

Programs of Study/Q9B_postsec

To what extent did each of the following **stakeholder groups** participate in your institution's efforts to *implement* POS?

	Not at all	Some	A lot	Don't know
Postsecondary academic instructors	○	○	○	○
Postsecondary CTE instructors	○	○	○	○
Postsecondary administrators	○	○	○	○
Secondary academic teachers	○	○	○	○
Secondary CTE teachers	○	○	○	○
Advisors	○	○	○	○
LEA administrators	○	○	○	○
Building administrators	○	○	○	○
National industry/union groups or professional associations	○	○	○	○
Local businesses and/or unions	○	○	○	○
Local chamber of commerce	○	○	○	○

Programs of Study/Q10A

To what extent has each of the following barriers limited your institution's efforts to *develop* POS?

	Not at all	Some	A lot	Don't know
Shortage of institutional CTE staff	○	○	○	○
Shortage of state CTE staff	○	○	○	○
Lack of content standards	○	○	○	○
Lack of curricular materials	○	○	○	○
Lack of assessment instruments	○	○	○	○
Lack of technical expertise	○	○	○	○
Lack of cooperation by CTE faculty	○	○	○	○
Lack of cooperation by academic faculty	○	○	○	○
Lack of cooperation by administrators	○	○	○	○
Lack of cooperation from secondary teachers or administrators	○	○	○	○
Lack of cooperation by state level staff	○	○	○	○
Resistance to state influence at local level	○	○	○	○
Shortage of funds	○	○	○	○
Shortage of time	○	○	○	○
Conflicts between relevant individuals	○	○	○	○
Cannot find qualified instructors	○	○	○	○
Lack of assistance from the state	○	○	○	○
Lack of state leadership	○	○	○	○

Programs of Study/Q10B

To what extent has each of the following barriers limited your institution's efforts to *implement* POS?

	Not at all	Some	A lot	Don't know
Shortage of institutional CTE staff	○	○	○	○
Shortage of state CTE staff	○	○	○	○
Lack of content standards	○	○	○	○
Lack of curricular materials	○	○	○	○
Lack of assessment instruments	○	○	○	○
Lack of technical expertise	○	○	○	○
Lack of cooperation by CTE faculty	○	○	○	○
Lack of cooperation by academic faculty	○	○	○	○
Lack of cooperation by administrators	○	○	○	○
Lack of cooperation from secondary teachers or administrators	○	○	○	○
Lack of cooperation by state level staff	○	○	○	○
Resistance to state influence at local level	○	○	○	○
Shortage of funds	○	○	○	○
Shortage of time	○	○	○	○
Conflicts between relevant individuals	○	○	○	○
Cannot find qualified instructors	○	○	○	○
Lack of assistance from the state	○	○	○	○
Lack of state leadership	○	○	○	○

Accountability/ACC_INTRO

The questions in the remainder of this survey address all of the CTE programs offered in your institution irrespective of whether or not they qualify as a POS.

Accountability/Q11_postsec

How difficult was it for your institution to reach agreement with your state CTE agency on performance benchmarks and targets for each of your Perkins accountability measures?

	Not Difficult		Somewhat Difficult		Very Difficult	Don't Know
Technical skill attainment (1P1)	○	○	○	○	○	○
Attainment of an industry-recognized credential certificate, or degree (2P1)	○	○	○	○	○	○
Retention in postsecondary education or transfer to a baccalaureate degree program (3P1)	○	○	○	○	○	○
Placement into an apprenticeship program, the military, or employment (4P1)	○	○	○	○	○	○
Non-traditional participation (5P1)	○	○	○	○	○	○
Non-traditional completion (5P2)	○	○	○	○	○	○

Accountability/Q11B

When negotiating with your state education agency to establish annual performance benchmarks and targets for your institution, what were the reasons for encountering difficulty?

(Mark all that apply)

- ☐ Insufficient baseline data upon which to negotiate targets
- ☐ Lack of clear guidance from the state on what constitutes continuous improvement
- ☐ Anticipated difficulty in gathering and submitting required data
- ☐ Anticipated difficulty in being able to meet proposed performance targets
- ☐ Concern over the repercussions of your institution failing to meet performance targets
- ☐ Other

Accountability/Q12

How do you identify students meeting the CTE concentrator threshold for Perkins accountability purposes?

(Mark all that apply)

- ☐ Students self-report concentrator status
- ☐ Faculty identify students based on course taking
- ☐ Administrators identify students using local management information system
- ☐ State identifies students using statewide database; no action at institutional level
- ☐ Other
- ☐ Don't know

Accountability/Q13

How do you ensure that the accountability data you collect for the Perkins accountability measures are accurate?

(Mark all that apply)

- ☐ Follow state guidance on measure development
- ☐ Provide technical assistance to teachers
- ☐ Require teachers or administrators to review or spot-check data submissions
- ☐ Other
- ☐ No steps taken to ensure data accuracy
- ☐ Don't know

Accountability/Q14_postsec

How confident are you that the data you are collecting for each of the following Perkins core indicators of performance provides an accurate measure of your institution's actual performance?

Core Indicator 1

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Technical skill attainment (1P1)	○	○	○	○	○	○

Core Indicator 2

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Industry recognized credential/certificate /degree (2P1)	○	○	○	○	○	○

Core Indicator 3

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Retention in postsecondary education or transfer to a baccalaureate degree program (3P1)	○	○	○	○	○	○

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Accountability/Q14_postsec

How confident are you that the data you are collecting for each of the following Perkins core indicators of performance provides an accurate measure of your institution's actual performance?

Core Indicator 4

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Placement in the military (4P1)	○	○	○	○	○	○
Placement in apprenticeship (4P1)	○	○	○	○	○	○
Placement in employment (4P1)	○	○	○	○	○	○

Core Indicator 5

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Non-traditional participation (5P1)	○	○	○	○	○	○
Non-traditional completion (5P2)	○	○	○	○	○	○

Accountability/Q15

How confident are you that the data you are collecting for each of the Perkins special population categories provides an accurate measure of the actual performance of these populations?

	Not Confident		Somewhat Confident		Very Confident	Don't Know
Individuals with disabilities	○	○	○	○	○	○
Individuals from economically disadvantaged families, including foster children	○	○	○	○	○	○
Individuals preparing for nontraditional fields	○	○	○	○	○	○
Single parents, including single pregnant women	○	○	○	○	○	○
Displaced homemakers	○	○	○	○	○	○
Individuals with limited English proficiency	○	○	○	○	○	○

Accountability/Q16A

In what ways and to what extent did your institution use its prior year Perkins accountability data in the 2008-09 program year?

	Used not at all	Used not very much	Used somewhat	Used quite a bit	Used to a great extent
To identify programs in need of improvement	○	○	○	○	○
To make program funding decisions	○	○	○	○	○
To provide targeted technical assistance	○	○	○	○	○
To identify special population students not being adequately served	○	○	○	○	○
Other *(specify)*	○	○	○	○	○
Overall, how useful are the Perkins data you collect for your local program improvement efforts?	○	○	○	○	○

Accountability/Q16B

In the previous question you indicated that your institution did not use its prior year Perkins accountability data in the following ways in the 2008-09 program year. Are there plans to use the data for any of these purposes in the next two years?

	Yes	No	Don't know
To identify programs in need of improvement	○	○	○
To make program funding decisions	○	○	○
To provide targeted technical assistance	○	○	○
To identify special population students not being adequately served	○	○	○

Accountability/Q17A

What type of feedback does your state agency provide you on your institution's performance on the Perkins accountability measures?

(Mark all that apply)

☐ No data on my institution performance is shared

☐ Statewide average performance outcomes for all institutions are shared

☐ Performance outcomes are shared for institutions with characteristics similar to my own

☐ Performance outcomes are shared for all individual institutions

Accountability/Q17B

If your institution were to fail to meet its Perkins performance targets, does your state have a policy for the type of corrective action you must take to address the accountability deficiencies?

(Mark all that apply)

- ☐ Not applicable, no state policy exists
- ☐ Develop a program improvement plan
- ☐ Provide professional development to staff of underperforming programs
- ☐ Consult with state or local business or industry experts in the field
- ☐ Eliminate underperforming programs
- ☐ Restrict student access to programs
- ☐ Restructure or redesign existing CTE programs
- ☐ Other *(specify)*
- ☐ Don't know

Accountability/Q18

What proportion of the students participating in state-approved CTE programs withi your institution were assessed using one of the following methods to measure their technical skill attainment in the 2008-09 program year?

	None	Some	Most	All	Don't know
State-developed postsecondary CTE skill exam	○	○	○	○	○
Institutionally developed exam	○	○	○	○	○
Industry-developed, employer validated exams	○	○	○	○	○
National licensing or credentialing exams	○	○	○	○	○
State licensing or credentialing exams	○	○	○	○	○
Commercially developed exams (e.g., NOCTI)	○	○	○	○	○
Grade point average (GPA)	○	○	○	○	○
Course or program completion	○	○	○	○	○
Other *(specify)*	○	○	○	○	○

Accountability/Q20

The 2006 Perkins Act introduced a new set of accountability requirements for Tech Prep students. Indicate your level of agreement or disagreement with each of the following statements:

	Strongly Disagree	Somewhat Disagree	No Opinion	Somewhat Agree	Strongly Agree	Don't know
New measures impose a substantial data burden	○	○	○	○	○	○
The new measures will support program improvement efforts at the *State* level	○	○	○	○	○	○
The new measures will support program improvement efforts at the *local* level	○	○	○	○	○	○
Data collected for the measures are of high quality	○	○	○	○	○	○
The advantages of the new measures outweigh their disadvantages	○	○	○	○	○	○
My institution is able to collect data on all measures	○	○	○	○	○	○
My institution would benefit from obtaining state guidance on collecting data for the Tech Prep measures	○	○	○	○	○	○
Other *(specify)*	○	○	○	○	○	○

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Finance/Q21

How much of the total budget for CTE offered in your institution in the 2008–09 program year came from each of the following sources?

(If none, enter "0", Mark "Don't Know" if you do not have this information)

	Dollar Amount	Don't Know
Local funds:		☐
State funds: Formula (must be spent on CTE)		☐
Discretionary		☐
Other *(specify)*		☐
Federal funds: Perkins Title I		☐
Perkins Reserve Fund		☐
Tech Prep Title II		☐
Other federal funds *(specify)*		☐

Finance/Q22

For which of the following permissible uses referenced in Section 135(c) of the 2006 Perkins Act did you use your 2008–09 Title I basic grant funds?

(Mark all that apply)

- ☐ Involving parents, business and labor in designing, implementing, and evaluating CTE programs covered by the Act
- ☐ Providing career guidance and academic counseling
- ☐ Promoting work-related experiences for students
- ☐ Promoting industry experiences for teachers
- ☐ Providing programs for special populations
- ☐ Assisting CTE student organizations
- ☐ Offering mentoring and related support services
- ☐ Leasing, purchasing, upgrading, or adapting equipment
- ☐ Supporting teacher preparation programs
- ☐ Entrepreneurship education and training
- ☐ Developing new CTE courses
- ☐ Creating small, personalized career-themed learning communities
- ☐ Supporting family and consumer sciences programs
- ☐ Offering programs for adults and school dropouts
- ☐ Offering continuing education or job referral services
- ☐ Supporting nontraditional training and activities
- ☐ Providing training programs in automotive technologies
- ☐ Improving accountability data collection and reporting
- ☐ Implementing CTE programs of study
- ☐ Other

Finance/Q23

What impact has each of the following changes introduced in the 2006 Perkins Act had on the administration and implementation of CTE programs in your institution?

	Very Negative Impact	Somewhat Negative Impact	No Impact	Somewhat Positive Impact	Very Positive Impact
Requirement to offer at least one POS to obtain funds	○	○	○	○	○
Requirement to dedicate funds to support students, including special populations, in preparing for high wage/skill/demand jobs	○	○	○	○	○
New allowable use of funds to support auto technologies	○	○	○	○	○
New allowable use of funds to form consortia to maximize investment and encourage innovation	○	○	○	○	○
Requirement to report disaggregated performance outcomes for specific population categories	○	○	○	○	○
Requirement to negotiate performance benchmarks with the State agency to qualify for funds	○	○	○	○	○
Sanctions for failing to meet state negotiated performance benchmarks	○	○	○	○	○

Finance/Q24_postsec

If your institution received a state waiver for the ***minimum allocation rule*** ($50,000 per substate grantee) in 2008-09, why was it granted? *[Reference: Section 132(a) (4) and 132(c) (1)]*

- ○ No waiver granted
- ○ Institution is in a rural, sparsely populated area
- ○ Other *(specify)*
- ○ Don't know

END

Please select the "validate" button located in the lower right-hand corner of the screen. The validate button will ensure that all questions have been answered and that there are no errors present in your responses. If there are errors present, simply select the question from the validation summary list to take you directly to the question to correct your data. Once you have corrected the data, go to the navigation panel on the left side of the screen and select the form titled END.

You have completed the Survey of Institutions of Higher Education Offering Career-Technical Education. To mark your survey complete and submit your data, click on the validate button and then select the Mark Complete button.

Thank you very much for taking the time to participate in this important study.

If you have any questions or comments about this study, please contact Steven Klein (MPR) at 503-963-3757

Appendix B. Programs of Study Expert Panel Review

Introduction

The *Carl D. Perkins Career and Technical Education Act of 2006* (*Perkins IV*) requires that local subgrantees offer one or more programs of study (POS) to link career and technical education (CTE) offered at the secondary and postsecondary education levels. POS are intended to provide students with access to sequenced, nonduplicative coursework, aligned with challenging academic standards and rigorous technical content, that leads to the conferral of an industry-recognized credential or certificate at the postsecondary level or an associate's or bachelor's degree. Where practical, high school students also can acquire postsecondary education credit through participation in dual credit or concurrent enrollment programs.

Perkins IV provides no direction on how local subgrantees are to meet this requirement, leaving it to state education agencies to establish criteria for compliance. To assess the guidance provided by states for the development of POS, the research team convened an expert panel in April 2010 to review materials collected from 50 state education agencies. The 10 expert panelists included secondary and postsecondary state administrators and representatives of national stakeholder groups and policy and research firms. The panelists are listed in Appendix A.

To structure the POS review process, the research team created a scoring rubric based on the *POS Design Framework* (Framework), released by the U.S. Department of Education (Department) in January 2010.[1] Because the design framework was released several years after the passage of *Perkins IV*, states did not have access to the information contained in the Framework when developing state guidance. The Framework consists of 10 components that, taken together, promote the development and implementation of effective POS. These components include the following.

- *Legislation and Policies*—Federal, state, and local legislation or administrative policies promoting POS development and implementation.

[1] http://cte.ed.gov/nationalinitiatives/rposdesignframework.cfm (accessed 9/24/2010).

- *Partnerships*—Ongoing relationships among education, business, and other community stakeholders that are central to POS design, implementation, and maintenance.
- *Professional Development*—Sustained, intensive, and focused opportunities for administrators, teachers, and faculty involved in the design, implementation, and maintenance of POS.
- *Accountability and Evaluation*—Systems and strategies to gather quantitative and qualitative data on both POS components and student outcomes to aid ongoing efforts to develop and implement POS.
- *College and Career Readiness Standards*—Content standards defining what students are expected to know and be able to do to enter and advance in college and/or careers.
- *Course Sequences*—Nonduplicative sequences of secondary and postsecondary courses within a POS ensuring that students transition to postsecondary education without duplicating classes or requiring remedial coursework.
- *Credit Transfer Agreements*—Credit transfer agreements that provide opportunities for secondary students to accrue transcripted postsecondary credit, supported by formal agreements between secondary and postsecondary education systems.
- *Guidance Counseling and Academic Advisement*—Guidance counseling and advisement helping students to make informed decisions about which POS to pursue.
- *Teaching and Learning Strategies*—Innovative and creative instructional approaches enabling teachers to integrate academic and technical instruction and students to apply academic and technical learning in their POS coursework.
- *Technical Skill Assessments*—National, state, and/or local assessments providing ongoing information on student attainment of the necessary knowledge and skills for entry and advancement in postsecondary education and careers in their chosen POS.

Researchers added an 11th component, asking panelists to provide an overall rating of the *Clarity and Coherence* of each state's POS guidance. The rubric included a definition of key terms, examples of the type of guidance that might exist under each of the 10 Framework components, and space for panelists to describe and rate the usefulness of state materials in each category. The rubric is included at end of this appendix.

Findings

Panelists found that all states had addressed, either directly or indirectly, at least some components of the Framework. Because the Framework was not released until early 2010—more than three years following the passage of *Perkins IV*—panelists' ratings reflect the extent to which states successfully anticipated and addressed areas subsequently identified by the Department as important to the development and implementation of effective POS.

During webinar discussions, panelists reported that some states appeared to have invested a considerable amount of time and staff resources in creating POS guidance and materials for local provider use. These states had created informative, user-friendly websites that included information on most, if not all, of the 10 components. Other states appeared to have just begun to develop POS guidance materials and make them available through the state website or documents distributed to locals. Materials in those states, while potentially useful to local providers, were rated by the expert panelists as providing relatively less guidance or direction on the design and implementation of POS.[2] Panelists suggested a variety of explanations for the lack of information, including the possibility that resources were lacking for the development of materials and websites to offer guidance.

Average State Ratings by Component

The expert panelists categorized state materials into one or more of the 10 Framework components, using a rating scale of 1–4 (with 4 denoting the clearest, most useful guidance). Average component ratings ranged from a low of 2.2 to a high of 3.0, with the overall clarity and coherence of POS guidance across components and across states rated at 2.8 (Exhibit B.1).

[2] While research staff sought to ensure that panelists had access to all state guidance and supporting materials, it is possible that state materials sent to local providers via hard copy or other means were not shared with study researchers. It is also possible that materials posted soon after the *Perkins IV* reauthorization were subsequently removed from websites and thus were not included in this review. Caution should therefore be used in drawing conclusions about the overall status or quality of materials developed by states.

Exhibit B.1.
Average panel ratings of usefulness of states' POS guidance

Relative rating	POS component (in order of highest to lowest average rating)	Average rating of materials 4 = Very useful 3 = Useful 2 = Somewhat useful 1 = Not useful
High	Legislation and Policies	3.0
	Course Sequences	2.8
	College and Career Readiness Standards	2.8
	Guidance Counseling and Academic Advisement	2.7
Medium	Professional Development	2.6
	Accountability and Evaluation	2.5
	Partnerships	2.5
Low	Credit Transfer Agreements	2.3
	Teaching and Learning Strategies	2.3
	Technical Skill Assessments	2.2
	Overall clarity and coherence	**2.8**

Exhibit reads: Panelist members rated the usefulness of states' POS guidance differently for the various POS components, with the highest average rating assigned to Legislation and Policies and the lowest to Technical Skill Assessments.

Some POS components were clearly given a low numeric rating by most panelists (e.g., technical skill assessments) or a high one (e.g., legislation and policies) (Exhibit B.2).[3] For other components, however, ratings across panelists were mixed, with similar proportions rating them as very useful or useful and not at all or somewhat useful (e.g., partnerships, accountability and evaluation). This distribution of panelists' ratings on the POS components clearly affected the average ratings.

[3] Panelists were paired in their review of state materials, with each state's guidance materials rated by each panelist. As such, a total of 102 possible ratings were possible (2 for each of 51 states); however, since not all reviewers rated each state, total number of ratings assigned to states' guidance materials may total less than 102.

Exhibit B.2.
Number of panelists assigning a rating to each POS component, by degree of usefulness

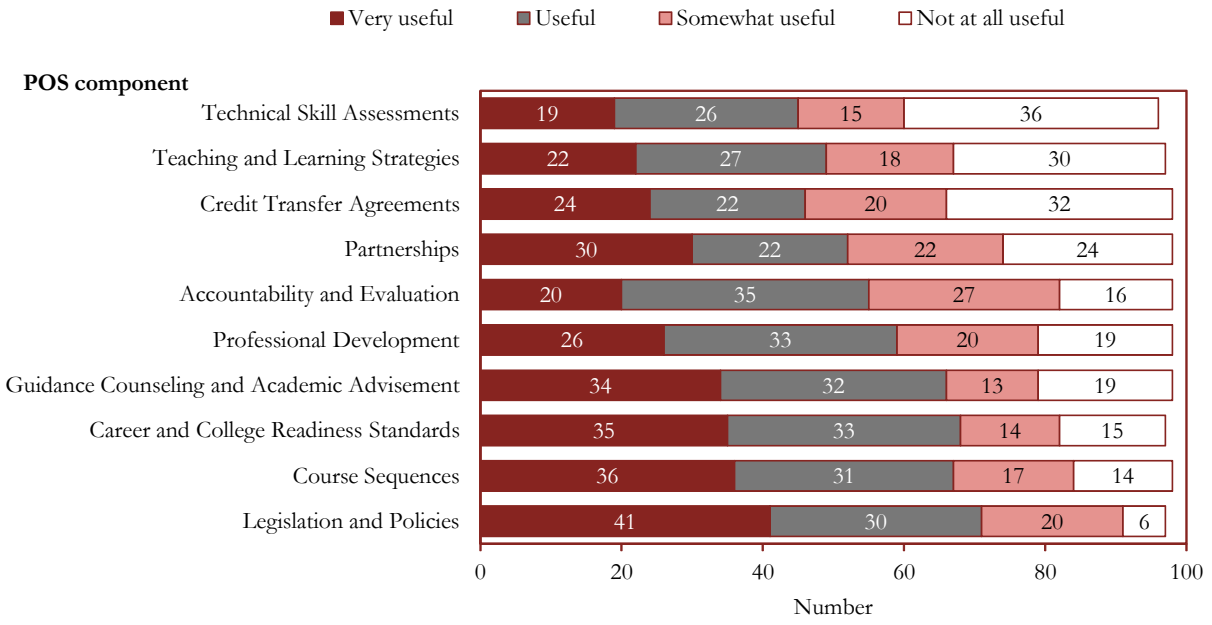

Exhibit reads: The number of panelists rating states' POS guidance as useful was highest for Legislation and Policies, with 41 rating guidance as very useful and 30 as somewhat useful; ratings for other framework components varied, with the lowest ratings of usefulness assigned to Technical Skill Assessments.
NOTE: Total possible ratings is 102 (2 ratings per state). Numbers may not sum to 102 due to missing ratings.

Overall, the components of states' POS guidance with the highest average ratings were Legislation and Policies, Course Sequences, College and Career Readiness Standards, and Guidance Counseling and Academic Advisement. Components with the lowest average ratings were Credit Transfer Agreements, Teaching and Learning Strategies, and Technical Skill Assessments.

Challenges in State Guidance on POS

In reviewing the guidance materials, panelists noted a number of issues that compromised states' efforts to support local agencies in designing and implementing quality POS. The key challenges are described below.

Disorganized websites

Panel members noted that many local providers use the Internet to search for information on POS; therefore, they suggested that states make an effort to include all POS guidance materials online, preferably in one frequently updated website, with a clear site map and user-friendly navigation tools. Because POS are intended to span secondary and postsecondary education, instructors at both levels would benefit from being able to access information on

POS from a single location, rather than having to seek information separately on either the secondary or postsecondary education agency website.

Missing information

In some instances, panelists encountered state education websites that had missing or fragmented information or links that no longer worked, which prevented them from accessing information. While panelists found templates or guidance on procedures and documents (e.g., memoranda of understanding) helpful, they noted that providing instructions (i.e., how to use the template) next to the documents also would have made it easier to access the information. Not unexpectedly, because *Perkins IV* does not have any reporting requirements associated with POS, panelists did not find much information on POS data systems or accountability.

Lack of contextual information on POS nationally

Panelists expected to see more information about the connection between state and federal legislation and between legislation and funding. They noted that local program staff might have little understanding of the "big picture" or the reasoning behind state decisions without a clear explanation offering a rationale and guidelines for local implementation.

Lack of direction on the four legislated components of POS

Panelists expressed concern about the absence of direction from states on how local programs might address the four elements of POS outlined in *Perkins IV*. They noted a lack of guidance on the progression of courses spanning secondary and postsecondary education levels; information on recognized industry certifications and local and state institutions offering degrees and certificates for a given POS; and career options for students, such as the fastest growing occupations and salary data. Panelists suggested that all states provide POS templates for each program/cluster area, as some states have already done. They also suggested that information be made available for local staff on how to adopt or adapt these templates, including specific guidance on the 10 Framework components.

Lack of POS-specific language

Panelists commented that state websites mentioned POS less frequently than they had expected. The components of POS often were addressed on the CTE web page, but there was little reference to POS specifically. Given the similarities between Tech Prep and POS, panelists expressed surprise at the lack of information on overlapping components, such as secondary and postsecondary partnerships, in states that did not merge their Title I and Title II funding.[4] In cases where states had well-developed Tech Prep systems prior to *Perkins IV*,

[4] *Perkins IV* establishes two similar approaches that recipients may use for CTE: Tech Prep [Sec. 203 (c)] and programs of study [Sec. 122 (c)(1)(A)]. Both approaches are required to have secondary and postsecondary elements, use rigorous academic standards and technical content, and lead to an indus-

the panel noted that there appears to have been little effort to convert the language or approach to reflect POS. They also commented that in many states, the relationships among Tech Prep, Career Clusters, Career Pathways, and POS were unclear; for example, only one state provided a glossary and crosswalk for these approaches.

Less information on postsecondary POS

Panelists observed that the state postsecondary education agency charged with administering CTE appeared to be less involved than the secondary CTE agency in the development and dissemination of POS guidance. This conclusion was based on the lack of information on state websites—both secondary and postsecondary—for a postsecondary audience. For example, while information on teaching and learning strategies, tools, and resources for teacher professional development were rare among states' POS guidance for the secondary level, guidance on these topics for the postsecondary level was absent altogether.

One panelist suggested that this dearth of information for postsecondary educators may be tied to states' allocations of *Perkins* funds, which in many cases go mainly to secondary education.[5] Another reason may be the separation of secondary and postsecondary offices at the state level; in some states, the separate secondary and postsecondary CTE websites often have no obvious connection to each other. Perhaps reflecting these "silos," there was little to no information in states' POS guidance about how to develop secondary/postsecondary partnerships. Indeed, the average rating for partnerships was relatively low.

Similarly, panelists found little information in states' guidance about how to partner with industry or use industry standards in the development of POS, resources regarding technical skill assessments, or a definition of what it means to be college and career ready. Other than career interest tools, panelists also noted that there was little information on career readiness, and they indicated that without such information, it might be difficult to reach out to businesses or create POS in emerging industry areas. Finally, panelists noted that while online career planning tools were relatively abundant on state websites, they needed to be linked more directly to POS.

Despite these shortcomings, panelists identified materials from 27 states that they agreed should be shared with other states because they appeared to have overcome many of the challenges cited above. Descriptions of these materials and website links (where applicable) are listed below.

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try-recognized credential, certificate, or postsecondary degree. While Title II Tech Prep has been made optional for states, the major features of Tech Prep are sustained as a requirement through POS within Title I of the legislation.

[5] According to study findings, states allocated an average of 63 percent of funds to the secondary sector in fiscal year (FY) 2010.

Useful Aspects of States' POS Guidance

The major observations of the expert panelists on the useful aspects of states' POS guidance are discussed in the next sections. They are organized according to the 10 Framework components and are ranked from highest to lowest. Each component is defined below, followed by the related panel findings.

Legislation and policies

These include legislative or administrative policies that establish funding and resources for POS development, as well as procedures and guidance for POS implementation and improvement. Legislation and policies provide for long-term POS stability.

Useful guidance included the following:

- Clear, searchable guides on state requirements and policies (e.g., funding, dual enrollment, or industry certifications) written for a local audience and including implementation guidance;
- Clearly written guidance documents for local implementers, including Frequently Asked Questions (FAQs) about federal and state legislation on POS; and
- Sample local POS development and implementation plans that cite legislation.

Panelists noted that Illinois and Ohio offered useful examples of comprehensive guidance covering the design, development, and implementation of POS. Examples of these resources were noted at:

- Illinois: http://occrl.illinois.edu/files/Projects/perkins/POSguide.pdf
- Ohio: http://education.ohio.gov/GD/Templates/Pages/ODE/ODEPrimary.aspx?Page=2&TopicID=1752&TopicRelationID=2

Course sequences

A clearly defined POS should contain a course sequence to be used as a program road map for a student pursuing a particular career path. The sequence outlines both secondary and postsecondary courses and, to the degree possible, eliminates any unnecessary duplication of coursework between the two educational levels.

Useful guidance included the following:

- POS templates for each program/cluster area spanning secondary and postsecondary levels, with a clear progression that includes dual credit opportunities at local and state institutions, industry certifications, and career options.

Indiana offers an example of course sequence templates for POS implementation at http://www.doe.in.gov/pathways/.

College and career readiness standards

College and career readiness is identified through academic and technical curricular content to establish what a student is expected to know and demonstrate in order to be prepared for advanced education and training as well as career entry. Content development should be a collaborative effort among secondary educators, postsecondary educators, and employers.

Useful guidance included the following:

- State definitions of what it means to be "college and career ready";
- Curriculum frameworks and academic and technical skill standards for each POS;
- Crosswalks of industry, academic, and CTE POS standards; and
- POS templates illustrating a coherent sequence of academic and technical coursework meeting college and career readiness standards.

Examples of CTE content standards and college and career readiness tools used by California, Nebraska, New Jersey, and Oklahoma can be found at:

- California: http://www.statewidepathways.org/ and http://www.cde.ca.gov/ci/ct/sf/documents/ctestandards.pdf
- Nebraska: http://www.nde.state.ne.us/NCE/
- New Jersey: http://www.state.nj.us/education/voc/toolbox.htm
- Oklahoma: http://www.okcareertech.org/testing/skills_stands.htm

Guidance counseling and academic advisement

A planned POS course sequence may not reflect the actual path a student chooses. Guidance and advisement are critical when a student elects to be creative on his or her chosen career path. Guidance tools such as a course sequence planner should be made available for the student to visualize the POS path. Educators providing guidance and advisement can offer counsel to students who may refine their plan over time as they become more focused on their career pursuit.

Useful guidance included the following:

- Third-party career exploration tools (e.g., The Real Game, which involves role-playing in future-based scenarios to help students learn experientially about the essential workplace skills needed for different jobs);

- Career planning websites and tools; and
- Separate information for students and parents and guidance counselors and school personnel.

Examples of resources for guidance and advisement can be found on the California, Colorado, and New York websites at:

- California: http://www.californiacareers.info/
- Colorado: http://www.coloradostateplan.com/Counselors.htm
- New York: https://www.nycareerzone.org/cz/index.jsp

Professional development

To mirror POS design, the professional development of educators also reflects both secondary and postsecondary participation and an appropriate mix of academic and technical instructors. Professional development needs to be sustained, intensive, and focused on classroom instruction. Administrators and guidance counselors are encouraged to take advantage of POS professional development opportunities.

Useful guidance included the following:

- Presentations and videos for use by local directors in teacher training workshops;
- Local and regional workshops offered by state staff;
- Technical assistance by state staff;
- Conferences in which local directors, teachers, and state staff can share ideas and information; and
- Regular communication between state and local staff (e.g., monthly or quarterly calls), with agenda and minutes posted.

Examples of technical assistance resources and FAQs for professional development used in Arkansas, Texas, Florida, and Pennsylvania can be found on their websites at:

- Arkansas: http://ace.arkansas.gov/CareerandTechEducation/presentations.htm
- Texas: http://cte.tamucc.edu/la/online_library.shtml
- Florida: http://www.fldoe.org/workforce/technicalassistancepapers.asp
  http://www.fldoe.org/workforce/conf-call.asp

- Pennsylvania: http://www.portal.state.pa.us/portal/server.pt/community/Career_&_Technical_Education/7335/

Accountability and evaluation

Valid and reliable data systems need to be in place to gather relevant data to analyze the effectiveness of a particular POS. The data points collected should reflect the values and important elements for the partnership sponsoring the POS. Ideally, a longitudinal data system would be in place to gather and report trend data over time.

Useful guidance included the following:

- Guidelines for state accountability requirements;
- Guidelines for what data to collect and how and where to submit them to the state;
- Definitions of data elements and formulas; and
- Suggestions for how to assess POS outcomes.

New Mexico and Wisconsin have examples of monitoring and evaluation resources, as well as professional development resources for accountability, on their websites at:

- New Mexico: http://www.ped.state.nm.us/CTWEB/monitoring.html
- Wisconsin: http://systemattic.wtcsystem.edu/qrp/default.htm

Partnerships

Stakeholder relationships among secondary educators, postsecondary educators, workforce development agencies, and employers establish an ongoing forum for POS development and improvement. Exchanges among partners can identify economic and workforce trends that may direct the creation of high-demand POS based on industry needs.

Useful guidance included the following:

- Guides on building advisory committees and involving industry partners;
- Sample memoranda of understanding that spell out the roles and responsibilities of each party (e.g., district and college);
- Sample agendas for meetings between secondary and postsecondary partners and between educators and business representatives; and
- List of statewide workforce/industry partnerships.

Arizona and Kansas have posted useful examples for the development and operation of an effective local advisory committee made up of educators and local employers that could support the development of effective POS. Their resources can be located at:

- Arizona: http://www.ade.state.az.us/cte/info/LeadershipGuide.pdf
- Kansas: http://www.ksde.org/Default.aspx?tabid=1660#ACH

Credit transfer agreements

Where appropriate, credit transfer provides opportunities for secondary students to earn college credit when they have attained an agreed-upon level of postsecondary proficiency. The college credits earned are entered onto transcripts at the time the student earns the credit. Formal agreements between secondary schools and postsecondary institutions are important to sustain policy-level support for such credit agreements.

Useful guidance included the following:

- Clear policy guidelines for funding for dual credit included in a formalized articulation agreement;
- Articulation agreement templates; and
- Guidance and requirements for statewide articulation agreements.

Georgia and Florida offer online examples of guides for dual enrollment, and Georgia also offers training videos online at:

- Georgia: http://www.doe.k12.ga.us/ci_cta.aspx?PageReq=CICTASeam
- Florida: http://www.fldoe.org/workforce/technicalassistancepapers.asp

Teaching and learning strategies

Instruction that explicitly shows the relationship between academic principles and technical application calls for new, innovative teaching and learning strategies. An interdisciplinary team of academic and technical educators can be encouraged to develop and adopt project- and problem-based teaching and learning approaches.

Useful guidance included the following:

- Guidelines and examples for integrating CTE and academics; and
- Resource toolkits.

Tennessee offers examples of how to design teaching and learning strategies that are aligned to industry standards for local instructors. These resources can be found at: http://www.state.tn.us/education/cte/ad/clupos/index.shtml.

Technical skill assessments

Measurement of student technical skill attainment should be explicit and assess whether the student's level of technical proficiency meets what is expected by a particular industry. In addition to assessing a student's technical skill attainment, assessments can also result in the award of an industry-recognized credential or a postsecondary certificate or degree.

Useful guidance included the following:

- Lists of available assessments by career area, source, and cost; and
- Links to state licensing agencies and industry websites with certification requirements.

Minnesota, Mississippi, and South Carolina have examples of resources for technical skill assessments on their websites at:

- Minnesota: http://www.cte.mnscu.edu/programs/Technical_Skill_Atta.html
- Mississippi: https://cia.rcu.msstate.edu/Assessment/
- South Carolina: http://ed.sc.gov/topics/careerandtech/

Clarity and coherence

The expert panel also was charged with giving an overall rating on the clarity and coherence of POS materials, and this rating was considered an indication of the quality of POS guidance materials.

Examples of clear, coherent guidance included the following:

- Easily navigable, user-friendly websites organized around CTE and POS; and
- Accessibility of state staff for technical assistance (whom to contact for specific topics).

States rated highly (3.5 or above) for overall clarity and coherence of POS guidance materials were California, Florida, Nebraska, Pennsylvania, Texas, Utah, and Wisconsin.

Summary

In general, states have made progress in developing POS guidance aligned with the Department's Framework components, even though the Framework was not released until early 2010. No state's guidance materials were rated very useful across the board, but many states had at least one component of POS guidance in which they excelled. Further, for each of the 10 components, panel members were able to identify one or more documents considered exemplary for use by the field. Panelists rated seven states highly for the clarity and coherence of their POS guidance materials.

The expert panelists found that the most useful state POS guidance provided the following:

- State requirements for program approval or expectations for POS operations (e.g., accountability);
- Funding guidelines detailing how POS can be supported (e.g., for dual enrollment or industry certifications);
- Clear answers to FAQs, with examples;
- Templates or samples of suggested documents (e.g., memoranda of understanding, articulation agreements, and POS), along with instructions for how to use them;
- Definitions of key federal and state terms (e.g., dual credit);
- Crosswalks that support local subgrantees in linking rigorous technical content with academic and industry standards;
- Business and industry information (local, state, and national);
- Resource toolkits, such as PowerPoint presentations and videos related to the development of POS, the integration of academics and CTE, and work-based learning;
- Career guidance information for students and parents and guidance counselors and school personnel; and
- Contact information for state CTE staff, calendars for local technical assistance workshops, and conference calls for state and local directors.

Panelists expressed concern that websites for some states were disorganized or offered sparse, outdated, or confusing information. Recognizing that local program staff often rely on the Internet for information on *Perkins IV* requirements, panel members judged such websites to be a substantial obstacle to POS design and implementation. In addition to a lack of useful guidance on some component areas, the panel also noted a general absence of

guidance or information for the postsecondary level. Materials tended to focus on the design and implementation of POS at the secondary level, with relatively little attention paid to the unique needs of postsecondary faculty and administrators.

State POS guidance was strongest in the areas of Legislation and Policies, Course Sequences, College and Career Readiness Standards, and Guidance Counseling and Academic Advisement. Panelists noted, however, that many states provided information on high school course sequences and requirements for entry into college, but little to no information on career preparation specifically. That is, the "career" portion of college and career readiness was notably absent from state POS guidance.

State POS guidance was weakest in the areas of Credit Transfer Agreements, Teaching and Learning Strategies, and Technical Skill Assessments. The expert panel suggested that states need to improve their guidance to locals in these areas and may need federal assistance in doing so. Recognizing the dynamic nature of the field, panelists also recommended that POS guidance and states' approaches to implementation be reviewed again in several years to assess progress.

Expert panelists responded positively to the Department's Framework and concluded that having a guiding structure for organizing states' design and implementation of POS would promote a more comprehensive, consistent, and informed response to *Perkins IV*. Panelists suggested that if states provided such guidance to local providers and shared useful resources, it would greatly improve the development and implementation of POS nationally. The materials reviewed by the expert panel for this study were considered a first step in advancing this national effort, and panelists supported circulating specific materials as an example of promising approaches that might benefit other states.

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Expert Panel Rubric

State Program of Study Guidelines
Expert Panel Evaluation Rubric

Overview

The rubric you will be using to rate state Program of Study (POS) guidance to local providers is based on an emerging design framework developed by the Office of Vocational and Adult Education (OVAE), U.S. Department of Education. This framework describes 10 core components that support the design and implementation of effective POS. Although the framework was not available to states at the time they initiated POS development, you will be assessing whether (and, if so, how) states are incorporating any key components into the guidance they offer to local providers. You will also be evaluating the clarity and coherence of the materials from the point of view of local providers developing and implementing POS.

Although states will not be ranked in the final Expert Panel Review report, we will be using your ratings to describe the presence or absence of state guidance around each component and to assess the usefulness of the materials in supporting local providers in creating effective POS. As you review state documents and materials, we ask that you (1) relate each of them to as few or as many of the 10 components contained in the OVAE framework as apply, explaining why you believe each document fits the category, and (2) why you believe the materials may or may not be useful to local agencies. We also ask you to provide a 4-point "usefulness" rating to each document. There is space at the end of the rubric to list documents or materials that do not fit into any of the 10 components. Finally, we will ask you to assess the clarity and coherence of the materials.

Once you have completed your review, you will participate in an expert panel webinar, along with other expert panelists and the study team, to discuss your state ratings. You will receive your state materials at least one week in advance of the webinar during which time your ratings will be reviewed, and we ask that you **submit an electronic copy of your review of each state to Corinne Alfeld (calfeld@aed.org) at least 24 hours prior to that webinar**.

State Program of Study Guidelines
Expert Panel Evaluation Rubric—Continued

Instructions

Listed below are the 10 supporting components of POS included in the OVAE design framework, along with examples of how each component might be translated into state guidance. As you review each state POS document, we ask that you first consider which of the 10 components the item addresses, with the understanding that some documents, or even sections of documents, may apply to multiple components. Once you have identified the POS component(s) addressed by a guidance document, we ask that you justify your classification and evaluate its usefulness to local providers.

Specifically, for each component, we ask that you provide a short description of the relevant document (or appropriate section of the document) (Column A) to identify it and how it addresses the component in which you have classified it (Column B). Next, describe your perception of the usefulness of the document in supporting local providers as they develop and implement POS (Column C) and assign a point value to the item using the following 4-point scale (Column D).

1 = Not Useful 2 = Somewhat Useful 3 = Useful 4 = Very Useful

Underneath the chart for each component, rate the overall usefulness of all of the materials you listed under that component. (If there was only one document, the overall rating will be the same as that of the document; if there is more than one document, you may decide to average their ratings to indicate overall usefulness.) Please add explanatory comments about your rating decisions whenever appropriate.

Finally, in addition to addressing each of the 10 components, please also evaluate the clarity and coherence of each of the POS guidance documents on the final page of the rubric (#11).

STATE: _____ REVIEWER: _____

Expert Panel Rubric—Continued

1. Legislation and Policies

States may adopt statewide legislation or administrative policies to promote POS development and implementation at the local level. Evidence of such state support could include the following:

- Legislation that formally describes the required components of POS;
- Fiscal resources that commit state funds in support of POS development or implementation;
- Administrative policies that describe the required components of POS at the local level; and
- Program approval criteria that define the minimal expectations of POS for local providers to qualify for federal *Perkins* funding.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

2. Partnerships

States may promote relationships among secondary and postsecondary education, business, and other community stakeholders to support POS design, implementation, and maintenance. Evidence of state support of partnership development at the local level could include the following:

- Examples of written memoranda of understanding that spell out the expectations of partnership members; and
- Technical assistance materials to assist providers in initiating and coordinating partnerships among diverse stakeholders (e.g., secondary, post-secondary, business/industry, workforce agencies).

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

3. College and Career Readiness Standards

College and career readiness standards define what students are expected to know and be able to do to enter and advance in college, postsecondary training, or careers. Evidence of state support for the development of such standards could include the following:

- State-identified academic, technical, and/or work readiness standards or skills that local providers may adopt or adapt; and
- Technical assistance materials that providers might use to identify college and career readiness standards or skills for use at the local level.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

4. Course Sequences

Effective POS offer a nonduplicative sequence of secondary and postsecondary courses that ensure students can transition to postsecondary education or training without duplicating classes or requiring remedial coursework or preparation. Evidence of state-developed materials to support local providers in aligning course sequences could include the following:

- Design templates/grids showing the academic and technical coursework in POS;
- Technical assistance materials detailing how master schedules may be adapted to support POS delivery (e.g., block scheduling); and
- Information on how course sequences may be structured, beginning with introductory coursework at the secondary level and progressing to more occupationally specific coursework offered at the postsecondary level.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

5. Credit Transfer Agreements

Credit transfer agreements provide opportunities for secondary students to be awarded postsecondary credit while still enrolled in high school. Evidence of state support for local providers to award postsecondary credits could include the following:

- Technical assistance materials that describe how dual credit or dual enrollment opportunities may be structured;
- Statewide articulation agreements that formalize credit transfer opportunities across the secondary and postsecondary education systems;
- Descriptions of the expectations or requirements for teacher and faculty qualifications to teach college-level coursework; and
- Statewide tuition reimbursement agreements or resource allocation agreements.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

6. Teaching and Learning Strategies

Innovative and creative instructional approaches enable teachers and instructors to integrate academic and technical instruction, and students to apply academic and technical learning in their POS courses. Evidence of state-developed materials to support local providers in developing effective instructional and learning strategies could include the following:

- Examples of integrated curriculum or curricular resources (e.g., websites or state-developed curricula);
- Technical assistance materials to assist teachers and instructors in working together to integrate coursework;
- Provision of state-developed or identified work-based, project-based, or problem-solving curricula; and
- Recommendations for using career and technical student organizations to support POS design or implementation.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

7. Professional Development

The provision of effective POS requires the sustained, intensive, and focused involvement of school and college administrators, teachers, and faculty.

Evidence of state guidance to support professional development among local provider staff could include the following:

- State-provided technical assistance workshops for local providers to support POS design and implementation; and
- Training materials to assist teachers and faculty in creating effective POS (e.g., strategies for integrating academic and technical curriculum or aligning curriculum across education levels).

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

8. Guidance Counseling and Academic Advisement

Guidance counseling and academic advisement help students make informed decisions about which POS to pursue. Evidence of state guidance to support guidance counseling and advising among local provider staff could include the following:

- State-developed or adopted guidance and counseling planning or support documents or standards;
- Technical assistance workshops or trainings to ensure that guidance, counseling, and advisement professionals have access to up-to-date information about POS offerings to aid students in their decision making;
- Web-based tools or written resources to assist students in identifying their career interests and aptitudes; and
- Information and resources for parents to help their children prepare for college and careers, such as workshops on college and financial aid applications.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

9. Technical Skill Assessments

National, state, and/or local assessments can provide ongoing information about the extent to which students are attaining the necessary knowledge and skills for entry into and advancement in postsecondary education, training, and careers in their chosen POS. Evidence of state guidance to support technical skill assessment at the local level could include the following:

- Examples of state-adopted, industry-approved technical skill assessments for POS, where available and appropriate;
- Technical assistance materials to assist local providers in developing or selecting technical skill assessments; and
- Evidence that states may award secondary credit, postsecondary credit, or a special designation on a student's high school diploma for those who pass assessments.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

10. Accountability and Evaluation

Systems and strategies to gather quantitative and qualitative data on both local POS components and student outcomes are crucial for ongoing state efforts to support development and implementation of POS at the local level. Evidence of state guidance to support local providers in assessing and addressing the outcomes of POS adoption could include the following:

- Written guidance on criteria for identifying POS participants and tracking their outcomes;
- State strategies for conducting follow-up of students completing the secondary component of POS; and
- State tracking of POS participants.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

Expert Panel Rubric—Continued

11. Other

Other observations about the documents which do not fit into the 10 previous components.

Document name (or description) (Column A)	**Why did you classify it here?** (Column B)	**How useful would these materials be? Why?** (Column C)	**Rating of usefulness** (Column D)

(Add rows as necessary.)

Comments:

Expert Panel Rubric—Continued

12. Overall Clarity and Coherence

Effective state guidance to support local POS development and implementation hinges on whether local providers can access and use the information states provide. Evidence that state written guidance is accessible and designed for local use could include the following:

- References to state websites where POS information is posted;
- Identification of state technical assistance phone numbers or state staff members who can answer questions relating to POS development and adoption; and
- Rubrics that organize materials or other signs that guidance is clearly written, logically organized, and easily understandable.

Document name (or description)	Comments on the clarity, accessibility, and coherence of the materials

(Add rows as necessary.)

Overall rating of usefulness of state guidance to local providers on this component_____

Comments:

E-mailed Letters to States Requesting POS Guidance Materials

Initial E-mailed Letter to State Directors

Dear [Name of State Director],

Thank you for your continued support in helping us to collect information for use in this study.

Upon reviewing the survey you recently completed, we have determined that we are missing important information about the guidance your office provided to assist local administrators in designing and implementing POS. Since we will be convening a panel of experts to review the guidance and support provided by states, it is critical that we have information about what your state has offered to the field. The panel review will not be evaluative nor will it be used to make comparisons among states; rather, expert panelist findings will be used to obtain a better understanding of states' POS design process, and to craft recommendations that will support all states in creating and/or refining POS for career and technical education.

Could you please provide us with contact information for the staff member within your state who can provide us with copies of any POS guidance and materials that your state has shared with local agencies? Information should be sent to Corinne Alfeld (calfeld@aed.org). If you have any questions, please contact me at (503) 963-3757.

Many thanks,

Steve Klein, Study Director
Corinne Alfeld, Expert Panel Lead

Follow-Up E-mail Letter to Designated State Staff

Dear ____,

I received your contact information from [Name of State Director].

We are compiling materials from each state to help us understand the state agency's role in helping local providers develop and implement Programs of Study (POS). We have assembled an expert panel to review these materials with the goal of identifying promising examples and strategies that can inform other states and local providers.

I am hoping that you will be able to provide us with materials and information that your state has made available to support local providers in creating POS. ***We are only interested in existing materials that you have already shared with your substate subgrantees since the reauthorization of the Act.***

Specifically, we would like any or all of the following types of documents, in either electronic or hard copy, or through a URL:

- Statewide definition of POS
- State guidelines and/or templates (e.g., forms and instructions, model standards, assessments, articulation agreements, suggested course sequences, guides for aligning academic and CTE standards and secondary and postsecondary curriculum, and any administrative regulations released by state career and technical agency staff to local providers)
- Statewide legislation and guidance on POS, articulation agreements, and/or dual enrollment
- Statewide guidance or requirements regarding college and career readiness standards/assessments and industry certifications
- State's approval process for POS
- Materials distributed at state-provided professional development training on POS
- Guidance and counseling tools developed to support POS, such as Individual Graduation Plan templates and college and career planning resources
- Other materials

We may have already collected some of these materials via your state director's survey and searches of your state's website.

Please feel free to call me at (202) 884-8622 if you would like to discuss this request.

Thank you!
Corinne Alfeld, Expert Panel Lead

Information on POS Collected from State Websites (Example: Alabama)

Link to main CTE page on state website	http://www.alsde.edu/html/sections/section_detail.asp?section=52&footer=sections
Statewide definition of POS	POS not mentioned. Career Clusters defined as "Career clusters in Alabama include courses that identify academic and technical knowledge and skills needed for students to pursue a wide range of career opportunities. Courses provide rigor and relevance for students by linking school-based learning with career-related experiences. Career clusters provide the framework for what students need to know and be able to do for success in the twenty-first century."
POS offered	CTE areas listed on the website include Agriscience, Law, Public Safety and Security; Commerce and Information Technology; Family, Human Services, Hospitality and Tourism, and Education; Health Science; and Technical Systems Education. There is a section on Tech Prep with a link to the Statewide Articulation Memoranda of Understanding listing all courses approved for statewide articulation. Career Clusters, Pathways, and Courses are listed on the website. The website lists 16 National Career Clusters.
Link(s) to guidelines and template(s) developed by state to help local providers develop POS (e.g., forms and instructions, guides for aligning academic and CTE standards and secondary and postsecondary curriculum, and any administrative regulations released by state career and technical agency staff to local providers)	Advisory Committee Handbook and Handbook for Local CTE partnering are available as Word documents on main CTE website. (Note: neither document mentions "program of study.")
Link(s) to guidelines/instructions and approval form(s)/criteria for local providers to submit POS for state approval	Not mentioned
Other relevant links	• http://www.alsde.edu (Sections > Curriculum & Instruction > Publications - Courses of Study Other > Combined courses for all 300 developed) • http://www.alcareertech.org/ (AL Department of Education CTE website, most information outdated) • http://www.alcareerinfo.org (Resources > Education Corner > Plans of Instruction) unit plans

State POS Guidance Examples Recommended by the Expert Panel as National Models

State Materials Recommended as National Models (listed in alphabetical order)

State	**Useful guidance materials**
California	• CTE framework document (http://www.cde.ca.gov/ci/ct/sf/documents/cteframework.pdf); • Standards validated by industry and crosswalked to connected curriculum framework with many resources (http://www.cde.ca.gov/ci/ct/sf/documents/ctestandards.pdf); • State career pathways websites with information on articulation agreements (http://www.statewidepathways.org/); • Career guidance (The Real Game and Road Trip Nation—part of California Career Resource Network) (http://www.californiacareers.info/); • Work experience education program information (http://www.cde.ca.gov/ci/ct/we/); • Data systems
Florida	• Technical assessment FAQs; • *Perkins* implementation guide (http://www.fldoe.org/workforce/perkins/pdf/2010-2011RFA.pdf); • White papers (technical assistance papers?) http://www.fldoe.org/workforce/technicalassistancepapers.asp)
New Mexico	• Monitoring documents (http://www.ped.state.nm.us/CTWEB/monitoring.html)
Pennsylvania	• Good upfront piece for navigating website (http://www.portal.state.pa.us/portal/server.pt/community/Career_&_Technical_Education/7335/); • "Illuminate" online communication tool
South Carolina	• Entire website could be a model (addresses multiple needs) (http://ed.sc.gov/topics/careerandtech/); "Paving Pathways to Success"; cost and funding options for technical assessments; data system
Texas	• Website materials better than others (http://ritter.tea.state.tx.us/cte/index.html); PD videos (http://cte.tamucc.edu/la/online_library.shtml); AchieveTX.org (http://www.achievetexas.org/)

Other Notable State Materials (listed in alphabetical order)

Arkansas	• PD sample technical assistance letter; • PowerPoints on how to improve programs and POS (http://ace.arkansas.gov/CareerandTechEducation/presentations.htm)
Arizona	• Leadership guide for creating local advisory committees (http://www.ade.state.az.us/cte/info/LeadershipGuide.pdf)
Colorado	• Career guidance (http://www.coloradostateplan.com/Counselors.htm); • Overall clarity of website materials (http://www.coloradostateplan.com/index.htm)
Georgia	• Guide to dual enrollment (http://www.doe.k12.ga.us/ci_cta.aspx?PageReq=CICTASeam); • Training videos (http://www.doe.k12.ga.us/ci_cta.aspx)
Hawaii	• Glossary of terms (career pathways, career clusters, POS) (http://www.hawaii.edu/cte/pathways/glossary.html)
Illinois	• POS guide (though no postsecondary component) (http://occrl.illinois.edu/files/Projects/perkins/POSguide.pdf)

State	**Useful guidance materials**
Indiana	• Course sequence template (http://www.doe.in.gov/pathways/); • State policy on credit transfer (http://www.transferin.net/index.aspx); • FAQs on dual credit/dual enrollment (http://www.doe.in.gov/core40/pdf/Dual_Credit_QA.pdf)
Kansas	• Guide for advisory committees (though MOA not included); • Links to PDFs (http://www.ksde.org/Default.aspx?tabid=1660#ACH); • FAQs are good; video and podcast training (good site but not POS specific)—same link.
Minnesota	• PDF files; • Frameworks (link to example framework) (http://www.cte.mnscu.edu/programs/index.html); • Technical assessments (http://www.cte.mnscu.edu/programs/Technical_Skill_Atta.html)
Missouri	• Good website materials, definition of POS (http://dese.mo.gov/divcareered/perkins_iv_pos.htm); • Curriculum policies; PDFs; • Multimedia offerings
Mississippi	• Assessment center (https://cia.rcu.msstate.edu/Assessment/)
North Carolina	• Course of study (http://www.ncpublicschools.org/cte/); • Careers magazine; briefing papers (http://www.ncpublicschools.org/cte/briefing/)
Nebraska	• Good presentation of materials; technical skill assessments; • POS information related to curriculum standards (http://www.nde.state.ne.us/NCE/)
New Jersey	• Toolbox (career and college readiness) (http://www.state.nj.us/education/voc/toolbox.htm); • POS reapproval application (http://www.state.nj.us/education/voc/occprapp.htm); • Work-based learning; Structured Learning Experiences http://www.state.nj.us/education/voc/sle/)
New York	• Career development and occupational resource guide = living document (https://www.nycareerzone.org/cz/index.jsp)
Ohio	• Teacher preparation; state administrative rules; • CTE standards (http://education.ohio.gov/GD/Templates/Pages/ODE/ODEPrimary.aspx?Page=2&TopicID=1752&TopicRelationID=2)
Oklahoma	• Oklahoma skills standards (done by a curriculum center) (http://www.okcareertech.org/testing/skills_stands.htm)
Tennessee	• PowerPoints for locals (http://www.state.tn.us/education/cte/index.shtml); • CTE website (with links to PPTs); • Detailed lesson plans (searchable); • Standards alignment to POS for technical exams (http://www.state.tn.us/education/cte/ad/clupos/index.shtml); state POS website; grants for dual credit (http://www.tn.gov/CollegePays/mon_college/grants.htm); state data system (E-TIGER) (http://www.state.tn.us/education/cte/ad/tiger/index.shtml)
Utah	• Good site, easy to navigate; program approval by cluster (http://www.schools.utah.gov/cte/pathways.html)
Wisconsin	• Summary of POS used in school districts and news and resources (http://dpi.wi.gov/cte/index.html)
Wyoming	• Guides related to careers and clusters within state (http://www.k12.wy.us/ICS/Cluster_Guides.asp)

Appendix C. Cross Case Report

Introduction

This appendix summarizes a series of case studies examining how, why, and to what extent statutory changes led to desired changes in CTE programs. The case studies, involving six states and three communities within each state, are intended to provide a deeper understanding of *Perkins IV* implementation at state and local levels.

National experts recommended the six participating states based on their size, geography, and organizational structure. Research teams visited the case study sites to collect qualitative data about their experiences in developing accountability systems, financial systems, and programs of study (POS) in response to *Perkins IV*. Interview protocols were used to structure the information collected through the case studies and to promote consistent, high-quality data collection across the case study sites.

Methodology

In five of the six states, the eligible agency was the state department of education; in the sixth state, an agency charged with coordinating workforce development and education activities was the recipient of *Perkins* funds. Local communities were selected by using a table of random numbers to identify local education agencies (LEAs) from the state's Common Core of Data file, collected by the Department's National Center for Education Statistics. For case study purposes, a community was defined as a school district and/or area CTE center and its postsecondary partner(s).

Each case study began with in-depth interviews with state secondary and postsecondary CTE directors to gather perspectives on their state's progress in implementing *Perkins IV* and challenges they had encountered. In addition, researchers interviewed state-level staff responsible for the accountability and finance provisions of *Perkins IV* as well as those responsible for the design and implementation of POS. Information obtained at the state level provided both context and a knowledge base for local site visits. In the local communities, researchers met with CTE directors,[1] secondary and postsecondary administrators and faculty, and business partners.

[1] In most LEAs, the CTE director has responsibility for implementation of *Perkins*-funded activities; in smaller districts, the CTE director may have other administrative or teaching responsibilities. In IHEs), the lead staff person for *Perkins* is typically a dean, a department head of a faculty member; typically there is not an individual with the CTE director title.

All respondents were assured anonymity. Researchers told each respondent that no state, locality, or individual would be identified in the research or findings and that the information they provided would not be attributed directly to them by name, position, or location. Some of the information and quotations in this appendix have been edited slightly to preserve confidentiality.

To promote consistent, high-quality data collection across the case study sites, the research team created a common set of protocols in consultation with Department staff. These protocols were tailored to the roles and responsibilities of state and local program administrators and staff. (Copies of these protocols are provided in Attachment A.) In addition, all case study staff participated in a full-day training session that included an in-depth review of the protocols, qualitative methodology, and expectations for note-taking and report writing.

Two- or three-person teams conducted all of the site visits between January and May 2010. A senior staff member with extensive case study experience served as the lead for all visits to a state and the communities within it. This individual worked closely with state and local CTE administrators to develop site visit agendas and arrange interviews with key personnel. Other members of the team assisted with interviews and assumed primary responsibility for note-taking. To ensure that researchers had thorough notes for analyses, most case study interviews were recorded and professionally transcribed.

Findings from approximately 30 interviews at the state level and more than 100 interviews at the local level revealed a number of patterns and common themes. Although it is not possible to generalize case study findings to the larger universe of states and eligible recipients engaged in the design and delivery of CTE programs and activities, these findings present a clear snapshot of *Perkins* financing, accountability systems, and POS in the 2009–10 school year.

CTE in the Context of Secondary Education Reform

In several of the case study states, both state and local administrators reported attempts to enhance CTE as part of broader education reforms at the secondary level—some of which were driven by the requirements of the *Elementary and Secondary Education Act* (*ESEA*), while others were part of efforts to raise students' academic performance and reduce dropout rates. A number of state and local secondary CTE administrators described how CTE was an integral component of these reform efforts. At the same time, many of these administrators said that the reform efforts have been undermined by significant cuts in state funding, which have reduced staffing and resources. In contrast, few postsecondary respondents described ways in which CTE programs were part of more extensive reform strategies.

CTE and State Reform Efforts

Reform efforts that encompass CTE varied across the states. Secondary reform strategies that highlight CTE included requirements for career exploration and advising at the middle school level; incorporation of CTE into the state's system for grading school performance; participation of CTE practitioners in the state's high school redesign committee; consolidation of CTE and academic units within the state department of education; and adoption of career-ready standards.

One state recently enacted statutes encouraging students to begin thinking about career-oriented studies as early as middle school. As a result, middle school students are expected to use an online advising system to create an academic and career plan from sixth grade through postsecondary education and are required to take at least one career course before promotion to high school. Another important change in this state was integrating CTE into the state system for grading school performance. Previously, schools were graded solely on their standardized test scores. Under the new policy, the grading system was expanded to include the number of industry certifications earned by students in each school—a measure that state staff said made CTE and workforce development more visible. In addition, state administrators reported efforts to forge stronger links between schools and employers by requiring local CTE programs to coordinate with local business and industry and focus on introducing students to high-wage, high-demand jobs.

The CTE director in another state described the participation of a CTE staff member in the state department of education's internal high school redesign committee. "We felt like we played an instrumental role in driving high school redesign with the new graduation requirements," he said. "As we redevelop curriculum, we'll use the new academic standards that have been implemented and highlight those in each one of the program areas where it's appropriate."

In a third state, the CTE director outlined ambitious plans to create integrated school support units at two levels, P–8 and 9th grade through postsecondary education, within the state department of education. He had been tapped to lead the latter division, giving him oversight of high schools, CTE, and adult education and longer range goals of revising governance policies and funding formulas to link elementary, middle, and high schools with area CTE centers through a regional allocation. He also cited efforts to strengthen relationships with other departments, a move he described as "really getting out of our agency silos." As an example, he cited an analysis of the agriculture and natural resources sectors in the state that was funded by the state department of education.

Administrators in another state reported developing career-ready standards that encompass "critical thinking, teamwork, responsibility, and all of those types of things that you don't get a measurement of on the pure academic side of the house." They said they used some *Per-*

kins funds to bring together more than 80 leaders from education and industry to discuss these standards and noted that they "purposely branched out beyond just CTE." State administrators said that LEAs have broad discretion in setting course requirements, as long as they meet state academic standards. They indicated that this flexibility allows districts to develop courses such as vocational agriculture that meet state math requirements and are as academically challenging as an algebra II course.

In some states, CTE played a central role in policymakers' efforts to keep struggling students interested in school and provide them with valuable workforce skills. One state CTE director suggested that CTE programs are important in overall efforts to improve high schools by helping struggling students understand the relevance of various academic topics. "We see CTE in a broader scope of high school improvement," he remarked. While many students are comfortable with lessons offered through "abstract and conceptual, typical traditional" strategies, he asserted that those approaches risk ignoring the needs of the "middle majority" of students "who learn more from experiential learning."

His views were echoed by his counterparts in other states, one of whom observed, "All of the research shows that you've got to get a student engaged. It may be in band, it may be in art, or it may be in CTE, but those students [who] are engaged graduate at higher rates than those who are just window shopping for courses." Similarly, officials in another state said that they have paid increasing attention to improving high school completion rates in recent years and suggested that effective CTE classes can encourage students to stay in school. While CTE is not the only dropout prevention strategy, it is "very important to keeping kids in school, keeping them engaged and excited about learning," one state official explained. In this state and others, officials also expressed concerns that students had fewer opportunities to take CTE courses and other electives as a result of *ESEA* and increased high school graduation requirements.

In at least two states, administrators reported that budget cuts had led to reduced CTE staffing at the state level and other changes to CTE program delivery. In one state, budget cuts resulted in the conversion of the state's designated CTE funding stream into flexible funding that allows districts to use money that once paid for CTE and other programs and services. Officials in this state said they expected this flexible funding arrangement to continue to put pressure on CTE budgets in the years ahead.

CTE and Local Reform

Administrators in several LEAs noted that CTE played a significant role in school and district reform efforts. Some suggested that CTE helped forge stronger ties with postsecondary institutions and led to better alignment of academic programs with postsecondary expectations, citing dual enrollment policies designed to boost students' access to academically challenging course content. Others explained how districts have made creating new and more

academically rigorous CTE programs a core element of efforts to redesign struggling schools.

One local CTE director cited CTE as a major part of the LEA's efforts to redesign 14 low-performing schools and noted district leaders' conviction that CTE programs meet students' interests and capitalize on their analytical and creative skills. Administrators in this LEA sought to improve the overall quality of CTE courses. One official noted that CTE courses are no longer regarded as a "dumping ground," but rather as a "proving ground." As part of their effort to improve CTE quality, staff in the LEA created honors-level CTE courses and integrated CTE courses with other disciplines, such as foreign languages. For instance, the LEA was offering a "business Spanish" class.

As pressure to reduce dropout rates intensifies, several LEA officials said that they regarded CTE as an important vehicle for keeping students interested in school and helping them understand its relevance to their lives. One local CTE director recalled considerable debate in his district about whether teachers should focus on preparing students for college, the workforce, or both. He reported that LEA administrators ultimately recognized the importance of CTE courses in providing students with the academic foundation necessary to choose either a postsecondary or career path. In addition, he noted a focus on ensuring that CTE courses are more than just "fun electives" and explained that district officials have become increasingly determined to create "deeper, stronger links" to postsecondary education and support students who learn in nontraditional ways. An administrator in another district reported data on the connection between CTE and high school completion:

> We have the data to prove that career and technical education students are graduating at a higher percentage rate. We're retaining those students. . . . Today's students want to know "Why do I need to learn this?" I can remember asking that question in high school myself. And I remember my algebra teacher saying, "Oh, you'll use it someday. Don't worry about it." Well, we're actually showing students how to use algebra, and they're applying the concepts. They use them, and so they retain them.

In another LEA, officials reported that they were organizing CTE classes and other elective courses around unified themes as part of an *ESEA*-mandated school restructuring initiative focused on creating academies or small learning communities. Beginning in the 2010–11 school year, all students in the district will select a small learning community when they move from middle to high school. Each small learning community will contain several CTE pathways and formal POS. The local CTE director said the small learning communities will be the central pathway through which students will be exposed to CTE in the future. She also noted that CTE courses are being embedded in small learning communities within schools in different ways. In some schools, they are offered as electives that are not ap-

proved for credit for admission to state universities; in other schools, CTE courses do meet this state standard. One school offered a sequence of three CTE courses, with the most advanced course eligible for college credit. District officials said that they intended to review the different structure of CTE courses within schools' small learning communities in the future.

Several K–12 and postsecondary officials said that CTE is critical to efforts to forge stronger links between high schools and postsecondary education, in some cases through dual-enrollment agreements between LEAs and institutions of higher education (IHEs). In one LEA, increased interest in promoting college access and workforce preparation had generated support for dual enrollment and the establishment of a "regional collegiate high school." A regional administrator in another state noted that *Perkins IV* had encouraged much closer working relationships between K–12 systems and colleges than had existed in the past, when those links were more "haphazard." Today, schools have "colleges sitting at the table with us, talking to us as partners," he remarked.

CTE and Postsecondary Reform

In several states, IHEs were building on existing reform efforts in implementing *Perkins IV*, especially in developing connections with secondary partners. As one state postsecondary administrator explained, "There was a lot of precursor work [before *Perkins IV*] . . . the system spent a heck of a lot of energy well before *Perkins IV* around career pathways, career lattices that came out of the career clusters work, the 16 career clusters." Another postsecondary administrator described her institution's intensive efforts to develop dual enrollment opportunities for secondary students and why they chose to concentrate those efforts in area CTE centers: "We very intentionally have dual enrollment situated in the [area CTE centers] because we believe that we can support the middle flyers, a lot of whom are at the [area CTE centers], who don't think of college as an option. [T]his is an opportunity for them to see a future beyond simply a high school degree." This state's community college system had established a staff position dedicated solely to forging connections with secondary partners. This staff person explained how secondary-postsecondary partnerships in the state had been built over time: "There's a lot of agreement [between secondary and postsecondary partners] because we'[ve] already done a lot of the leg work. . . . We have about eight years of an exceptionally strong partnership between the community college and the [area CTE centers]."

Academic Credit for Secondary CTE Coursework

Policies related to awarding academic credit (i.e., required or elective credits in specific subjects) for CTE courses varied considerably across the case study states. The decision about awarding academic credit for coursework completed in a CTE subject area or class was generally left to LEA officials in most of the states. However, the latitude allowed LEAs by state

officials varied. On one end of the spectrum, state university system officials had identified 7,500 individual CTE courses that met the system's admissions requirements, but local school boards still had to decide whether students received academic credit for any particular CTE course. The CTE director in another state said that there were a number of contextual academic and CTE courses that could be substituted for academic courses. In a third state, the CTE director said that decisions about academic credit are made at the local level. "It's not state-controlled or state-approved," he noted. "There are local schools that offer science or whatever credit for CTE courses."

Administrators in another state described an alternative credit pilot program launched in 2008 to allow students enrolled in industry-certified CTE courses to be awarded core credits in biology, geometry, or algebra. Examples of CTE courses qualifying for academic credit in this state included an agricultural science foundation course that meets a general science requirement and a health science course that leads to credit in anatomy/physiology. Officials also noted that some CTE courses can meet the state's graduation requirements for fine arts. CTE administrators were optimistic that more CTE courses would qualify for academic credit in the future, because the state's application for federal "Race to the Top" funding would require districts to offer CTE courses in science, technology, engineering, and math that count for academic credit and offer industry certification.

However, the CTE director in another state was less optimistic about the future of academic credit embedded in CTE courses. He said that embedded academic credits are recorded at area CTE centers and then on transcripts at the students' home high schools but that some high schools refuse to recognize these credits. "I started saying in 2006 that you need to assume that embedded academic credits will go away," he recalled. Describing these credits as a "threatened species" if not validated through an assessment process, he questioned whether embedded academic courses offered at area CTE centers are "valid and reliable methods of teaching students the same level of academics that a student not attending the regional center would get." A college administrator in the same state reported difficulties in determining what levels of academic courses were embedded in CTE classes. She said it is "really difficult for a college to figure out what a student's got for math when the student's math credit is embedded in his/her automotive course."

Implementing *Perkins IV* Funding Provisions

This section of the appendix provides a summary of the major funding provisions in *Perkins IV* and describes how they are being implemented in case study states and communities. Particular emphasis is placed on the distribution and use of funds within states, LEAs, and IHEs. The section concludes with a summary of recommendations offered by respondents for changes to funding provisions in future *Perkins* reauthorizations.

Major Funding Provisions in Perkins IV

Statutory provisions pertaining to the distribution and uses of funds remained substantially consistent from *Perkins III* to *Perkins IV*. There were no changes to the formula used to distribute money to states or to the general requirements for allocations within states.

Perkins funds are distributed to states using a formula based on the percentages of residents in each state who fall within different age groups. Funds are awarded under two different sections of the Act—Title I, which is also known as the basic state grant, and Title II, Tech Prep Education. Perhaps the most significant change in *Perkins IV* was a new provision that gave states the option to merge some or all of their Tech Prep allocations with the funding they receive under Title I of the legislation.

As with its predecessor, *Perkins IV* specifies that states are required to allocate at least 85 percent of their *Perkins* Title I funds to LEAs and IHEs, although it gives states the discretion to determine how the funds are split between the secondary and postsecondary levels. The legislation also prescribes the formulas for fund allocations within states. At the secondary level, the formula considers the number of individuals aged 5–17 within the LEA and the number of individuals in this age group who are below the poverty line. The postsecondary formula includes the percentage of students who receive Pell Grants or financial assistance from the Bureau of Indian Affairs. In addition, the Act identifies thresholds for minimum grant allocations—$15,000 at the secondary level and $50,000 at the postsecondary level—and requires LEAs and IHEs that do not qualify for the minimum allocation to join consortia.

Under *Perkins III*, state *Perkins* administrators were allowed to reserve up to 10 percent of the funds to be spent at the local level (or up to 8.5 percent of the total *Perkins* Title I allocation) for distribution to local subgrantees in areas with high numbers of CTE students, rural areas, and areas negatively affected by changes to within-state formulas. *Perkins IV* allows state officials to target these funds to areas with high percentages of CTE students, areas with large numbers of CTE students, and rural areas. (The language pertaining to within-state formulas was eliminated because the formulas were not changed.)

Perkins IV allows states to reserve up to 10 percent of their Title I allotments for state leadership activities. The legislation identifies 9 required and 17 permissible uses of leadership funds. Required activities include assessing CTE programs; promoting and improving the use of technology in CTE programs; supporting professional development of teachers and other staff; providing preparation in "nontraditional" fields that expose students to high-wage, high-skill occupations; and providing technical assistance to local schools and districts. Permissible activities include strengthening guidance and career

counseling; establishing articulation agreements between secondary and postsecondary CTE institutions; and supporting partnerships between schools and businesses.

As with the previous legislation, *Perkins IV* limits the amount of *Perkins* funds that can be used for administrative expenses at the state level to $250,000 or no more than 5 percent of the state's Title 1 allotment (whichever amount is greater). States are also required to provide a one-to-one match for administrative funds from nonfederal sources.

Key Findings

All of the case study states and most of the LEAs and IHEs provided additional funding for CTE, either through categorical grants or general budget expenditures for teachers, administrators, facilities, and classroom materials. Nonetheless, almost all respondents indicated that the need for *Perkins* funds exceeded the dollars available. State CTE administrators reported that administrative funds, which were typically used to cover staff, data collection and analysis, and travel, were inadequate especially with the new requirements of *Perkins IV*. They also noted that the amount designated for leadership funds was insufficient to cover the additional required and permissible uses. At the local level, most practitioners were satisfied with the process by which *Perkins* funds were allocated, but almost all said that funding for CTE was insufficient. Key findings related to the implementation of *Perkins* funding provisions are summarized below:

- Four of the six states merged Tech Prep funds with their basic *Perkins* grants. There was little agreement about the decision to merge *Perkins* funds*;* postsecondary administrators generally agreed that they should be kept separate, while secondary administrators generally favored consolidation.
- Across the states, decisions about the secondary and postsecondary funding split were based on factors such as data analyses, competitive grant processes, the number of eligible providers, and comparative enrollments; on average, 58 percent of funding went to LEAs and 42 percent went to IHEs.
- Many LEAs and some IHEs formed consortia to meet the minimum allocation threshold.
- Three states provided financial support for dual enrollment through different funding strategies.
- Four states took advantage of the reserve option to enhance flexibility, increase funding for rural communities, and support innovation and technical assistance.

Perkins IV *Funds to States*

There was broad agreement in the states that *Perkins* funding is crucial to the operation of state and local programs, and many state and local officials said they did not believe there was adequate federal support for CTE.

Most sites finance CTE with both state and local funds, which typically are used to support two of the biggest budget items in the educational system—teachers and facilities. One state supported CTE through state basic education funding. "We have a considerable investment in state money that goes into secondary and postsecondary CTE," the state director of workforce education explained. "In fact, the postsecondary has really grown to respond to issues of capacity and providing a trained workforce that business and labor need." In another state, support for CTE has been more problematic. As a local CTE director noted, "The budget here is a little bit over $3 million, but $500,000 of that is for debt reduction, because when the state authorized us to build this facility, they said they were going to pay for it. But they haven't paid for it yet. There's still over $9 million of outstanding debt that we have to pay the interest on that the state hasn't paid the capital on yet."

States may choose to consolidate all or part of their Tech Prep grants with their basic state grants. Four of the six states visited merged Tech Prep and basic grant funds, and two kept a separate Tech Prep funding stream. There was little agreement within the states on merging funding streams or keeping them separate: postsecondary administrators generally agreed that they should be kept separate, while secondary administrators generally favored consolidation. In one of the four states that consolidated its funds, the process played out over several years: funding streams were kept separate in 2007–08; funds began to be integrated in 2008–09; and then funds were merged in 2009–10.

Local perspectives on the merger of Tech Prep funds often paralleled those found at the state level. Postsecondary administrators and instructors tended to oppose a merger, while most secondary administrators favored consolidation. Across the six states, the pattern appeared to rest on the perception of where additional money would be placed, with postsecondary representatives favoring separate Tech Prep funding that typically flowed through IHEs and secondary officials favoring consolidation because funds might be spread between the postsecondary and secondary levels.

Splitting Funds between Secondary and Postsecondary Education

States are required to provide support for CTE programs at both the secondary and postsecondary levels. States have the flexibility to determine the proportion of funds that each education level will receive, and the six states reported widely differing approaches to sharing *Perkins IV* Basic Grant funds between the secondary and postsecondary levels (Exhibit C.1).

Exhibit C.1.
Split of *Perkins IV* funds within case study states: 2009–10

State	Secondary	Postsecondary
A	55 percent	45 percent
B	44 percent	56 percent
C	38 percent	62 percent
D	51 percent	49 percent
E	74 percent	26 percent
F	85 percent	15 percent
Six state average	58 percent	42 percent
2010 national average	63 percent	37 percent

On average across the six states, 58 percent of basic grant funding went to LEAs and 42 percent to IHEs, although this breakdown varied greatly from state to state. When splitting the funds, two states provided proportionally much more funding to secondary education, with 74/26 and 85/15 splits, respectively, while another took a very different approach, devoting 62 percent to postsecondary and 38 percent to secondary, a breakdown nearly the reverse of the national average. If anything, the case study states seemed to provide a higher proportion of funding to IHEs than the national average. Two states allocated more than half of their *Perkins IV* funding to IHEs, while two other states split funds almost evenly between the two levels.

State officials offered different rationales in describing their policies for dividing funding between secondary and postsecondary education. Officials in the state with the 85/15 split between the secondary and postsecondary levels said that breakdown was necessary to continue using a competitive grant process. IHEs in that state, however, also receive additional support through state leadership funds and through a special grant to cover tuition for dual enrollment students.

In another state, the funding split is based on postsecondary data and was in place before *Perkins IV*. In noting the almost equal split between the secondary and postsecondary levels, a state administrator put it this way: "Federal dollars are not considered to be the driving force behind CTE and workforce development, due to the level of investment at the state level, so pushback on the split decision has been minimal." He continued, "The increase in the postsecondary allocation was due to enrollment increases and value-added data analyses, which made the case for increasing the postsecondary funding pot." The division providing more funds to postsecondary education in one state is based on comparative enrollments in

CTE at the two levels. In another state, the split is based on the number of eligible providers, resulting in 74 percent of the funds going to LEAs and 24 percent to IHEs.

After making secondary and postsecondary allocations, one state reserved 10 percent of each allocation for a nonprofit organization focused on supporting innovative partnership programs across the state. This approach provided greater flexibility for the state to allocate *Perkins* funds and support local partnerships between secondary and postsecondary education, officials in this state explained.

Another state established a working group to ensure that the split between secondary and postsecondary education was equitable and fair, based on full-time-equivalent (FTE) student enrollment and relative need. That split can fluctuate annually, which affects the formula. Another state has changed its rules on forming consortia based on *Perkins IV* provisions. Under *Perkins IV*, consortia are less able to "game the system" by providing support for districts within the consortia.

Changes to Funding Consortia under Perkins IV*: An Example*

A state-level administrator explained how *Perkins IV* had prompted the state to change its own rules for funding consortia, with implications for delivering high-quality CTE.

This state previously had allowed schools to create their own consortia for *Perkins* funding. Some consortia then returned the funds to each district to enable the district to buy the equipment it needed. Under *Perkins IV*, however, school districts can only form a consortium with a regional education entity or with a community college. The result is that federal funds can only be invested in developing high-quality CTE, rather than serving as a revenue stream to purchase equipment and other resources.

Allocating Perkins *Funds to LEAs and IHEs*

States have implemented formal application processes to determine allocations to LEAs and IHEs. Some states showed large disparities in the amount of funds allocated to secondary and postsecondary education. These differences—even if explained by federal and state policies—can cause friction in local communities. For example, as one community college administrator explained:

> One of the big differences between the community college and the school district is we don't get very much money. We get a fairly small allocation, and there is really not enough money to actually do what is required. So we leverage funds all over campus and try to make this work. The *Perkins* mon-

ey is so critical to our campus. It is used to support extra lab hours, instructional techs in the labs, and equipment purchases. Without the *Perkins* dollars, we could not have some of our programs.

Allocating Funds to LEAs

All six states use an application process for channeling funds to LEAs (Exhibit C.2). The applications generally parallel the states' applications to the Department, usually cover five years, and often include a performance improvement plan. As a CTE specialist in one state observed, "The nice part with *Perkins IV* is that the locals are now mirroring what we do at the state level, which includes a plan revision each year which lets us address what changes we're making with budget and projections."

Exhibit C.2.
State allocation process for LEAs

State	Allocation process for LEAs
A	• Allocations to LEAs and consortia based on formula • Each eligible recipient must submit an application
B	• Online application mirrors the application submitted by the state • Application components include five-year plan, end-of-year report, performance improvement plan, and explanation of how LEA will address required and permissive uses of funds • Districts can apply individually or as part of consortium
C	• Web-based application that parallels the state plan • Plan can be changed each year
D	• Online application process • Allocation by formula • Recipients must show they are meeting all requirements
E	• Funding allocated to 15 secondary and technical education regions by formula • Five-year plan must be submitted
F	• Online application process • Plan must demonstrate program quality and POS linked with postsecondary education

Overall, local communities were satisfied with the process used by their states to allocate funds. All of them said, however, that funds for CTE were insufficient in their districts. As one CTE director noted, "The process we use is to discuss funding needs in the spring. We have big needs, and our *Perkins* allotment will not meet these needs." Another local CTE director stated, "We don't have enough money to do everything. We could put all of it at one school and help them. It's like anything—we just have to kind of share the wealth."

Most states provided CTE funding to local districts in addition to *Perkins* funds. Not surprisingly, local districts in these states were less concerned about the level of *Perkins* funding and

tended to use the *Perkins* funds for equipment or special projects. In the one state that did not provide categorical funding for CTE, *Perkins* funding allocations to local districts were reported to be very important. As state staff emphasized, "We could not survive without *Perkins*. Our program survived because of the small amount of money that we have from *Perkins*, and we do the best we can."

Many LEAs had their own distinct processes for allocating funds. Some districts divided funds evenly among schools, while others focused on different CTE programs each year.

Local school districts used the funds they received in different ways**.** One large school district provided significant local funding for CTE. "*Perkins* may come across to some districts as an unfunded mandate," the district CTE director said. "We get a little over $3 million in *Perkins* funds, and I am running a $52 million dollar program." In contrast, a medium-sized district in the same state provided little additional funding, and as a result, *Perkins* funds were used to cover administrators' salaries and equipment for programs. In a smaller district in that state, *Perkins* funds were used for salaries and equipment. The CTE director in this district noted that his system has "dropped programs over the years because we don't have the money." Nonetheless, state and local funds represented the vast majority of CTE budgets in all three communities because they covered costs for teachers and facilities.

Many LEAs reported forming consortia, allowed under *Perkins III* and continuing under *Perkins IV*, in an effort to make greater use of limited funds. The minimum award to an LEA allowed under *Perkins IV* is $15,000. LEAs are encouraged to form consortia to operate programs of sufficient size, scope, and quality to be effective. Funds allocated to consortia must be used for purposes and programs that are beneficial for all consortium members and cannot be re-allocated to individual members. "I think we have 12 schools in [our] consortium," one local administrator (local A3) said. "It fluctuates. This particular year, the agriculture program has had the bulk of the funding, but we have used the consortium for counselor training, staff development, and assessment materials."

Allocating Funds to IHEs

As with secondary allocations, all states used an application process to allocate postsecondary *Perkins* funds (Exhibit C.3). The applications mirrored states' applications to the Department and covered five years. Often the annual application updates included quality assessments or performance improvement plans.

Exhibit C.3.
State allocation process for IHEs

State	Postsecondary allocation process
A	• Allocation to seven IHEs by formula • Each eligible recipient must submit an application
B	• Online application mirrors the application submitted by the state • Application components include five-year plan, end-of-year report, performance improvement plan, and explanation of how LEA will address required and permissive uses of funds • IHEs can apply individually or as part of consortium
C	• Web-based application that parallels the state plan • Allocation by formula • Plan can be changed each year
D	• Online application process • Recipients must show they are meeting all requirements
E	• Funding allocated by formula to two IHEs • Five-year plan must be submitted
F	• Online application process • Plan must demonstrate program quality and POS linked with secondary institution

Some states used separate review teams to evaluate postsecondary and secondary applications. One state, for example, convened a review team composed of Tech Prep and workforce education administrators and college deans to review applications and make recommendations. "The review process is great professional development," the state *Perkins IV* administrator said. "We try to make sure there is a mix of new as well as experienced people, and they all learn a lot. Those [reviewers] that are new, definitely their plans are much better the next year."

States differed in the number of IHEs they fund, from two to more than 100. In one state, there was concern about the postsecondary formula because it uses the number of students, rather than FTE students, as the basis for allocation decisions. This process results in a smaller allocation to the IHE with more CTE programs. State officials requested a waiver, but it was denied by the Department.

Many local administrators said they felt far removed from the allocation process in their states. Others, however, said that they participated and could control the allocation of funds locally. One Tech Prep director observed: "All of us have to develop a plan for how we're going to divide funds among local programs, and so it's actually pretty easy for us at the technical college, because we're all professional technical education. We do a program effectiveness process. We all develop our *Perkins* plans, and we get the check, [which is then allocated among programs]."

In the same state, another Tech Prep consortium followed a similar process. "They determine ahead of time funding allotments by consortia, dependent upon [the] Tech Prep head count from the previous year," one community college Tech Prep director said. "So we have an idea about how much money we should be getting. Then I'm responsible for working with my board, and writing the grant, and addressing each of the four or five different areas, including the new goals for this year, and how are we going to meet them."

Allocating Funds to Area CTE Centers

Three states allocated *Perkins* funds to area CTE centers (Exhibit C.4). One state allocated postsecondary *Perkins* funds to these centers. Another used state funds to support secondary programs, and additional postsecondary *Perkins* funds went to the centers to support adult students in the area CTE centers. The third state allocated all secondary funds to area CTE centers, although the state required each center to redirect a portion of its allocation to an IHE for CTE teacher preparation.

Exhibit C.4.
Allocating funds to area CTE centers

State	Allocations to area CTE centers
C	• Postsecondary funds are split between community colleges and adult schools or area CTE centers with adult students based on enrollment counts from the past two years. • Area CTE centers do not receive secondary *Perkins* funding from the state. • A new stipulation in the state plan allows LEAs to form a consortium and release their *Perkins* funds to an area CTE center to support CTE programs not offered in the districts.
D	• Area CTE centers receive both secondary and postsecondary *Perkins* funds—secondary for high school students and postsecondary for adult students who take courses in the centers.
E	• All secondary *Perkins* funding goes to area CTE centers. • Area CTE centers also receive categorical funding from the state based on FTE as well as tuition from sending districts. • *Perkins* funds constitute 5 percent or less of each center's annual budget.

NOTE: Three of the six case study states had area CTE centers.

Area CTE center directors and CTE directors are creative in their use of *Perkins* funds. They often combine them with other funding sources, or they use *Perkins* funds to supplement specific program or staff costs. As one area CTE center director reported,

> The tech center receives both secondary and postsecondary funding. *Perkins* funding for adult education (Title I) comes directly to the tech center, while the secondary is shared with the high school. Annually, the tech center receives twice as much for adult students as secondary students. We have both high school and adult students going to Career and Technical Student Organization (CTSO) competitions—40 percent adult, 60 percent secondary students—and we use *Perkins* funding to support these students. The

> other thing I look for, before I spend *Perkins* funds, is if I am receiving district, capital outlay, or other grant money that can be used to support the program. Then I don't need to spend the *Perkins* funds on it.

Funds for POS Dual Enrollment

Even though *Perkins IV* placed considerable emphasis on POS as a new strategy for connecting secondary and postsecondary education, the law did not explicitly direct funds for this purpose. As part of the definition in Sec. 122, *Perkins IV* states that a POS "may include the opportunity for secondary students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits."

Considerable variation was found across the six states in their financial support for dual enrollment programs and articulation agreements. Three states did not provide any funding for dual enrollment, and representatives from these states reported that dual enrollment was problematic because it was difficult to determine how funds would be allocated between secondary and postsecondary institutions. In one state, the fear of "double dipping" was cited as a barrier to POS implementation in some sites.

Three states, however, did provide funding for dual enrollment. One state offered LEAs and IHEs three alternative strategies. In the second state, all costs were covered by the area CTE centers, and in the third state, lottery funds were used to reimburse IHEs, while LEAs received the student allocation (Exhibit C.5).

Exhibit C.5.
State strategies for dual enrollment funding

State	Dual enrollment funding strategy
A	• No dual enrollment funding
B	• No dual enrollment funding
C	• No dual enrollment funding
D	• Three different funding strategies are used: 1. Both LEA and IHE absorb costs independently. 2. IHE reimburses LEA for instruction delivered on high school campus by high school teachers. 3. LEA reimburses IHE for instruction delivered by community college instructors on high school campus.
E	• Area CTE centers cover all costs and receive the student allocation. • Dual enrollment courses are approved by the IHE and taught at the area CTE center by instructors paid by the center. A student fee often is covered by the area CTE center as well.
F	• Students counted as part of LEA average daily attendance at secondary level. • IHEs reimbursed with funds from a state lottery.

Minimum Allocation

Perkins IV permits states to waive the minimum allocation rule if an LEA is located in a rural, sparsely populated area; if it is a public charter school that operates a secondary CTE program; and if it demonstrates that it is unable to join a consortium. Similarly, *Perkins IV* allows state administrators to grant waivers to IHEs if they are located in rural, sparsely populated areas.

States used waivers to address different circumstances. Officials in two states reported using waivers for LEAs that were unable to meet the minimum allocation requirement. In one state, *Perkins* administrators said that they had granted waivers to a few districts based on their rural locations. A secondary CTE administrator in this state reported that about 40 LEAs were routinely granted waivers until state officials changed the definition of rural and the number of waivers decreased. He noted that *Perkins* administrators subsequently asked the state board of education for further revision of the rural definition to enable more LEAs to qualify for waivers and described an electronic waiver request form that requires local administrators to document efforts to form or join a consortium.

A local CTE director in a small, rural district in this state offered firsthand experiences of the challenges associated with the changes in the state's approach to waivers. He explained that his district previously was part of a consortium for which the area CTE center served as the fiduciary agent. "When *Perkins IV* came around, the [center] decided to disband the consor-

tium, and districts were told they could apply for waivers," he recalled. His LEA initially did not qualify for a waiver based on rural location because state data included it in a standard metropolitan statistical area. He said that he "made a case for a waiver," citing three factors: most schools in the region qualified for the minimum allocation; they were too far away for effective collaboration; or they did not want to write a CTE plan. Even though state officials did not accept his contention that the LEA was rural, the district received a waiver based on its inability to form a consortium. He also noted, "A year later, [the department of education] made an announcement reopening *Perkins* doors to other small districts to seek waivers."

Two states reported granting waivers to IHEs that were unable to qualify for the minimum allocation. A high-ranking postsecondary administrator in one state suggested that some IHEs use consortia strictly as funding entities and an alternative to obtaining formal waivers: "Every year, we have a couple of colleges that are right on the edge of qualifying for the *Perkins* funding. Because they are in geographically isolated rural areas, we're able to invoke the waiver that allows them to run their own programs separately. It's just that they are in a consortium as a funding entity; it is not a true consortium, because they're not serving the same populations."

While this arrangement seems to run counter to *Perkins* language limiting spending by consortia to purposes that benefit all members, administrators in the other state reported what seemed to be stricter adherence to waiver requirements. According to one state official, postsecondary institutions that are unable to qualify for the minimum allocation "would have to enter a consortium to receive those dollars. They would be given an application which details the requirements and provides the waiver information."

Reserve Funds

Perkins IV has a reserve option allowing states to distribute up to 10 percent of the state allotment that goes to the local level by means other than the formulas detailed in Sec. 131 and 132. These funds may be made available for CTE programs in areas that are rural and have high percentages or high numbers of CTE students.

Four states took advantage of the reserve option. The primary reasons offered by the states were to increase flexibility, make additional funding available to rural communities, and support innovative programs and services through either competitive grants or use of formulas (Exhibit C.6). As one administrator stated, "I like the reserve option because it gives systems that don't normally receive a large sum of money the opportunity to put a program into place. It also gives encouragement for systems to be innovative and look at new labor market data and not just continue to offer the same CTE programs that they've offered for years." Some states appear to have exercised some discretion in distributing grants under the reserve

option. State officials in one state reported using reserve funds to support a number of programs that did not seem to fall under the three categories specified in *Perkins IV*.

Exhibit C.6.
State uses of reserve funds

State	Use of reserve funds
A	• Funds distributed through competitive innovation grants and formula-based programs. • Funding supports innovation, development of resources, and best practice models.
B	• Funds go to rural districts with large CTE enrollments. • Approximately 150 districts received support through reserve funds. Reserve funds are distributed to colleges based on a prorated share allocated to colleges in counties with populations of less than 100 people per square mile.
D	• Reserve funds go to two groups: (1) university lab schools, state school for the deaf and blind, and department of juvenile justice districts and (2) rural and sparsely populated areas, by formula. • The latter group of LEAs must work with colleges and focus on one of four areas: distance learning; IT; priorities set by the workforce board; or support for teacher or student certifications.
F	• Allocation is distributed 80 percent to secondary and 20 percent postsecondary education. • Competitive grants used to support secondary to postsecondary transition programs for POS development, articulation, dual credit, dual enrollment, and distance learning. • Funds support approximately 24 grants per year, ranging from $5,000 to $100,000 with an average of about $70,000.

NOTE: Four of the six case study states made use of the reserve option in *Perkins IV*.

While not all state CTE administrators decided to use the reserve option, those who did cited increased flexibility and support for innovation in CTE as important benefits. A state administrator in a state not currently using the reserve option described possibly using its merged Tech Prep funds to establish a reserve fund for competitive grants for POS development. The CTE director in the other state not using the reserve option explained, "Our state hasn't been willing to get into having a reserve fund, because we don't want to be perceived as taking money away from districts."

State Leadership Funds

States can devote up to 10 percent of their *Perkins* funds to state leadership activities. States are required to apply these funds to nine different purposes and 17 permissible uses.

Further, states must use leadership funds to serve individuals in state institutions and prepare students for nontraditional fields. *Perkins IV* also allows states to reserve up to 5 percent of their total state allotment or $250,000—whichever is greater—for administration of the state plan. When using money for these administrative purposes, states are required to provide dollar-for-dollar matching funds.

Officials in all six states said they used leadership funds for a range of programs and services (Exhibit C.7). Some state directors were not asked about all nine required uses and mentioned only a few of the permissible uses, so it should not be assumed that these are the states' only uses of the funds within the two categories.

Exhibit C.7.
Required and permissible uses of leadership funds

Required	Permissible
• Professional development (All six states) • Technical assistance (All six states) • Support programs for special populations (States A and D) • Preparation for nontraditional fields (All six states) • Assessment of CTE programs (State E) • Contracts for assistance in developing common assessments (e.g., assessment design, piloting, and statistical review, as well as co-facilitation of meetings with faculty) (State E)	• Statewide articulation agreements (States A and D) • Support for CTE student organizations (States B, C, and D) • Incentive grants (State C) • Improve academic counseling (State D) • Develop new CTE courses (State D) • Support for POS development (States D and F) • Co-sponsorship of special events (State E) • Website focusing on nontraditional students and career guidance programs (State F)

One state provided state leadership block grants to IHEs to support required and permissible uses, including replication of best practices. IHEs in this state could also apply through a competitive process to receive funding to support new and innovative best practices. Another state's leadership funds were primarily distributed to support statewide or regional projects, including content advisory committees that bring together industry representatives and faculty to discuss trends in a specific discipline and determine priorities for curriculum and professional development. Other leadership funds in this state were distributed through competitive grants to community colleges, with the intent of providing an incentive to partner. These funds went to regional consortia to foster program coordination and information sharing.

Administrators in several states indicated that the amount allowed for leadership funds was inadequate to meet required and permissible uses. One state official mentioned several critical activities, including teacher preparation, on which they would like to spend leadership dollars—if they had more funding. An administrator from another state noted:

> I think there has to be recognition that, with the requirements for this particular legislation . . . there has to be sufficient administrative funds [or] the leadership portion ought to be increased. Strictly from a state perspective,

you need sufficient leadership and administrative dollars to make this program do all that it could do and should do. If *Perkins IV* had some opportunity for increased amounts that could be retained at the state level, we'd be in favor of that, especially since in our state these dollars are more discretionary and flexible.

Nontraditional Training and Employment

Administrators in all six states said that they spent more than the required $60,000 on nontraditional training and employment. Respondents offered information on both state-level suballocations for nontraditional training and employment and specific examples of local uses of these funds (Exhibit C.8).

Exhibit C.8.
Nontraditional training and employment suballocations

State	Expenditures
A	• State allocated $60,000 and reported investing more than that on nontraditional training and employment activities. • A local CTE director developed a series of "nontraditional posters" with photos and examples of people in nontraditional careers.
B	• The state appropriated $150,000 for nontraditional training and employment activities. • Funds were divided across the state's colleges for a few targeted activities to inform students of nontraditional careers. • A local CTE director did not set aside funds for nontraditional training and employment but exposed students to an array of careers through posters, software, career days, job fairs, and job shadowing. • Local LEA staff helped coordinate events to promote nontraditional careers.
C	• State allocated $150,000 for nontraditional training and employment activities. • State provided resources, outreach, and training to educational practitioners at both K–adult and community college levels. The nature and amounts of expenditures did not change dramatically since *Perkins III*. • One LEA hosted annual nontraditional career fairs because it did not meet the nontraditional performance targets. • Another LEA spent funds on recruitment materials and activities for outreach to nontraditional populations and developed business partnerships to secure internships and mentorships for students.
D	• State allocated $60,000 for nontraditional training and employment activities. • The state funded 40 percent of a state staff person's time for nontraditional training and employment and special populations. • A local CTE director developed promotional posters, a kit to distribute to schools, and exploratory summer camps to promote nontraditional careers.
E	• State allocated $60,000 for nontraditional training and employment activities. • The state CTE director deliberately sought business associations to help with outreach to students. • A local CTE director was planning a video recruiting campaign aimed at nontraditional students.
F	• State allocated $150,000 for nontraditional training and employment activities. • The state created an annual program that awards a $500 reimbursable scholarship to students in nontraditional programs.

State and local CTE directors expressed concerns about the nontraditional training and employment requirement and offered recommendations to improve it (Exhibit C.9). State officials from two states suggested examining the current status of nontraditional training and employment to ensure more complete understanding of the barriers faced by students entering certain fields. They also asked that federal officials provide them with more effective strategies and best practices at the federal level. One local CTE director suggested deleting this requirement from *Perkins IV* altogether: "I would get rid of nontraditional in a heartbeat.

Does it matter whether they're concentrating in a nontraditional area or gaining the skills to succeed in any area? I would like to hear what kind of difference that makes, if you're trying to make sure that, at the end of the day, every student has mastered the competencies."

Two local CTE directors said that although they can get students to take nontraditional courses, it is challenging for them to complete the program of study because as they "they see fewer and fewer students of their same gender as they continue through the POS, and they become discouraged and drop out of the program."

Exhibit C.9.
Perceptions of nontraditional training and employment requirement

State	Perceptions
A	• State CTE director suggested doing an in-depth evaluation of progress on nontraditional training. The director did not feel that guidance from the Department was very substantive and would like to have the Department as a resource on what works. • A local CTE director said some students who take nontraditional courses do not continue through the POS. Further, it is critical to connect with students much earlier than high school to encourage them to think outside of gender stereotypes.
B	• A local CTE director noticed he no longer has to recruit students actively to take nontraditional courses; he has seen progress, with more students taking nontraditional courses.
C	• State CTE director expressed need to start these initiatives earlier (in elementary school) and involve parents in promoting nontraditional participation. He agreed that it is important to look at the data on nontraditional training and employment but suggested the criteria should not be so high-stakes and LEAs and IHEs should not be sanctioned. In addition, he mentioned barriers for students, including harassment in classrooms and on the job and family pressures against pursuing a nontraditional career.
D	• State CTE director felt that the nontraditional training and employment requirement is outdated and noted that the state exceeds the national average in terms of students taking nontraditional courses in certain areas.
E	• A local CTE director reported exceeding state goals for gender equity and said that that the sooner you can reach the students the better, which is why they have programs in the middle school.
F	• A local CTE director identified challenges in retaining nontraditional students because of the stigma attached to courses typically taken by students of one gender—and mentioned it would be helpful to look at current labor market data to see what progress is being made.

State Administrative Funds

Perkins IV allows states to allocate funds for state administrative purposes, including development of state plans, program monitoring and evaluation, technical assistance, and development of data systems. Administrators in five states reported spending these funds on staff salaries. In three states, funds were spent on staff travel for program monitoring and technical assistance. One state used administrative funds to gather student data, and another used

funds for salaries for data staff. In other states, administrators reported using funds to develop, review, and implement state plans.

Perkins IV stipulates that all states must match, from nonfederal sources and on a dollar-for-dollar basis, funds spent on administrative activities. State CTE directors reported that meeting the matching requirement was a challenge and shared their strategies for identifying the necessary funds. One state administrator described using salaries for corrections staff as part of its match, because those staff are paid with state dollars to administer CTE within the prison system. Administrators from two states reported that the match requirement is met by the state general fund or general revenue spent on administrative functions by state agencies. Administrators from three states expressed concern about meeting the match requirement. One state CTE director mentioned that the match requirement limits the state's ability to use state administrative funds and acknowledged it has been a struggle to meet the match.

Across the states, the amount of funding for administrative uses (i.e., *Perkins IV* funds plus matching funds) was widely viewed as inadequate to meet administrative needs. A state CTE director reported that the amount allowed for administrative costs had remained constant, while actual costs had continued to increase. As a result, fewer funds were available for innovation and leadership functions.

Some administrators suggested that the additional requirements in *Perkins IV* should have triggered additional administrative funding to help with implementation. One state CTE director explicitly stated that administrative dollars were insufficient to meet the federal requirements. Another CTE director reported, "We struggle. We've been able to meet it to date, but cuts at the state level reduce your general revenue dollars. So one day we're going to be at a point very soon that you won't have that same level of match. . . . [W]e struggle with the documentation of it. We're constantly doing this staff analysis to make sure that we're able to maintain our match."

Recommendations for Future Changes to Funding Provisions

State and local CTE administrators, faculty, and staff offered numerous recommendations for changes to the funding provisions in future *Perkins* reauthorizations. Common themes included a need for more funds, a desire for greater flexibility in allocating funds, and an interest in modifications to the formula for distributing the *Perkins* basic grant (Exhibits C.10 and C.11).

Most state administrators advocated for increased *Perkins IV* funding and greater flexibility, with a number noting that they are looking increasingly to the federal government for CTE funding as state and local budgets continue to be squeezed. Several noted that the increased accountability and leadership requirements were not accompanied by parallel increases in funding. Some recommended additional funding for teacher professional development and

training (particularly industry certifications), new software training, and conference travel to connect with industry representatives and employers. Several also said that more *Perkins* funds were needed to cover rising costs of equipment related to new high-tech, high-skill careers. One secondary state CTE director said, "I've reached the conclusion now that we probably need twice as much *Perkins* money. There's a huge need at the K–12 level and a huge need at the community college level, and when you split it up, it gets watered down very quickly."

Most state staff indicated the federal formulas can be constraining and suggested that greater flexibility would be beneficial in the long run, both in terms of those served and in program outcomes (Exhibit 10). Some state administrators recommended reducing the administrative and reporting burden attached to funds or developing different requirements for large and small districts because they receive different amounts of money but are still held accountable to the same standards. Another common recommendation related to the administrative match. Many suggested that the requirement that state funds come from general revenue is too constraining (Exhibit C.10).

Finally, several state administrators indicated that the *Perkins* allocation formulas should be modified to reward high levels of CTE participation. They noted that school districts and postsecondary institutions with large numbers of CTE students are negatively affected if most of these students are not living in poverty.

Exhibit C.10.
State recommendations for changes to *Perkins* funding provisions

State	Recommendations	Quotes
A	• Link CTE to state economic development • Increase CTE funding • Explore alternative funding allocation formulas	• Our ability to help economic development is hampered every time we lose some money. • Is poverty the best way to allocate appropriate funds for CTE? It is not a poverty program; it is an education program.
B	• Increase funding • Increase flexibility • Increase administrative funds • Maintain Tech Prep as a separate funding provision • Separate outcomes from programs • Increase support for small and medium communities	• Increase funding to keep pace with increasing accountability. • Flexibility is necessary to better provide for unique programs. • The more discretion in how to use the dollars, the better the results. • There has to be sufficient administration, and if it is too crazy to increase administration to over 5 percent, the leadership funds should be increased. • Give us the outcomes, but let us take the money to move up to where we need it to accomplish the outcomes. • Our small and medium districts face huge challenges because there is so much they have to do with so little support.
C	• Modify the formula to "incentivize" CTE • Increase local funding flexibility • Increase length of time for waivers • Change maintenance of effort requirement • Lower the postsecondary minimum allocation to $40,000 • Ensure that secondary and postsecondary voices are heard	• The current federal formula for funding allocations to local districts is based on poverty counts, not CTE enrollment. • There ought to be some flexibility in strategically investing funds that go to LEAs based on some state formula. • We haven't used a waiver because waivers are for only one year. • I would change the maintenance of effort to match what's in adult education, *IDEA*, or *ESEA* so you can fluctuate within 10 percent in any year. • Small rural colleges wouldn't have to worry about the minimum, and they wouldn't lose 5 percent that goes to the consortium. • The postsecondary side has zero status—the Department only contacts the secondary CTE director.
D	• Increase federal share of CTE funding • Provide greater flexibility for the administrative match	• There's never enough. I think over time the needs are greater. • We have general revenue, but the way the law is written you can only use general revenue that is spent on administrative functions and by state agencies to do your dollar for dollar match. . . . We've been able to meet it to date, but cuts at the state level reduce your general revenue dollars. So one day we're going to be at a point very soon that you won't have that same level of match.

Exhibit C.10.—cont.
State recommendations for changes to *Perkins* funding provisions

State	Recommendations	Quotes
E	• Increase the small state minimum • Fix the funding and governance structures • Change postsecondary funding formula	• Our state gets a small state minimum, and it has not gone up since *Perkins II*. • Fixing the funding and governance structures might lead to higher CTE enrollments. • The postsecondary formula is problematic because it is based on number of students rather than FTEs.
F	• Agree on national priorities for CTE • Focus on outcomes and data systems • Increase federal funding • Increase support for equipment • Link CTE funding to labor market data • Maintain the increased flexibility of reserve grants • Provide incentives and strategies to attract CTE teachers • Increase focus of CTE to meet needs of diverse groups of students	• [Identify] what we are trying to accomplish and focus funding specifically on those things. • The formula needs to be reexamined in light of what we need to accomplish. • We have added to the legislation, but we haven't added the dollars to support it. • When the equipment gets old and you don't have money to support it, the next thing that happens is the program is closed. • [There] should be so much more emphasis on CTE than what exists today. • The flexibility allowed our postsecondary institutions to be more innovative. • Many people will not give up a high-paying job for a $30,000 CTE teaching position. • If you cut out *Perkins,* you're going to see a higher dropout rate.

Common recommendations from local CTE administrators and faculty included providing additional funds for professional development and equipment and reducing administrative burden. Some local representatives specifically mentioned providing additional funds to purchase, install, and maintain equipment to ensure that students are using the latest technology. Other local recommendations included reducing funding delays to bring the actual receipt of funds in closer alignment with expenditures and increasing funds for innovation in programming (Exhibit C.11).

Exhibit C.11.
Local recommendations for changes to *Perkins* funding provisions

State	Recommendations	Quotes
A	• Provide funds for equipment installation and maintenance • Allow use of funds to expose younger youth to CTE • Allow funding to middle schools for student career exploration • Increase funding for professional development and training for CTE instructors • Provide funds to update equipment • Include business and industry representatives in funding allocation processes	• [We] need to expose youth to CTE opportunities earlier. Unlike smaller districts where K–12 students are in the same building, larger districts have fewer opportunities for younger students to be exposed to CTE. • Funds should be spent to train counselors on *Perkins IV*, as some have retired and new counselors do not have background or training in *Perkins IV*. • There is a lack of funds to respond to the technology explosion in many CTE courses, which necessitates the reliance on technology at the community college.
B	• Increase funding for CTE instructor professional development • Direct funds to curriculum development and innovation • Increase flexibility	• There should be more emphasis on using funds to enhance the ability of teachers. • It would be helpful to have more flexibility to use the funds to pilot a new curriculum or hire high-demand instructors.
C	• Regionalize *Perkins IV* funds to eliminate need for multiple local CTE plans • Reduce administrative and reporting burden attached to funds • Vary requirements depending on school size	• Districts should consider declaring intent to use the funds, so the state knows which districts are willing to put in the time to develop a plan and earn the funds. • Funding level is usually based upon average daily attendance (ADA) or school size, but the requirements are the same whether it is a small, rural school or a large, urban district.
D	• Minimize advantage of larger districts over small and rural districts • Make seed money available through a competitive process to fund innovative programs • Increase funding for CTE instructor professional development • Provide more funds for teachers to attend conferences for professional development and to link with industry employers • Supply funds for industry certifications and software training for CTE instructors • Minimize funding distribution delays • Increase flexibility • Develop different accountability standards for large districts and small, rural districts	• Funds should be concentrated on professional development because technology is changing rapidly and instructors need to be able to teach at that level. • This small, rural area receives significantly fewer funds than other districts, yet we are held accountable to the same standards.

Exhibit C.11.—cont.
Local recommendations for changes to *Perkins* funding provisions

State	Recommendations	Quotes
E	• Allow larger area CTE centers to benefit more directly • Increase funding level	• There is competition between secondary and postsecondary, and technology centers do not receive adequate funds.
F	• Provide funds to update equipment, specifically computer technology • Do not allocate funds through RFP process • Incentivize cooperation between secondary and postsecondary, and even within postsecondary • Minimize funding distribution delays	• We want to expand the program so that every student [who] wants to take a CTE course has the opportunity. • There is a discrepancy between the date when the county is allowed to begin spending funds, and when the funds are actually received, presumably due to the difference between local and federal fiscal years.

Implementing *Perkins IV* Accountability Provisions

Perkins IV maintained the central accountability components introduced in *Perkins III*, heightened emphasis on coordination with other federal statutes and programs, and added greater specificity and higher stakes with regard to core indicators, reporting requirements, and negotiated performance levels. This section provides a summary of the major accountability provisions in *Perkins IV* and describes the status of their implementation in case study states and local communities. Particular attention is paid to the variation across and within states and on the differences found between the secondary and postsecondary levels.

Major Accountability Provisions in Perkins IV

While *Perkins III* listed only four core indicators for use at both the secondary and postsecondary levels, *Perkins IV* identifies different indicators for each level. Under *Perkins IV*, eligible agencies are required to identify performance measures for each core indicator. Moving well beyond the *Perkins III* statutory language that allowed use of "currently identified state performance measures that meet the purpose of the Act" (ACTE 2006, p. 104), *Perkins IV* explicitly states that "an eligible agency shall, to the greatest extent possible, align the indicators so that substantially similar information gathered for other federal and state programs. . .is used to meet the requirements of this section" [Sec. 113(b)(2)(F)].

At the secondary level, *Perkins IV* mandates use of the high school academic assessments required under *ESEA* and requires reporting of graduation rates as described in *ESEA*. Statutory core indicators of secondary student performance are:

- Student attainment of challenging academic content standards and student academic achievement standards, as adopted by a state in accordance with. . . *ESEA* and measured by the state-determined proficient levels on the academic assessments described in. . .[*ESEA*];
- Student attainment of career and technical skill proficiencies, including student achievement on technical assessments, that are aligned with industry-recognized standards, if available and appropriate;
- Student rates of attainment of each of the following: a secondary school diploma; a General Education Development (GED) credential or other state-recognized equivalent (including recognized alternative standards for individuals with disabilities); [and] a proficiency credential, certificate, or degree, in conjunction with a secondary diploma (if such a credential, certificate, or degree is offered by the state in conjunction with a secondary school diploma);
- Student graduation rates (as described in. . .*ESEA*);
- Student placement in postsecondary education or advanced training, in military service, or in employment; [and]
- Student participation in and completion of CTE programs that lead to nontraditional fields.

At the postsecondary level, *Perkins IV* eliminates the *Perkins III* academic attainment indicator and splits the *Perkins III* placement and retention indicator into two indicators, one measuring retention in postsecondary education and the other measuring placement in employment, the military, or apprenticeships. The statutory indicators of performance for postsecondary students are:

- Student attainment of challenging career and technical skill proficiencies, including student achievement on technical assessments that are aligned with industry-recognized standards, if available and appropriate;
- Student attainment of an industry-recognized credential, a certificate, or a degree;
- Student retention in postsecondary education or transfer to a baccalaureate degree program;
- Student placement in military service or apprenticeship programs or placement or retention in employment, including placement in high-skill, high-wage, or high-demand occupations or professions; [and]

- Student participation in and completion of CTE programs in nontraditional fields.

Perkins IV also raises the bar for state and local reporting on these core indicators and adds new emphasis on performance at the local level. *Perkins III* required states to negotiate quantifiable levels of performance for each core indicator with the Department but stopped short of requiring detailed reporting on each indicator. *Perkins IV* mandates disaggregated reporting on each indicator for each category of students identified in *ESEA* as well as those identified as special populations in *Perkins*. In addition, the legislation requires eligible recipients—i.e., LEAs, area CTE centers, IHEs, or consortia at either the secondary or postsecondary level—to accept the state-adjusted levels of performance or negotiate their own unique levels of performance with the state's eligible agency.

Perkins IV specifies sanctions for failure to meet negotiated state or local performance levels and establishes a timeline for program improvement. A state or eligible recipient that fails to meet at least 90 percent of an agreed-upon target has to develop and implement a program improvement plan. *Perkins IV* also establishes provisions for withholding funds if the improvement plan is not implemented, no improvement is shown, or the state or eligible recipient fails to meet at least 90 percent of a performance level for three years in a row.

In 2007, the Department issued nonregulatory guidance to help states develop performance measures that meet *Perkins IV* requirements. This nonregulatory guidance outlines measurement population definitions as well as performance measures.

The nonregulatory guidance was designed to help states "build a stronger and more valid and reliable accountability system for career and technical education across the nation" (Justesen 2007a, p. 1). States were given the option to propose other population definitions and measurement approaches in their *Perkins* plans, but those that opted to do so were required to describe how the alternative definitions and measures would be valid and reliable.

Key Findings Related to Perkins IV *Accountability Provisions*

Case study interviews at the state and local levels revealed strong support for the concept of *Perkins* accountability but questions about whether the core indicators are appropriate measures of performance. Nonetheless, most state and local CTE administrators and faculty appeared to be taking the new reporting requirements seriously and placing greater emphasis on collecting and reporting valid and reliable data. The sophistication of the *Perkins* accountability systems varied significantly across (and sometimes within) the case study states, but all could be described as works in progress. Although state CTE administrators generally exhibited a thorough understanding of *Perkins* reporting requirements and a commitment to helping LEAs and IHEs provide valid and reliable data, local case study visits suggested significant differences in understanding of the state's performance measures and the popula-

tions to be reported. Key findings related to implementation of the *Perkins IV* accountability provisions are summarized below.

- State CTE administrators generally appreciated the nonregulatory guidance provided by the Department, but they liked the flexibility to create their own definitions and performance measures based on state data sources, reporting capacity, and program delivery structures.
- All of the case study states used at least one of the Department's recommendations for measurement populations and performance measures, but none adopted all of them verbatim.
- Reporting capacity within the states ranged from sophisticated web-based portals to more rudimentary systems in which data were tabulated locally and submitted via e-mail or CD.
- Most state administrators expressed confidence in their ability to report disaggregated data on most of the special populations identified in *Perkins IV,* but local CTE practitioners were less sanguine about their capacity to provide information about special populations, more explicit in their descriptions of the challenges associated with collecting them, and more candid about their reliance on sources that could not be verified.
- Many administrators at both the state and local levels said that the cost of *Perkins* accountability systems far exceeds the human and financial resources available for this purpose and thus poses a substantial burden.
- State administrators often reported using local *Perkins* performance data to identify programs in need of improvement, but local administrators offered varied opinions about the extent to which local performance targets actually led to improved performance.

Defining Populations and Performance Measures

Although *Perkins IV* emphasizes accountability through identification of a set of core indicators to be used by states and local subgrantees to assess program effectiveness, it does not stipulate how subgrantees should measure performance against these indicators. The Department required states to establish performance measures for each core indicator and include these measures along with definitions of CTE participants and concentrators in their five-year *Perkins* plans, but the legislation provides no guidance on student definitions or measure construction. States were thus allowed to develop their own definitions and measures based on factors such as data availability, data collection capacity, or previous measurement approaches. The Department's process for review and approval of *Perkins*

plans was designed to ensure that each state included valid and reliable measures for the core indicators of performance, but it could not ensure consistency of measurement approaches across states.

Measurement Populations

The Department's nonregulatory guidance offers a set of definitions for CTE participants and concentrators at the secondary and postsecondary levels. Although neither of these terms appears in the *Perkins IV* legislation, CTE participants and concentrators are the two groups identified in the Department's suggested performance measures. Typically, the definitions of these populations are based on the number of CTE courses completed or the number of CTE credits earned. Variations in these definitions across states mean that states are reporting on different populations and therefore limit the comparability of reported performance levels.

The Department recommended that a secondary student be identified as a "CTE participant" after earning one or more credits in any CTE program area and identified as a "CTE concentrator" after earning three or more credits in a single CTE program area (or two credits in program areas where two-credit sequences are recognized by the state or its eligible local recipients). The suggested postsecondary participant definition was virtually identical—a postsecondary/adult student who has earned one or more credits in any CTE program. As criteria for identifying postsecondary concentrators, the Department recommended either completion of at least 12 academic or CTE credits within a single program sequence or completion of a short-term CTE program sequence of less than 12 credits, with either sequence terminating in an industry-recognized credential, certificate, or degree. Only one of the six states adopted the Department's suggested population definitions at both the secondary and postsecondary levels, and more states exercised flexibility with their postsecondary definitions than with their secondary ones. One state adopted two sets of postsecondary definitions—one for degree-granting institutions and one for certificate or diploma programs.

At least three of these states continued to use the term "completer" at one or both levels to identify a third population and distinguish between students who enroll in CTE courses at the level required for concentrator status and those who actually complete a CTE program or sequence. In one of these states, the CTE director and a postsecondary administrator provided oral definitions of CTE completers, even though written definitions were not included in their state *Perkins* plan. Several states previously had included completers as fundamental elements of their *Perkins III* accountability systems (White et al. 2004), and some continued to do so even though completers were not included among the populations defined in the nonregulatory guidance. A state's decision to include completers instead of concentrators in calculating performance poses an additional barrier to comparability of *Perkins* accountability data across states.

At the secondary level, differences between the definitions recommended by the Department and those adopted by case study states included emphasis on enrollment instead of completion of courses or use of course time instead of credits (Exhibit C.12). Two states used enrollment in CTE programs or courses to define participants. One of these states used completion of 350 hours of program instruction or half of the program's required skill assessments to define a concentrator; the other used enrollment in two courses or courses above the exploratory level in a single career cluster and defined a completer as a student who completed a CTE instructional program. A third state used instructional time completed to identify participants and enrollment in the second half of a course sequence or multi-hour course to define concentrators. In this state, concentrators were also counted as participants. An administrator explained, "We've done that because we've created a data system that is based on the total number being the participants and everything else is a subset. When we look at our participants, those are all CTE students."

Exhibit C.12.
Secondary student definitions

Participant	
OVAE guidance	A secondary student who has earned one (1) or more credits in any career and technical education (CTE) program area.
State A	A secondary student who has earned one (1) or more credits in any CTE program area.
State B	A secondary student who has enrolled in one (1) or more courses in any CTE program area.
State C	A secondary CTE participant is a student who has completed the equivalent of a conventional 50-minute class taken five times per week for 180 school days or approximately 150 hours of instruction in a state-recognized CTE sequence or program.
State D	A secondary student who has earned one (1) or more credits in any CTE program.
State E	A secondary student who is enrolled in a state-approved technical education program that addresses the core academic and technical competencies identified as needed for employment and/or further education in a career cluster.
State F	A secondary student who has earned one (1) or more credits in any CTE program area.
Concentrator	
OVAE guidance	A secondary student who has earned three (3) or more credits in a single CTE program area (e.g., health care or business services) or two (2) credits in a single CTE program area, but only in those program areas where 2-credit sequences at the secondary level are recognized by the state and/or its local eligible recipients.
State A	A secondary student who has earned three (3) or more credits in a single CTE program of study area (e.g., health sciences or business administration) or two (2) credits in a single CTE program area, but only in those program areas where 2-credit sequences at the secondary level are recognized by the state and/or its local eligible recipients.
State B	A student who has enrolled in two or more CTE courses above the exploratory level in a single cluster.
State C	A secondary CTE concentrator is a student who has completed 50 percent of a planned program sequence (in hours or credits) in a state-recognized CTE sequence and is enrolled in the next course in that sequence or has completed 50 percent of a single, state-recognized, multi-hour course and is enrolled in the second half of that course.
State D	A secondary student who has earned three (3) or more credits in a single CTE program or two (2) credits in a single CTE program, but only in those programs where 2-credit sequences at the secondary level are recognized by the state and/or its local eligible recipients.
State E	A secondary student enrolled in a state-approved technical education program who has completed 350 hours of the program instruction or who has completed half of the program's required skill assessments.
State F	A secondary student who has earned three (3) or more credits in a single CTE program area (e.g., health science or business technology) or two (2) credits in a single CTE program area, but only in those programs where 2-credit sequences at the secondary level are recognized by the state and/or its local eligible recipients.
Completer	
OVAE guidance	N/A
State B	A secondary student who has completed a CTE instructional program.

At the postsecondary level, variations in participant definitions across the states ranged from relatively minor modifications of the language suggested by the Department—e.g., a student who has earned one or more credits in any college credit CTE program or a student enrolled with a vocational intent who has earned one or more college-level credits in any CTE program area—to completely different language based on the number of credits earned or enrollment at a specific point in time (Exhibit C.13). For example, one state defined a postsecondary participant as a student who has earned at least six credits required by the degree or certificate program and is enrolled in at least one three-credit academic or CTE course during the fall semester of the reporting year. Another defined a postsecondary participant as either a student enrolled in a preparatory program of study or a student who is enrolled on the 14th day of the freshman fall term in any CTE program; the differences are based on type of institution (i.e., certificate-granting versus degree-granting). In a third state, the participant definition is usually based on enrollment in any vocational course during the cohort year, but a different definition is applied to the measure for nontraditional participation.

Exhibit C.13.
Postsecondary student definitions

Participant	
OVAE guidance	A postsecondary/adult student who has earned one (1) or more credits in any CTE program area.
State A	A postsecondary student who has earned one (1) or more credits in any CTE program area.
State B	A student enrolled with a vocational intent who has earned one (1) or more college-level credits in any CTE program area.
State C	Definition is based on its use. In most instances, participation is defined by enrollment in any vocational course during the cohort year. Participation in nontraditional programs is defined as the number of CTE concentrators in programs deemed nontraditional for either gender.
State D	A postsecondary/adult student who has earned one (1) or more credits in any college credit CTE program.
State E	A postsecondary student who has earned at least six (6) credits required by their degree/certificate program and is enrolled in at least one academic or CTE three (3) credit course in their degree/certificate program during the fall semester of the reporting year.
State F*	A postsecondary/adult student who is enrolled on the 14th day of the freshman fall term in any CTE program area.
	Certificate/diploma programs: A postsecondary/adult student enrolled in a preparatory program of study offered by the regional CTE center.

Concentrator	
OVAE guidance	A postsecondary/adult student who (1) completes at least 12 academic or CTE credits within a single program area sequence that is comprised of 12 or more academic and technical credits and terminates in the award of an industry-recognized credential, a certificate, or a degree; or (2) completes a short-term CTE program sequence of less than 12 credit units that terminates in an industry-recognized credential, a certificate, or a degree.
State A	A postsecondary student who (1) completes at least 12 academic or CTE credits within a single program area sequence that is comprised of 12 or more academic and technical credits and terminates in the award of an industry-recognized credential, a certificate, or a degree; or (2) completes a short-term CTE program sequence of less than 12 credit units that terminates in an industry-recognized credential, a certificate, or a degree.
State B	A postsecondary CTE participant who has completed at least 12 CTE credits or completed an industry-recognized credential or formal award.
State C	A student who has, within the previous three years, completed a minimum threshold of 12 or more units of related coursework in a CTE program area (defined as a two-digit TOP code) with at least one of those courses teaching job-specific skills.
State D	A postsecondary student who completes at least one-third of the academic and/or technical hours in a college credit CTE program that terminates in the award of an industry-recognized credential, certificate, or degree.
State E	A postsecondary student who has completed 50 percent of the credits required for earning the program's degree or certificate.
State F	A postsecondary student who is designated as a sophomore, with 30 college-level credits, during the fall semester of the cohort year in a defined CTE program of study that terminates in an industry-recognized associate's degree or other award.
	Certificate/diploma programs: A postsecondary/adult student enrolled in a TTC program of study leading to an industry-recognized credential, a preparatory certificate, or diploma who completes more than 20 percent of scheduled hours in the first term.

Exhibit C.13.—cont.
Postsecondary student definitions

Completer	
OVAE guidance	N/A
State B	A CTE student who has attained a formal award (a degree, certificate, apprenticeship, or an industry certification) or completed at least 45 vocational credits with a 2.0 or higher GPA.
State F	A postsecondary student who gains an industry-recognized associate's degree or other award within two years beyond the concentrator cohort year.
	Certificate/diploma programs: A student who demonstrates competencies for a specific job proficiency level and receives a preparatory certificate or diploma conferred by the institution.

* State F maintains separate definitions for postsecondary certificate/diploma programs.

Similar variations existed in definitions of postsecondary concentrators. Some states adopted definitions resembling the language recommended by the Department, but others did not. For example, one state defined a postsecondary concentrator as a postsecondary CTE participant who has completed at least 12 CTE credits or has completed an industry-recognized credential or formal award. Another state defined a concentrator as a student who, within the previous three years, completed a minimum of 12 or more units of related coursework in a CTE program area, with at least one of those courses focusing on job-specific skills. Other definitions were based on percentage of credits or hours of CTE programs completed—e.g., 50 percent of the credits required for earning the program's degree or certificate; at least one-third of the academic or technical hours in a college credit CTE program terminating in the award of an industry-recognized credential, certificate, or degree; or completion of more than 20 percent of scheduled hours in the first term or the number of credits attained. Two states also defined postsecondary completers.

State CTE administrators offered a range of reasons for adopting definitions other than those proposed by the Department, and at least one noted that the definitions in his state might change in the future. One postsecondary administrator said, "We couldn't just take the concentrator at the 12-credit level. We have completers at 10-credit levels, so we had to fit things like that into how our system works." A colleague acknowledged that compromises were necessary to reach agreement on definitions, noting that "for some purposes, we consider a completer anybody who gets past a certain number of credits. If someone takes 45 CTE credits within given parameters, we consider that person to have gotten the minimum dose." In another state, a secondary CTE administrator explained, "We didn't use [the Department's] recommended definitions because we don't use Carnegie units; it was easier for us to use hours."

One state CTE director described anticipated changes in population definitions and the reasons for them. He said that the state plans to move from its current secondary definition

that pegs concentrator status at completion of 350 hours of program instruction to completion of 50 percent of a program, a definition that aligns with one used in several neighboring states. He also indicated a longer-range plan "to eliminate the time-in-seat thing, so the assessments will determine whether your competency level has been attained. Eventually, we'd like to rewrite the definition so that completers must pass a state-approved common assessment, if available." He explained that these changes are not feasible at present, because "not enough of the programs have approved assessments."

A local administrator in this state acknowledged that most participants do not turn into concentrators. When asked what percentage of participants do, he responded, "I'd like to be able to say . . . that most of our students who start go on, but if you look at our enrollment, I think two-thirds of it is first-year students and one-third is second-year students. From that, I'm not sure what you would deduce, but generally speaking . . . you could say we have a fair amount of attrition." He attributed some of this attrition to "the natural phenomena" of students who sign up thinking they have an interest in the area: "The student might say this really wasn't what I had in mind, and in terms of ability level, some students find out that they don't have the ability to do the program. . . . We're not going to have every single first-year student come back as a second-year student. It just doesn't work that way."

There was variation in the extent to which state administrators engaged local representatives in developing *Perkins* population definitions and the effectiveness with which these definitions were communicated to LEAs and IHEs. An administrator in a state that used the Department's guidance for its participant definitions indicated that definitions of secondary and postsecondary concentrators "were developed at the beginning of the state plan through our accountability committee, so we had a subcommittee with representatives of community colleges and school districts . . . to get their input." A secondary administrator in another state described a similar collaborative effort to build a definition of a CTE concentrator: "It wasn't a definition that we at the state level created all by ourselves. We brought in a team of practitioners, CTE directors and college folks, to talk about what the definition of a CTE concentrator was. It wasn't the state level doing what we normally do best as bureaucrats—just telling you how to do and this is what it's going to be." A local postsecondary administrator in a third state noted that the state CTE director "sat in several meetings and worked with us around the definitions and the performance measures to make sure that they're sensible, that we understand them, and that we can work with them."

Local Understanding of Measurement Populations

Although local *Perkins* subgrantees are expected to use the population definitions included in their state's five-year *Perkins* plan, interviews revealed progress toward common definitions as well as considerable confusion about and inconsistent understanding of these definitions. Some local administrators were quick to acknowledge that steps were being taken to enhance the consistency and quality of data. "Definitions and measures are getting better at the state

level," the director of an area CTE center observed. "We have common definitions now, which are the best part. In the past, it seemed that rules would change every year because somebody would redefine what the definitions were. . . . We do have pathways, and we set definitions as we create pathways. It comes down to 'If you've spent a year here, you're a concentrator'."

Flawed Definitions Can Lead to Inaccuracies in Perkins *Accountability Reporting*

A practitioner in one local community described how different course-taking schedules could affect how concentrators are reported:

Students take our cosmetology program for four hours a day during their senior year. They start before school even starts, they go four hours a day throughout the school year, and then they don't complete until the end of July. That cosmetology program is approved as one single CIP code, not two as it says in the definition. I would think those cosmetology students . . . would be concentrators, but they're not . . . according the state definition and they do not count in the data….How they take the courses, what sequence they take the courses, what sequence they're offered makes the difference. Those students, either four hours a day one year or two hours a day one year and two hours a day another year, that determines if they're concentrators or not. . . . I've been hammering my head against a wall trying to convince state administrators that this is a problem. . . . If data are going to be pulled and they're not accurate and not consistent and it negatively reflects upon me, I take that personally.

In another state, local administrators faulted state officials for not doing a good job of communicating definitions. One local CTE director reported, "I don't think we ever got clear directions." A local administrator in another state said:

> Everybody kind of makes up their own definition, as long as they say it's a class that's going to lead a student into a career pathway. . . . We define a participant as someone who can be taking the course to continue or just as exposure. A concentrator is someone who decided to continue . . . and is taking the second or third course in that pathway. . . . So in theory, if students take the second, third, or fourth course within a pathway, they're called concentrators.

In one state that reported using a collaborative process for establishing definitions, a community college administrator noted, "Completers are another big issue. Are they counting our degrees as completers, or are they counting as if they meet the gold standard and the industry certification as a completer?" A local CTE director in that state suggested that "concentrator" is just a new name for "completer" at the secondary level.

> We have a senior awards night every year, and I always present certificates to the students who were completers. Of course, now we call them concentrators. For the last couple of years, I would say that 75 percent of our seniors have been completers or concentrators. . . . A completer would be someone who's finished the three sequential courses for a career tech program—basically the same thing as a concentrator, [but] they've just changed the name.

In another state, both state and local CTE administrators conceded that the definitions were not well understood. According to a state postsecondary administrator, the definition of participants is not clear among locals: "You still stumble across people who ask 'what's a completer?' even though completers have been out there forever. . . . Our concentrator definition is not particularly well known, and it was the best compromise we could make. . . . If you do the Venn diagram with concentrators and completers, there are a lot of people who are concentrators [who] aren't completers, and that's expected. But there are almost as many people who are completers who would not qualify as concentrators."

A colleague at the state level suggested that postsecondary faculty and staff understand how to account for the number of credits by course but were uncertain about whether they equate credit attainment to being a concentrator. He said that local practitioners understand that a concentrator is a student who has enrolled in two or more courses above the exploratory level, but "when we say in the same or related cluster, then how do you count that? What about keyboarding because it goes across every single program?"

Local administrators in this state offered harsh criticism of the population definitions adopted by the state and the process used to develop them. One local administrator noted, "It would have helped if there had been some consistency in what our definitions were. . . . There wasn't as much collaboration between systems as we should have had earlier on and now the definitions have pretty much been mandated to us." This person also erroneously attributed one of the state's definitions to *Perkins*: "I assume that we now have a good definition of what a completer is because *Carl D. Perkins IV* said what a completer is."[2] A CTE director in another LEA said the state decided to base its definitions on what data are easily available—and not on "what the feds are really looking for or what would have to change to get accurate data. . . . In the definition of concentrator that the state is using, I highlighted the word enrolled. It doesn't say completed, it doesn't say get any credits, just enrolled. . . . It's possible for a student to be identified as a concentrator and never show up for class."

[2] Neither *Perkins IV* nor the Department's guidance define (or even mention) completers.

Defining Performance Measures

In addition to suggested definitions of measurement populations, the Department's nonregulatory guidance also includes performance measures that identify the proposed numerator and denominator for each core indicator. (For example, the suggested numerator for the secondary school completion measure is the number of concentrators who earned a diploma or equivalent credential during the reporting year, and the suggested denominator is the number of concentrators who left secondary education that year.) With the exception of nontraditional participation at the secondary and postsecondary levels, all of the measures proposed by the Department are designed to evaluate the performance of a state's concentrator cohort. The proposed nontraditional measures are designed to evaluate participant outcomes. Because the recommended measures are based on the Department's suggested population definitions, data comparability is compromised if states have adopted alternate definitions of concentrators or participants.

None of the case study states adopted all of the performance measures recommended by the Department. In some instances, changes made at the state level might be construed as relatively modest—e.g., the insertion of modifiers before or after "concentrators" to refine the population included in a particular measure or specification of the assessment instrument used for the secondary academic attainment measure. In other instances, the measures adopted bore little, if any, resemblance to those suggested by the Department. Four of the six states used completers instead of concentrators in at least one of their secondary and postsecondary performance measures. Data comparability across states is further decreased when states opt to include different groups of students in either the numerator or the denominator of the measures they adopted. Attachment B provides a comparison of the Department's recommended performance measures with those adopted at the secondary and postsecondary levels in the six case study states.

State administrators had varying perspectives on the utility or value of the Department's nonregulatory guidance. Although most reported using some of the Department's guidance to define measurement populations or establish performance measures, some still questioned its salience. "We were one of those states . . . that copied and pasted the guidance," said one state CTE administrator, "but there have been some modifications." A colleague cited the value of the guidance in promoting collaboration among the states: "I think that the nonregulatory guidance . . . has been helpful. I think the spirit continues to grow among the states to work closely to adopt or interpret as best we can."

In another state, the *Perkins* coordinator offered a less enthusiastic appraisal of the guidance. "I don't know how helpful it was," he said. "I guess I would rather have the nonregulatory guidance than not have it, but there are issues with it. I have asked [the Department] 'What's the question you want answered?' and they can't tell me. The only problem with the core indicators is that I don't think they measure the right things. I think some of the core indica-

tors are just giving Congress data, but they're not necessarily giving them worthwhile data, anything they can really use." A postsecondary colleague was blunter in his assessment of the guidance: "I don't agree with much [the Department] has done. . . . They say it's nonregulatory guidance, but when it comes to my plan, they won't approve it unless I'm doing it their way."

A state CTE administrator in a third state described working with an accountability committee to craft measures: "We took all that information and where it made sense we created alignment. . . . [O]ne of the guiding principles . . . was we didn't want a measure that was only important for the *Perkins* law. . . . We wanted to have relevance to our institutions . . . within the parameters of what was required from the law." A counterpart in yet another state reported even less use of the guidance: "I didn't use the nonregulatory guidance. I went to [our eligible agency] for my guidance at every level, every step. The negotiations for all of our core indicators were done collaboratively between us and our [eligible agency]. I took a look at their nonregulatory guidance, but that's pretty much what I did with it, because there really wasn't much there."

State administrators were much more consistent in their opposition to the possibility of regulatory guidance (Exhibit C.14). Although state administrators in one state indicated that they might support regulatory guidance, their colleagues in the other five states varied in the extent to which they opposed this possibility.

Exhibit C.14.
State CTE administrators' perspectives on possibility of regulatory guidance

State	Would you support regulatory guidance?
A	Probably. I'm a firm believer that the more we can get at common definitions [or] common procedures across the country, the better off career tech's going to be in general. Yes and no. Yes in the spirit of trying to create a common comparative approach, but no because it typically would mean that it doesn't come with funds to help implement systems that would get us there.
B	With the regulation you have more definition, but then you have less flexibility since each state's data systems are so much different. I think if [definitions and measures] had been mandated and there had been regulations… [from] Washington…there wouldn't have been the ownership that we have now [in the state]…Is ours a model? Probably not. But do we think it should be regulated? Not even.
C	The reason I don't want regulatory guidance is the nonregulatory guidance [that] I don't agree with….If I've got the same kind of regulations that I have as non-regulatory guidance . . . heaven help us.
D	Nonregulatory guidance helps us out because regulatory guidance would probably produce more work if there wasn't some local flexibility.
E	I think detailed guidance is better since federal regulations are often not appropriate for shared-time systems in career and technical education.
F	[The Department] should have at least nonregulatory guidance for there to be some consistency across the states. Without such guidance, it leaves each state on its own to interpret the legislation and to decide on how it wants to build its measures. However, the guidance should not be developed in a vacuum. [The Department] should convene a committee of state directors to work with them in developing the guidance.

The reasons for selecting different performance measures varied by indicator and by state, and none of the six states adopted all of the recommended measures verbatim. Technical skill attainment was an indicator for which five of the six states proposed different measures at both the secondary and postsecondary levels. For both levels, the Department proposed "the number of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year" as the numerator, but several states built in options for use of grades, end-of-course assessments, hours completed, degree or certificate attainment, CTE curriculum standards, or other locally determined methods. A secondary administrator in one state explained: "We felt it was better to look at all concentrators and assess them on [whether they met] the gold standard as we defined it in our plan . . . or did they meet it based on the alternative measure, which is the teachers certifying that they achieved the competencies based on the curriculum frameworks provided to them."

In another state, CTE administrators reported four ways in which districts can measure technical skill attainment. Alternative measures were deemed essential because only 12 of the state's 9,642 concentrators actually took an industry-based certification exam during the previous year. "Not only do we collect whether or not they met it," a state administrator explained, "we collect how they met it. It's sort of a hierarchy. The highest one is . . . by industry certification. The next down is third-party certification, [i.e.,] a NOCTI [National

Occupational Competency Testing Institute] exam or Skills USA. The third is whether they had a dual credit course for which they received credit. . . . The fourth and final option is what we call 'locally developed criteria.'" In this state, several postsecondary institutions were positioning themselves to become testing centers for industry certification. These institutions were said to believe that part of their goal as community colleges is for students to leave with industry certifications. According to state administrators, practitioners at these IHEs envision having their students go through the industry assessments on site, which "then gets over the barrier of capturing the data results and identifying their success in [these assessments]or lack thereof."

A postsecondary CTE administrator in another state argued vigorously for using GPA to document technical skill attainment. As he explained, "The denominator is anybody who's taking a course above the introductory level and the numerator is those with GPA above 2.0 for those courses. . . . We measure technical skill proficiencies through multiple demonstrations throughout the semester. Why would I take one test and say that one paper-and-pencil test is your level of proficiency? . . . So from the perspective of educators in [this state], to hang everything on one paper-and-pencil test is not good pedagogy. We feel a grade of C or better in those courses is a strong indicator of technical skill attainment."

Even the CTE director in the one state using the measures recommended by the Department for secondary and postsecondary technical skill attainment conceded that there are limitations to the data reported: "We don't report assessment data to [the Department] for pathways where there is not an approved statewide assessment. That's just something . . . we're going to have to live with until we get valid assessments in all the programs. For the others, we try to push for proof of self-reported results. The validity has improved now that we've started doing monitoring visits."

State CTE staff also flagged concerns about other performance measures—specifically, secondary school completion, graduation rates, placement at the secondary and postsecondary levels, retention, transfer, and nontraditional participation and completion at both levels. Administrators in one state said that they were using the same definition for both secondary school completion and graduation "because the law says 'state recognized certificate or degree,' and the only one this state recognizes is a high school diploma." In the same state, a postsecondary administrator raised concerns about the Department's guidance regarding the retention and transfer indicator: "I don't like persistence because of the part-time status of the community college students. I followed one cohort. Were they there next year? No. They were in my leaver cohort. I had 80 percent of the students come back eventually over a three- or four-year period. Measuring persistence the way we're doing it, year-to-year persistence, is kind of a remnant from the four-year degree model. The median time to a two-year degree is seven semesters—and that's not contiguous semesters."

Another postsecondary administrator suggested that his state might change its measure constructions for retention and transfer, particularly as they relate to timing, to make them more useful for internal reporting. He explained that current measures are looking at the cohort of students from the previous fall: "We could report [on the cohort] in a consistent way and still get at the same figures if we waited and looked at the transfer rate in September. For the 2009–10 cohort, you would look at the transfer rate in September 2010" (i.e., at the start of the following school year).

Two states questioned the Department's recommendations for including "leavers" in the measure constructions for placement at the secondary and postsecondary levels. A CTE administrator in one state said, "What we typically do is take completers from the prior year and find out if they were placed, rather than all concentrators. . . . It didn't seem appropriate to hold the state accountable for the performance [and placement] of people who had not completed the entire program." A postsecondary administrator in another state identified multiple challenges in tracking leavers and conceded that leavers are not a priority for data collection: "Only in this round of *Perkins* have we had to look at placement data for leavers, and it's a real pain in the neck to do that." He defined leavers as concentrators who left a program without completing it and noted two problems with this definition:

> One, some of these leavers come back. Others have left the state, and it's a real effort to track them down. We do a mail survey and follow up by phone. Most of them aren't going to answer a survey if they're not here. We are getting something like a 12 percent response rate for these people, and it really depresses our placement rate very significantly. Including leavers depresses our placement rate from 88.9 percent for responders to 39.8 percent. We care more about why people are leaving. The placement rate used to be a lot higher when it was for completers, and I think this one now is kind of meaningless. We're asking [the Department] if it's possible that we don't have to report placement for leavers.

A postsecondary administrator in another state questioned the wisdom of limiting the time frame for measuring placement to a single quarter. "Given the instability of the employment data, when we looked at the use of a single specific quarter, especially either October through December [as suggested in the nonregulatory guidance] or January through March, which are both high and low quarters for retail, agricultural, construction, and a variety of other occupational areas, we decided to use a more stable indicator," he explained. "After reexamining numerous configurations for employment . . . we determined that the existing indicator would insert less confounding variables into the model examining employment outcomes." As a result, the postsecondary placement measure in this state is the percentage of CTE program leavers and completers who did not transfer to a two- or four-year institution and were found during one of the four quarters following the cohort year in an appren-

ticeship program, employment covered by unemployment insurance, the federal government, or the military.

Administrators in a third state expressed concern about the proposed measures for the nontraditional ("nontrad") core indicators. As summarized by one administrator, some concerns were based on specific aspects of the proposed measures, but others appeared to be more philosophical:

> We didn't like the way they constructed nontrad. If we're honest, the nonregulatory guidance puts a lot of emphasis on nontrad. I don't think it's appropriate to have two separate measures for nontrad. I think we would prefer that it was just a participation measure. I don't know any reason to believe that the performance of people once they get into nontrad is different from the people who are traditional. . . . What we felt was appropriate was to make sure the completion rates of people in nontrad programs are not different than the completion rates of students who aren't nontraditional in that occupation. . . . If you want to evaluate that, you could look at the difference on the subpopulation indicator [rather than] creating a separate measure for it. . . . I think it sends the wrong message to have these two separate measures.

Local Understanding of Performance Measures

There was considerable variation in local understanding and interpretation of the performance measures included in state *Perkins* plans. In addition, some local practitioners cited confusion about how state staff used data to calculate performance. LEAs and IHEs in states with more sophisticated data systems did not always exhibit greater understanding of these measures or higher confidence in the quality and consistency of data reported. In some instances, the lack of consistency in reporting on specific measures (e.g., technical skill attainment) seemed to be associated with the nature of the documentation required.

A secondary state CTE administrator in a state that includes CTE data in a consolidated data collection to which all districts submit electronically conceded that mistakes were made when data were entered into the data system. In this state, a CTE report for each district is extracted from the state database and sent to the LEA for validation. As he noted, "Now that we're releasing local performance indicators to school districts, we've found that a lot of our school districts misidentified their students, miscoded in the area of graduation rate. Sometimes . . . one student can really make or break a school district, so we've been working with our districts to help them understand how to identify and code their students." This administrator provided a further description of the problems resulting from the calculation of graduation rates for *Perkins* reporting:

> *Perkins* accountability . . . is quite confusing to the school districts. I always told school districts to look at local performance indicators as your local CTE report card. . . . What's really hard is when we go into the Adequate Yearly Process (AYP) measures looking at the assessments and the student graduation rates. They see the regular AYP graduation rate as being 100 percent, and then they look at our CTE 4S1 measure as being 30 percent. Of course, by default, they're in a *Perkins* improvement plan, because they're not at state target.

A community college administrator in that state noted a lack of consistency between data at the state and local levels: "We just last year finally got to the point where we saw what the state was aggregating. There's a mismatch between what we know on our campuses for completion rates and what the state is saying our completion rates are. We're trying to figure out how they are pulling those data. The data are messy at this point."

A high school teacher in the same state noted changes in how the state calculates placements: "We used to do call-ins three years after [the students] graduated. Now it's all driven off their Social Security numbers. We really don't get the same kind of data we used to get when we [did] individual call-ins to talk to students three years later to see what they're doing. The state takes care of that, and I'm not sure they share those data. I haven't seen them."

A local curriculum director in another state echoed concern about the complexity of integrating *Perkins* indicators into state data systems: "It's complicated . . . what I deal with the most is [the state's] student data website," he explained. "Coming into this position last year, I didn't really know anything about federal *Perkins* money. . . . Last year was a baptism by fire kind of deal in what I had to know. I was a part of all of the name changes that were required of classes . . . and trying to align all of that and figure out what kids were concentrators and what kids were this or that."

A community college administrator in another state cited a lack of common understanding about measuring technical skill attainment: "There has been such confusion about industry certification and what it means. . . . For a while, there were two or three lists floating around the state. . . . The state's saying that we have to report on these industry certifications—we have to know who these people are—and not just who they are, but when they took the test, did they pass the test, did they retake the test, did they get a job."

Secondary administrators in another state also raised concerns about the lack of consistency in measuring and reporting technical skill attainment but suggested that the state is taking steps to remedy these problems. According to one local CTE director, "The problem with data has been that 'competency' is subjective to the teacher. Now, we are moving to a rubric

that is going to help create more viable or reliable data on that student, but it's still going to be somewhat subjective . . . because it's still based on what the teacher says at any given point. You may go in and I may go in and rate a student differently." A colleague in this district reported, "We're still using the same assessment system that we had in place before the programs of study. We are still doing the teacher-made tests, and they are part of the courses themselves. We have done nothing beyond that. We are working locally and with the state, but none of that is in place yet."

A postsecondary administrator in another state raised questions about *Perkins* core indicator reporting and whether responsibility rested with the state eligible agency or the federal government: "Some of the requirements of the reporting that we do for different categories of all the statistics just don't make sense sometimes. It finally occurred to me that they're not sort of standard. . . . Seems that the eligible agency is getting instructions from [the Department], and they interpret what they're hearing. Then they give it to us, and then we're trying to interpret what we're hearing, and it can be confusing." She also highlighted the impact of seemingly modest changes to the accountability system: "We do what we think we're supposed to do, and then the wording gets changed slightly and we have to go back and redo it all. It truly is a nightmare."

A local CTE director in that state suggested that problems with the state's measurement of technical skill attainment went beyond a lack of consistent understanding or application of the measure construction. He said that he had no confidence in the validity and reliability of technical skill attainment data. He admitted that he "just provided a number above the state target" and guessed that most of his colleagues across the state did the same.

This director also cited concerns about what happens to data when they are submitted to the state: "We submit electronically. [The data are] manipulated behind closed doors, and [they come] back out different from what was submitted." While he said that he had confidence in the data collected by individual schools, he was not sure if the data were added together correctly at the state level: "Someone at the state office used to send out data and then the state CTE director would tell us the data are wrong and to ignore them. You could just look at the data and see that they weren't right, didn't add up. They were clearly bogus, didn't pass the smell test." However, he also indicated that he had seen recent improvements at the state level, in part because the state CTE director "has done an awful lot of work on getting higher quality data." This administrator also noted that definitions and measures are getting better at the state level: "In the past, it seemed that the rules would change every year. . . . We were comparing apples to oranges because how they calculated the data would change. Gender equity, for example, would change every year, so we were never counting the same kids."

Appropriateness of *Perkins IV* Core Indicators

Most administrators and faculty at the state and local levels expressed strong support for holding *Perkins* recipients accountable for attaining positive outcomes and using *Perkins* funds. Some questioned how the accountability systems were designed and implemented, and many questioned whether the core indicators are appropriate measures. The indicators identified most frequently as inappropriate were the secondary academic attainment measures for reading/language arts and mathematics.

Problems with Perkins *Academic Attainment Indicators*

Several state CTE administrators cited reasons why the required measures of academic attainment fail to provide a valid measure of CTE's impact on students' academic achievement.

The biggest or most obvious [problem] is in academic attainment. In our state, we give an exit exam in the 10th grade . . . and the majority of students who enroll in CTE don't even do so until their junior year. In some LEAs, that could go against kids. Why would I enroll a low-performing student in CTE when I know two years from now you're going to look at that measure and hold it against me? It really is a nonsensical measure. (State CTE administrator)

The assessment is administered in October of the 11th grade and measures end-of-10th-grade learning, but the students typically begin their CTE core enrollment at the beginning of grade 11. So the area CTE centers are held accountable for those scores when that learning occurred before they even enrolled in the centers. This has led to huge, contentious discussions. . . . The *NCLB* measurement is being misused in states that deliver shared time systems like this. Use of the *NCLB* measurement is not measuring academic gain; it only measures differences in successive cohorts of students. (State CTE director)

Academic attainment is just a dumb measure. I don't have any trouble with what we're trying to measure, but the way we're trying to measure it just doesn't make any sense. It doesn't measure CTE's impact on academic attainment at all. (State CTE administrator)

Our three *NCLB* measures in this state are dysfunctional. If they were actually binding, they would drive us to take on fewer at-risk kids, which is something you don't want the system to do. (State CTE administrator)

Perkins IV requires states to use the high school assessments administered for *ESEA* for these indicators, and state CTE directors reported that the Department offered no flexibility to use alternative assessments. The *ESEA* assessments were widely viewed as inappropriate because they typically are administered in the 10th grade or early in the 11th grade, and students are more likely to take CTE courses as juniors and seniors.

Administrators in most states questioned the emphasis placed on the nontraditional indicators and the wisdom of holding districts accountable for outcomes that are difficult to control. As one noted, "We have two or four nontraditional measures; the majority of our measures are things that are dysfunctional." A colleague concurred, "The feedback I get

from deans is that there are so many factors out of our control. . . . If I'm at a technical college, I have a lot more of the hard trades . . . [and] probably a lot less of the nontraditional gender students."

A secondary administrator in another state said, "One that I really question is nontraditional participation, particularly for the smaller agencies. It's possible that they don't have any nontraditional programs. By law, we can't require them to operate programs unless we can pay for them, which we can't do. So they're kind of destined to be sanctioned down the road because of something that they can't do, and they don't have the resources to do."

In a third state, the executive director of the statewide CTE council said, "We have a huge issue with nontraditional. There's just no way you can hog-tie kids and put them in classes they don't want. That's a big issue with local directors." Another state CTE director said, "The ones I question the most are . . . the emphasis [on] the nontraditional. To be held accountable in the same way there as for performance in math and reading doesn't feel right to me."

A local administrator in another state explained how the nontraditional indicators put pressure on him to spend *Perkins* funds in different ways:

> I haven't in the past had a lot of money for nontraditional, but now because of the accountability data, my nontraditional data look like they need improvement—as they do for every other center. So because of the accountability data, we are spending money on nontraditional stuff like promotion. We can keep measuring it. I don't think anything is going to change. . . . People are going to sign up for what they want to sign up for, and that's just a hard nut to crack. In auto body, females do sign up for it, but they'll never sign up in the same proportions that males do. Same in aviation. There are some fields that just will never be 50/50.

Others voiced concerns about how postsecondary populations are defined and how retention is measured. "I don't think it's irrational to set targets and hold people accountable to them," a state postsecondary administrator explained. "I think it's irrational to say 100 percent of all students entering your institution will be in each measure. . . . I don't know who came up with that." He noted that the "accountability mechanisms are out of sync" and suggested that "a lot of the accountability is really predicated on the old four-year model of an 18-year- old newbie who comes into the community college, gets out in two years, and then goes on to a four-year [institution]." He also indicated that he liked "the leverage that accountability has given the local deans." One of his colleagues questioned the feasibility of the retention measure, noting that "We shouldn't be focusing on retention or persistence in a

program when the economy has changed to make that program less viable. Students 'vote with their feet' in enrollments."

A workforce development administrator in another state echoed concerns about the wisdom of measuring retention at the postsecondary level. He reported, "Our biggest problem is a conceptual one—the issue of what do you consider a completer. It's a baccalaureate degree orientation or high school graduation orientation. The big chunk of what happens in workforce education at the community college level is on the ability-to-benefit model; it's not to get a degree."

Data Collection and Reporting

CTE administrators, faculty, and staff appear to be taking the strengthened *Perkins IV* accountability provisions seriously and moving toward systematic and rigorous approaches to data collection and significant emphasis on data quality. While *Perkins* accountability systems in all six states could still be described as works in progress to varying degrees, state CTE administrators exhibited a thorough understanding of the *Perkins* accountability requirements and a commitment to helping LEAs and IHEs collect valid and reliable data. Most local respondents could identify how the state had assisted with *Perkins IV* data collection, but their reviews of state assistance were not universally positive. Even in states with web-based reporting systems or longitudinal tracking capacity, some *Perkins* recipients reported frustration with reporting processes and information provided by state administrators.

Noticeable differences in accountability systems were apparent in the two states visited for both the 2004 National Assessment of Vocational Education (NAVE) funding and accountability study and the current study. State administrators in both states had pushed for greater consistency in collection of *Perkins* data, deeper local understanding of the purposes and importance of *Perkins* reporting, and new approaches to assessment of technical skills. When visited in 2002 for the NAVE study, both states still relied heavily on teacher-developed checklists for documenting technical skill attainment. By early 2010, one was rolling out a series of third-party assessments, developed with state and local input but administered and managed by an external vendor, and the other was developing a competency-based assessment rubric that includes standards in five areas: knowledge attainment; technical skills; problem solving; career awareness; and communications/literacy.

Data Systems and Reporting Capacity

All six states were making use of technology to streamline data collection and reporting and increase consistency. Each had established some type of electronic reporting system, but the level of sophistication varied dramatically. Only one of the states had a comprehensive longitudinal data system that combines education and workforce data, including unemployment

insurance wage records, to track outcomes of CTE programs. Different local entities in this state were responsible for uploading data into the different systems; at the state level, data could be drawn and combined for different purposes (reporting, research, funding, etc.). The *Perkins* director stated, "We're able, with all of our longitudinal data, to hone in on how our students are doing, how our programs are doing, how individual programs are doing, so that they're very accountable."

At the other end of the spectrum, the CTE director in another state acknowledged that data had not been valued in the past. He noted with some chagrin that "our data system is literally sitting under an employee's desk out there on a PC on an Access data base that her son designed years ago. . . . The data system architecture is a huge question in my mind."

Two states had integrated student-level databases linking *Perkins* data with information from other academic programs, and the other three had plans to implement more comprehensive data systems. In one of these states, a state data administrator described efforts to link its CTE reporting system with other student-level data in its electronic information system. He expressed confidence that "a lot of *Perkins* reporting and accountability issues will go away and data will get much better," as the state invests in a longitudinal data system. He also noted the critical importance of coordinating with postsecondary partners:

> The state's working right now on a database, if we can ever get all our postsecondary [institutions] to cooperate with us. Every student [who] goes to public school in [this state] has a state ID number—not the Social [Security number], but an assigned unique number. If we can just get . . . all the different postsecondary institutions to agree [that] everybody uses the same number, then we can simply follow those students. . . . At this point, we have a unique number, the [technical college system] has a different number, the community college has different number, and the [university system] has a different system, so we're trying to get everybody on the same page.

The *Perkins* coordinator in another state explained that an ambitious student-level database had been stalled by the state's economic downturn, but the CTE director was ready to estimate a time frame for the project. He said, "Within three years, we should have a system that's starting to crank out relatively good data. We've put in a proposal for funding to establish a longitudinal database across all the levels of higher education and K–12, as well as do data matching with the employment development department. . . . Right now the barriers are *FERPA* and the Social Security issue. There is absolutely no willingness to use SSNs as student identifiers."

The CTE director in a third state was optimistic about unveiling a more limited system by fall 2010: "We are going toward a statewide grant management system that will have online *Perkins* applications [and] online monitoring document[s], and the original design we've talked about would also carry a parallel data gathering form. . . . Down the road, [I'll probably have to pay for design of] the web-based data collection that would be on the statewide grant management system."

Changes in Data Collection and Reporting for *Perkins IV*

Many case study respondents described data system improvements they had implemented in response to *Perkins IV* requirements. One state CTE director reflected upon how far his state had come with regard to data quality in a short time: "We used to refer to [our state] as kind of a data desert. We've changed dramatically in the last five years, and we're getting better all the time. We created a portal where all schools go in and register their programs of study, and then we approve them on that electronic board. . . . [We're] not as strong on outcomes. Our second round of state longitudinal data systems grant that we applied for would provide a lot more." The deputy director provided more details about the new data system: "Until 07–08, [our state] only reported aggregate data at the state level; that was the first year the state began reporting school-level data. One of the big projects of our state longitudinal data system grant is a decision-support system, where you're able to mine this big monster data queue and go in and look at data and slice and dice it however you would like. . . .We put a bunch of our eggs in that particular basket as a vehicle for us to get reports, trend analysis, and drill-down capacity of identifying special populations."

State CTE administrators in another state reported that their quality assurance process improved between *Perkins III* and *Perkins IV*, citing more local visits for technical assistance on the state's management information system. The assessment coordinator for this state noted, "Transitioning from *Perkins III* to *IV* produced a lot of work for a lot of MIS people because they may have had to reconfigure any local reports. . . . But we just tried to rely, wherever we [could], on something that's already being collected."

A state *Perkins* administrator in a third state suggested that the *Perkins IV* changes to accountability requirements had greater impact at the secondary level. "*Perkins IV* was nothing new to the college system," she remarked. "[With] *Perkins III* at the secondary level, they reported their data. Sometimes it was in a timely manner, and other times it might not have been." A postsecondary colleague elaborated further on the *Perkins IV* changes: "In [*Perkins*] *III*, I think…we had a lot of focus on [on nontraditional and] bringing those numbers up. [Now] they're looking at all of the accountability measures. They're making relationships between student achievement initiatives." Administrators in this state also noted changes in how *Perkins* data are shared with postsecondary institutions. Under *Perkins III*, state officials shared only aggregate data; now they get individual performance reports that they can compare to the aggregate performance indicators for all community and technical colleges.

Data Reporting Roles and Responsibilities

As noted above, all of the case study states had at least some capacity for electronic reporting of *Perkins* core indicator data, but that capacity ranged from sophisticated web-based portals to more primitive systems in which eligible agencies submitted data via e-mail or CD. The more sophisticated systems were designed to support aggregation and initial analyses of *Perkins* data with little to no additional effort at the local level. The less sophisticated systems required more extensive input from LEAs and IHEs. As a general rule, postsecondary data collection and reporting systems were less likely than their secondary counterparts to rely on manual tabulation or input of student-level data.

Although states have made significant investments and efforts, LEAs and area CTE centers are still expected to assume primary roles in the collection or validation of student-level data in most states. Specific responsibilities for secondary data collection and reporting varied across the case study states (Exhibit C.15).

Exhibit C.15.
State and local responsibilities for secondary *Perkins* data collection and reporting

State	State responsibilities	Local responsibilities
A	Electronic portal is used for data collection on concentrators, participants, and special populations. Unique ID for each student allows state staff to disaggregate data to obtain an unduplicated count. Statewide contract with the National Student Clearinghouse provides access to postsecondary placement data. State staff members generate a verification report specifying which concentrators graduated and ask local staff to identify what those students were doing the second quarter after the year in which they graduated. State staff access and compile placement data.	School districts pull data from their student information systems and populate the program fact template, which includes every participant, with program code and level of participation. Districts upload data to the department of education portal. Local staff complete the post-school survey to report whether graduates went on to postsecondary education, employment, or military service and submit those data to the portal.
B	New electronic secondary data system is used to collect grade history, credits, and state course codes mapped to CIP codes. CTE data are part of consolidated student data report required of all districts; a vocational report is extracted at the state level for validation by local staff. Concentrators are identified at the state level based on information submitted through the new data system.	Local responsibility for data submission and validation may rest with CTE director, data system coordinator, or superintendent. Teachers are expected to verify student information prior to submission. LEA staff report completer information to the state database.
C	The department of education collects data on secondary core indicators from districts through a separate online data collection system. Enrollment data collected in the fall include demographics, participants, and concentrators from the previous year; placement data are collected in the spring. The department of education aggregates statewide data and examines data at the LEA level to identify those LEAs that are those underperforming.	Districts pull data from their student information systems and hand-enter data on enrollments into the state system. Some districts use software that pulls demographic data as well as participant and concentrator information from the school or LEA's student information system. Some larger districts employ dedicated data staff; in smaller districts, CTE and counseling staff often handle reporting.
D	The state has a comprehensive, longitudinal data system with standardized definitions and guidelines for each data element in the local management information system. Department of education staff receive raw data from LEAs and calculate accountability measures (e.g., concentrator) using algorithms. The state also has a workforce data system that can determine placement information. State staff provide each LEA with an aggregated report on its performance on *Perkins* indicators.	Raw data are extracted from the LEA's data elements and sent to the department of education. LEA staff review reports generated at the state level and make corrections as needed. Local CTE directors use an online system to establish local performance levels.
E	Department of education staff e-mail a zip file to the LEA. State staff compile data and calculate state and local performance on core indicators; academic attainment data are added at the state level. State staff obtain technical skill assessment data from website of third party vendor. State staff disaggregate demographic and special populations data for CTE participants and concentrators to examine differences in performance.	School staff member collects data from individual teachers, who typically provide information on paper rather than electronically. Teachers identify participants and concentrators and students who are members of special populations; counselors or teachers at area CTE centers may have to call the sending schools for student information. Area CTE centers have primary responsibility for collecting follow-up data for the placement indicator. Information is imported into the state database format and put on a CD that is sent to the state.

Exhibit C.15.—cont.
State and local responsibilities for secondary *Perkins* data collection and reporting

State	State responsibilities	Local responsibilities
F	The state uses a web-based data collection system to capture CTE class data, student concentrator status, competency information, dual credit and dual enrollment data, and follow-up data on concentrators.	CTE directors and teachers report their data electronically though an upload function on the state agency's website. Teachers are expected to input competency assessments and information related to dual enrollment courses. Some teachers enter their data and upload attendance figures through a statewide student information management system used by districts on a voluntary basis.

At the secondary level, four states had web-based reporting applications that eliminated the need for LEAs to submit redundant student profile data and helped identify concentrators and completers. The other two states employed a two-tiered data reporting strategy that required LEA staff to assemble data from a variety of sources and package the data for submission to the state. In both of these states, concentrators were identified at the local level. Only one state claimed it had the capacity to generate placement data at the secondary level. In four of the other states, LEAs had primary responsibility for collecting placement data; in the fifth state, the eligible agency engaged a contractor to perform this function. A secondary administrator in this state described the contract for collecting secondary placement data: "We contract placement out with a state university, and we're going to continue to use a contractor until we get our statewide longitudinal data all worked up. [The contractor] does a lot of work for us. They do UI wage matches for us, FEDES matches, [and] military wages. They go through the National Student Clearinghouse to find our students at universities and colleges throughout the nation through SAT matches and ACT matches as well."

Although postsecondary data systems were frequently described as more sophisticated than their secondary counterparts, this was not always the case (Exhibit C.16). For example, one state-level administrator noted: "The other big challenge for us was on the postsecondary side. It [the postsecondary data system] doesn't exist, so what we're doing now is having the [postsecondary institutions] provide us aggregate data that they have. . . . I think we've made inroads in creating some data quality, but . . . either the system doesn't have the capacity, as far as its technology infrastructure, or the program people have a hard time communicating what data they actually need to the information technology data analyst people. There's just a disconnect."

Exhibit C.16.
State and local responsibilities for postsecondary *Perkins* data collection and reporting

State	State responsibilities	Local responsibilities
A	State staff created a manual to guide extraction and compilation of postsecondary *Perkins* data. State staff provide technical assistance to IHEs through meetings with all *Perkins*-eligible IHEs, webinars, and one-on-one support. At present, there is no state data system for postsecondary *Perkins* information.	Postsecondary institutions compile, extract, and submit performance data set forth in the state data manual. Data typically are compiled by the institutional grants office, the institutional advancement or research office, or others and approved by the college president or CEO.
B	The state has a common data system and standardized extract used by all postsecondary institutions. A negotiated process (i.e., one-time exception or permanent expansion of the extract) occurs whenever state staff request data that are not part of the standardized extract. Information is compiled at the state level before going to the data warehouse.	Each college houses its own database, in a system common throughout state. IHEs use a standardized extract to submit data to state CTE staff. Staff at individual IHEs are responsible for coding intent and exit codes, which are uploaded into centralized system quarterly. Data sent to the state include information on enrollments and grades and unit records.
C	All community colleges have a unified database [a statewide database into which both secondary and postsecondary systems can load information] from which state staff extract data. The state provides guidance to locals on data confidentiality. Staff in the state postsecondary CTE office conduct data analyses and provide colleges with program-level reports.	Community colleges conduct supplemental data collections at registration or administer classroom surveys to obtain special populations data. Many colleges started using administrative data matches instead of follow-up surveys, which were reported to be time consuming.
D	The state has a comprehensive, longitudinal data system with standardized definitions and guidelines for each data element in the local management information system. Department of education staff receive raw data from IHEs and calculate accountability measures (e.g., concentrator) using algorithms. The state also has a workforce data system that can determine placement information. State staff provide each IHE with an aggregated report on its performance on *Perkins* indicators.	IHEs send raw data to the state for calculations of the measures. Performance reports received from the state are not disaggregated at the program level.
E	State staff met with staff at IHEs to discuss definitions and performance measures. State staff compile data and calculate performance on core indicators.	IHEs submit separate *Perkins* reports to the eligible agency; most data are harvested from the data warehouse or system at the individual IHEs. Administrators identify participants and concentrators, with assistance from program managers and faculty. Placement data are obtained through surveys administered by staff responsible for tracking all placements (not just those of CTE students).
F	The state has a common data system used by all postsecondary institutions to collect and report *Perkins* data. State staff trained local student services personnel on data input and common definitions. State staff compile data submitted by individual IHEs and centers and prepare reports.	Local staff enter data into the state system using prescribed common definitions. IHEs receive reports on their performance on the core indicators.

In contrast, a postsecondary state administrator in another state noted that all community colleges have a unified database and said, "Unfortunately, K–12 is not in that place. They have, in my understanding, five pretty common platforms. . . . Beyond those five, there are other homegrown systems, hand record systems still, in some cases." In a third state, a workforce development researcher gave high marks to the postsecondary data system: "The postsecondary system has been in place for quite some time. This is one place where the postsecondary is much more of a system than the secondary. There is a single database design and software. The databases actually reside at the institutions, but there are standardized extracts that come pumped up to the state office. They've recently increased what's in those, but there's a negotiated process every time you want to get data that aren't in the standardized extract. . . . It's sort of an industrial-strength management information system."

State Technical Assistance and Support

State administrators in all of the case study states reported offering technical assistance on *Perkins* accountability measures and reporting procedures. The most frequently cited forms of technical assistance were workshops or some type of written instructions. In addition, most administrators described a process by which local practitioners could access additional help from state staff via telephone or e-mail—and many local practitioners indicated that they had taken advantage of this customized assistance.

One state CTE director reported a broader partnership across the state education agency to support data collection, noting that *Perkins* accountability reporting is now included in statewide data summits and data training. He also said that the CTE division offered its own training. His deputy indicated that state staffing for data-related services includes five full-time help desk attendants who respond to "questions associated with data uploads, data connections, and data validation" and four regional trainers who "work with school districts all year long" and conduct a series of regional "data input parties." Because these staff respond to questions related to multiple federal programs, he explained that their time is charged to specific programs depending on the nature of the call or inquiry. He also reported that the state education agency sponsors an annual data quality conference attended by approximately 700 district staff, with program-specific breakout sessions that allow CTE staff to focus on topics such as the post-school survey and how to count students who transfer from other schools.

However, a high school principal in this state suggested that there was still room for improvement in the state's technical assistance delivery, particularly for LEAs using Mac computers for data collection and reporting. "They tell me all the time it's just the loose nut on your keyboard," he reported. "I agreed sometimes. It takes quite a little extra time and help—and they do have good help available on the help line. . . . After a fashion, it all gets worked out and it gets up and rolling again." A local administrator in another district was far more critical:

> [O]ur state doesn't have a really good data warehouse and a good, current functional database for me to pull from. . . . It's the most dysfunctional system I've ever witnessed, and I've worked in six states. . . . When I have to go through. . . the portal and get the data. . .to fill out the report, it's just an absolute nightmare. The help desk is now dial-a-prayer; there's nobody there to ask for help. If you put in punctuation other than commas and periods in the portal, it rejects your answer. Once you learn that you can't do all that stuff, it's time consuming. . . to take any documents you're trying to download and take all the punctuation out of [them].

In the state with the most sophisticated longitudinal data system, state CTE administrators reported that division staff members "spend a lot of time on technical assistance for inputting data so everything is standardized. There are definitions and guidelines for each data element in the local management information system so data submitted to the state are accurate." The state CTE director pointed out that the technical assistance extends beyond guidance on input to identification of priorities for program improvement. "We have a strategy where we work with locals to develop their plans," she explained. "[We ask] what's the focus of that year in terms of the indicators? . . . At some point you have to focus."

A third state administrator stressed the importance of using data: "State research and data staff do local workshops not only on how to input data but also on how to look at data for program improvement." In addition, she noted peer support for *Perkins* accountability reporting: "There's a community out there among LEAs. Many of them talk to each other about how they're doing. If one LEA is struggling, I think they tend to want to find somebody who isn't and work with them. There is really a strong CTE community among the directors on the secondary and postsecondary sides where they seek solutions from each other. . . . The big providers and the smaller providers, we're really seeing commonalities in terms of their strategies, and I think that's been really successful."

In yet another state, both secondary and postsecondary CTE administrators described the state's technical assistance efforts: "Technical assistance workshops were probably the big ah-ha," according to a postsecondary administrator. "We've been mentioning these measures since we first learned about *Perkins IV*. . . . It really didn't become real until we had this information out and really got to do some of the more personal discussions. We've [done] presentations. . . . We've had [the information] published on our website for them. . . . We've distributed it along with the [negotiated state performance levels]." Another administrator described the customized assistance provided at the local level if students are not properly coded or counted: "We would go one by one, record by record, with the school districts . . . to see where they were. That's technical assistance down to the fine grains of sand, and it's an excellent opportunity for them to see the importance of accurate coding."

A secondary administrator in this state reported receiving phone calls from superintendents who asked for explanations of core indicators. She said some admitted that CTE hadn't been a priority in the past but indicated that it would be in the future if it affects funding. A colleague concurred, noting that "local CTE directors wanted information to be shared with superintendents when we told them that they would be held accountable for performance data."

Nonetheless, officials in this state acknowledged that their technical assistance efforts were not universally valued at the local level. One commented that local practitioners' perceptions were "they don't want to help us, they don't care," an observation confirmed by some local staff. One local practitioner suggested that state staff could be a barrier to moving forward on data analysis. She described plans for a summer retreat for a task force from the directors' association to look at the data that were collected up to that point. "The state encouraged us to cancel that meeting" because proper data were not available, she explained. "So it wasn't until December that they finally got the data-sharing agreement in place, shared appropriate data, and pulled information at the state level. But truly, July to Christmastime, they couldn't give us any answers." A counterpart in another district reported "a general sense of frustration in terms of lack of direction and guidance from the state."

State administrators in two other states indicated that workshops were their primary forms of technical assistance. "We do an August conference that is aligned around all of the *Perkins* accountabilities, assessment development using data to inform instruction, and integrated academics," one state CTE director reported. "Then we sponsor regional or other statewide pieces throughout the year to reinforce some of those things." This administrator also indicated that he was encouraging local subgrantees to contribute to these efforts "so that we'll have that buy-in, and then we'll pick up the balance of that just so that they feel that's part . . . of their responsibility." However, an IHE administrator in this state suggested that state *Perkins* officials could have provided more technical support: "The main thing they've done is sat in several meetings and worked with us around the definitions and performance measures to make sure they're sensible, that we understand them, and that we can work with them. Other than that, there's been very little advance on the technical front."

In yet another state, a secondary administrator described a series of workshops and webinars offered to assist local *Perkins* subgrantees with accountability requirements. "That's one of the reasons I've designated one of my consultants as being the data guy," he reported. "It's his responsibility to make those kinds of things happen." A local *Perkins* coordinator said that help was available at the state level if she called: "The consultants [at the state level] divide themselves up . . . and each region has its own person to work with. He's usually really good if I send him an email. He'll make sure that he emails me the same day, but it's basically questions like, would this be allowed? . . . Or how do I figure out what my core indicators are?"

Local Data Collection Efforts

Case study visits identified extensive local efforts to collect and report valid and reliable *Perkins* accountability data. At both the secondary and postsecondary levels, respondents were able to identify specific actions they had taken to improve data quality and respond more efficiently to data (or data validation) requests from state *Perkins* administrators. Most were confident that they had submitted accurate data for most indicators. In addition, many also noted that their data collection efforts were constrained by shortages of time and resources—human, financial, and technological. Several local practitioners suggested a need for better alignment of state and local reporting efforts. Some also suggested that the *Perkins* indicators included some information they would be tracking anyway.

In the state with the most sophisticated longitudinal data system, one local secondary CTE administrator said, "*Perkins* data are collected through our MIS system, which submits the report directly to the state. . . . We have a data processor at each of the high schools. . . . [W]hen the guidance counselors do their schedules. . . the data processors put that information into the system . . . I can go in and see who's in each of the CTE programs and also see their sequence of courses." After proudly noting that her district had the top graduation rate in the state, she said that district administrators would be tracking this information regardless of *Perkins* requirements: "Graduation rate . . . it's something that we are on top of for all students. . . . If we didn't have to report it for *Perkins*, we'd still be on top of it." A faculty member in another LEA reported significant local involvement in the collection of placement and retention data. "We have to follow up on every single one of our students who come through the program, whether they complete or not," she indicated. "[The report] goes to the state . . . but some of the information we get back from the state is different than what we have here. I don't know where they are getting [those data]."

Local postsecondary administrators in this state also reported significant involvement in collection of placement data and described efforts to integrate *Perkins* reporting into their institutional systems. One IHE instructor noted that "it's pretty easy" to get follow-up information on former CTE students: "We've got a small program, and students notify us or employers notify us." He said that most of the students work in the area, so he typically receives reference calls from employers or students stop by to tell the staff when they get a job. "Then we've got an employer and a graduate that we'll follow with a survey 6 to 12 months post-graduation," he stated.

An administrator at another IHE in this state reported the capacity to track students into baccalaureate institutions "if they went to one of our local university partners." She said, "We know that because of a local arrangement, not because there is a statewide system that provides that information." This administrator also noted that the college had incorporated *Perkins* data into the "data dashboard model" used for all programs: "When we're dealing with external funding agencies and they have different requirements or things that add to

what we're doing for the purposes of program viability, health, and institutional effectiveness, we find that it's best to try to incorporate [those requirements] rather than create a separate system." Noting that concentrators are the denominator for a number of *Perkins* measures, she indicated that "we began to pull that information into what we do institution-wide."

In another state, local administrators reported hiring new staff or training current staff to enter data in the state's new web-based data system. In one district, the CTE director said a designated staff member was hired to enter data into the *Perkins IV* portal and noted that teachers were required to code the data. Another administrator in the region noted that some smaller LEAs did not have staff specifically responsible for *Perkins* reporting, so the regional intermediary agency provided workshops that trained staff to enter the necessary data. A principal in another LEA indicated that *Perkins* data "are all set in our computer; I can just say 'run the *Perkins* information.'" A colleague noted that the introduction of the new system made reporting far less tedious and enabled administrators to transfer most data-entry responsibilities to a secretary. "The data are basically a function of what classes the kids are enrolled in, and that's already on the system," she remarked. "We just have to code the classes as to which career track they belonged to." However, the CTE director in one of the state's largest LEAs questioned the "artificial distinction" of separating *Perkins* data from other information in the local data system. "We want *Perkins* funding to continue," she said. "But evaluating *Perkins* by itself in our district is not really necessary because it's not different in our district."

In another state with a web-based reporting system, local practitioners described labor-intensive efforts to collect *Perkins* accountability data. One local CTE director reported a creative strategy for getting assistance with the collection of follow-up data, which is done by phone and mail surveys. He said that he asked the LEA's human resources department to identify a teacher who had been placed on administrative leave. He explained that rather than having this person "go home and sit and draw a check," he could put the teacher to work inputting data. "So it's not a cost to me, and it's actually putting somebody to work [who] needs to be working," he explained.

In one of the state's largest districts, the CTE director reported hiring a team on a part-time basis to help look at the data: "We bring in a team of business teachers and other teachers who have done this before; they go school-by-school and student-by-student to determine if these data are correct." He said that the "state determines the number of students we are going to do follow-ups on—and we have a team that comes in here and does nothing but follow-ups." His counterpart in a much smaller district indicated that mail surveys had typically generated about a 30 percent response rate, so he devised a new way to get more complete placement data. "When they come back to get their senior yearbooks, my assistant sits there with the follow-up surveys," he reported. "They usually come back in August before they've

gone off to college, and every student is going to come back to get that book. That is the most up-to-date, accurate information. . . . [With] the yearbooks, we get about 95 percent. We also go into the senior English classes to ask them about the students who graduated last year."

Local administrators in a state with a less sophisticated data system emphasized the time-consuming processes required to assemble and report data. While not required to do so, several indicated that they had purchased Grant Link software to help organize the required information. "Grant Link kind of organizes it in the way that I'm going to have to manually input everything on the state website," one local *Perkins* coordinator observed. "It usually takes about a month and a half from the time that I get the information and I make sure that everything is accurate on the software. Once the mapping portion of it is correct, then everything else is easier because it's a matter of just pushing a button to create whatever report I need." In another district, the person responsible for data said that the "software generates the numbers and grabs the student data," but noted that considerable set up is required: "The set up includes . . . making the information from our student information system available to the software, marking the courses that are . . . CTE courses, and marking the graduates—the 12th-graders who actually graduated because we're doing this a year in arrears." In another district in this state, an administrative assistant was compiling *Perkins* data without third-party software and demonstrated the cumbersome "cutting and pasting" that was required to enter *Perkins* data through the state's online data collection system.

Challenges

At both state and local levels, respondents identified several challenges or barriers to their efforts to produce valid and reliable *Perkins* data. Some were related to the process or mechanics of data collection, while others were based on the content of the information required to report on the core indicators. Some respondents identified both process and the content as problematic.

State officials and local practitioners in most states identified myriad challenges associated with the collection of technical skills assessment data at both the secondary and postsecondary levels. Beyond the challenges associated with the lack of widely available, affordable technical skills assessments at the secondary level, as previously noted, officials also identified challenges in obtaining the results of state or nationally recognized assessments. "That's a huge challenge," one state secondary administrator said. "Once students graduate, they're not required to come back to tell their teachers 'I received my cosmetology license or my RN license or whatever.' So our school districts don't report on that—or only report on this handful of students that do come back to . . . show their certificates to their instructors." A colleague pointed out that students who come back to show off their certifications are not part of the cohort for the current reporting year.

In another state, local postsecondary administrators expressed similar frustration about the heavy reliance on industry certification as the preferred measure of technical skill attainment. One administrator noted challenges in gaining access to certification examination results: "The board of nursing will give us that information but it will cost a lot of money; we will get the information when we pay the $2,000 or $3,000." In contrast, an instructor said the college doesn't have to pay for results from the emergency medical technician examinations: "We can just call the state and we get it. We don't get it very quickly, but we can get it." Early childhood education credentials were considered particularly problematic at this IHE, because alumni "have five years after they get the degree to take the certification exam, and we don't even know if they do it or not."

A counterpart at another college noted similar concerns. "If industry certifications are going to be retained as part of the measure, then there has to be a response for collecting [them]," she stated. "I think that we would all be reported as underperforming simply because of the complexity of getting the data. . . . It just doesn't make sense for [each of the] community colleges to have to contact the nursing licensing board for their individual population of students' pass rates." She also recognized the privacy considerations associated with access to certification exam results and suggested "some type of waiver that students are able to sign for the purpose of sharing their information."

Local postsecondary administrators in two other states echoed such comments. "They ask for pass rates on certification exams," one dean stated. "A lot of students take those [exams] after they graduate, so we may not be able to get those data or tie them to specific names. We could try to collect that afterward, but it would mean a staff person we don't have [now] calling the student." A counterpart in another state noted that documentation of skill attainment is more difficult when there is no national exam: "We rely pretty much on the grades and whether or not [students are] passing through their programs."

At the state level, one CTE director pointed to "a lot of technical assistance with locals" on technical skill attainment. She also acknowledged that the use of nationally recognized exams is cost-prohibitive for some LEAs because they would have to pay for their students' exams. A postsecondary administrator in another state said, "The problem with using third-party assessments is that it can lead to ossified curriculum." He also cited data access challenges. "I've tried to get [scores on] third-party tests [through administrative data matches] and [test administrators] won't do it; nobody does it."

Many local practitioners reported challenges associated with the collection of placement data. One area CTE director noted that high schools in the area "rely on an exit survey, which is pretty much what I plan to do. It's probably about 40 percent accurate, if that good." She said that her center does "as good a job as anybody in trying to find students and what they're doing," but indicated that it is almost impossible to find them in the state data system

without a Social Security number. A counselor at an area CTE center acknowledged both the importance of placement data and the difficulties in obtaining them: "I understand why they want to know. . . . But people in our area who aren't employed above a certain financial level tend to be pretty transient."

Another challenge identified by local respondents was the lack of connection between *Perkins* reporting requirements and district data needs. "One of the challenges we face is the demands for *Perkins* reporting are not always in balance with the other demands of the district," a local administrator observed. "We can't work it into the work flow because it creates peaks and valleys." She questioned whether it might be possible to alter the reporting schedule or adjust the fiscal year to spread out "those ebbs and flows." In another district in that state, the superintendent talked about disproportionate demands on teachers' time: "It's the teachers in the classroom [who] are doing all of this . . . and it takes away directly from . . . what they can do with students. I know we live in a time of accountability, but the paperwork is a killer—and that's on everything, not just *Perkins*." Other local CTE directors pointed to the imbalance between the amount of *Perkins* funding received and the level of effort required to collect the data.

Almost all local respondents identified challenges in tracking students from secondary into postsecondary education. As one IHE administrator noted: "High schools want to know how their kids [do] when they get here, and we want to know what happens when they leave us, but we're still having a difficult time tracking them." Another local postsecondary administrator concurred: "It really is the transitional data that are the hardest to get. Everybody knows [they're] necessary. It's a challenge [to get them] at just the local inter-agency level, and it's an incredible challenge statewide as well."

Other reporting challenges identified at the state level included the timing of data, the variation in data systems at the local level, and data accuracy. One state-level administrator noted the absence of a common data system at the secondary level and suggested that there are about 20 different systems in use in the state. "There's no electronic upload because every high school has a different data system," he said. "We collect all of our secondary core indicators through a separate online data collection system and all the LEAs have to hand-enter all that data on enrollments." He admitted that the Department had asked how he knows that the data are valid and reliable. "Our answer was [they're] about as valid and reliable as we can get, because [they're] the only data we have." A state administrator in another state reported similar concerns about the data collected at the local level: "The problem that the locals are having is in data reporting. . . . I think we still have some problems with accuracy, but I think it's 100 percent better."

Reporting on Special Populations

While most state CTE administrators expressed confidence in their ability to report disaggregated data on most of the special populations identified in *Perkins IV* legislation (i.e., individuals with disabilities; individuals from economically disadvantaged families, including foster children; individuals preparing for nontraditional training and employment; single parents, including single pregnant women; and individuals with limited English proficiency), some raised questions about the accuracy and utility of these data. Some also indicated that their capacity to provide this information had improved between *Perkins III* and *Perkins IV*.

Administrators in one state reported no difficulty in collecting data on race, ethnicity, English-language learners, and special education status. The CTE director in this state acknowledged the importance of collecting data on the performance of subpopulations. "The intent would be to share them with the LEAs and analyze them at the state level to see if we notice any obvious gaps," she explained. "For us, it's really about are they performing?" However, the accountability director questioned the reliability of subpopulations data that were self-reported. "Anything related to teen parents, single parents, and economically disadvantaged can be difficult," she acknowledged.

Both secondary and postsecondary state CTE administrators in a state that had recently unveiled a new data system expressed high levels of confidence in their capacity to report some subpopulations data in greater detail than asked for in federal reporting requirements. Noting that the state had "lots of capacity" for reporting disaggregated student populations, a secondary administrator cited the example of moving from eight racial categories to 64 racial subgroups. A postsecondary colleague reported that the state data system was designed to distinguish between multiracial subgroups. "We're actually a little step ahead of the Integrated Postsecondary Education Data System (IPEDS)," she suggested. "IPEDS has a category that takes everybody who's multiracial and puts them in one bucket, but when we do our reporting, we take it down to the different combinations. We get a finer grain that we can roll up to the IPEDS." Although she also noted that reporting on some populations is based more on "deriving instead of taking the face value data," she commented that these categories can signal opportunities to improve the system. As an example, she noted that limited-English-proficient students typically are identified by flags on English-as-a-second-language courses.

A third administrator in this state said that special populations "do well for everything that's in the management information system" but conceded that some special populations cannot be identified through the system. He reported that state *Perkins* administrators "have trouble with" displaced homemakers and pregnant or parenting teens. Every year on the pregnant and parenting teens, we write in and say we don't collect this."

A postsecondary official in a third state indicated that "special populations data are usually collected through self-reporting. For the most part, I think they're valid, but I think no one understands what a displaced homemaker is." In yet another state, a postsecondary official commented on the reporting challenges posed by the "temporal" nature of single parent and displaced homemaker status: "Because you can be [in one of] those [categories] one semester and not another semester, [the IHEs] have to ask those [questions] every semester." His colleague at the secondary level reported the capacity to disaggregate by ethnic groups and other special populations to compare their performance with all students but acknowledged that "we don't have the whole system refined to getting student-level data."

Administrators in another state were quick to point to improvements in their capacity to collect and report special populations data. The state CTE director said, "We've struggled in the past because we've not had a decent state data system to draw from." Another administrator explained that the new system allows districts to submit a "student snapshot file" that includes race, ethnicity, free and reduced-price lunch eligibility, and eligibility for services under the *Individuals with Disabilities Education Act (IDEA*): "What we're able to do is generate how many agriculture participants we had and then break them up by their subpopulations and identify all [those] kind of data."

Local Capacity to Collect Special Populations Data

Local CTE practitioners tended to be less sanguine about their capacity to provide information about special populations, more explicit in their descriptions of the challenges associated with collecting it, and more candid about their reliance on sources that could not be verified. Although school district officials generally reported becoming more adept at collecting information on different special populations, many also identified areas for further improvement.

In one state, local CTE directors in three secondary districts reported the capacity to generate most special populations data. "Our data are all broken out by disadvantaged, disabilities . . . it's very simple to look and see," one local director observed. "Each teacher goes in and fills out about five questions about each student." His counterpart in a much larger district said, "We have someone reporting on all of [these populations], and I have a great deal of confidence in these data." However, the CTE director in a third district suggested that it is harder to get reliable data on some of the populations: "I think our data [are] good based on the system. . . . Because it's pre-populated now, you can find that information. . . . It's listed. If they're an English-language learner, we know that. . . . The only three areas that are left open to ask [about] are [foster care, pregnant teens, and single parents]. Foster care . . . those are hard data to get . . . unless you just ask the student. [They're] not reported. If I'm a foster parent, it just lists me as a parent. Pregnant teen? . . . And how do you ask that in a class?"

In another state, area CTE center directors raised concerns about the quality of special populations data, suggesting that they varied according to the center's relationship with the student's sending high school. Center directors and faculty expressed high confidence in the quality of data obtained from the comprehensive high schools with which they share a campus, but they also acknowledged the limitations of the data available. One area CTE director indicated that instructors use individual education plans, free and reduced-price lunch eligibility status, and other data to identify members of special populations. "It's very rare we miss anything, especially within our host school," an instructor commented. "Sometimes with our sending schools, we might not find out." He explained that he made assumptions "based on what we're seeing and the feedback we're getting from the kid" to identify disadvantaged status if the student was not enrolled in the free and reduced-price lunch program. He also said that he generally found out about single parent status "within the first six weeks or so, especially when it gets into scheduling, babysitting, and things like that." A guidance counselor at another center indicated that she usually was able to draw information on subpopulations from the school's data system: "I'm actually very fortunate because I know how to mine the system. I'm pretty tech-savvy, and I've worked with the system for several years."

The director of another center in this state expressed more explicit concerns about the quality of the special populations data. "We do our best to gather subpopulation data based on kids' reporting," he stated. "We sometimes don't know who fits in which group. It's hard to gather subpopulations data because you don't know. For example, we don't if somebody is a single parent until the bitter end. It's very possible that kind of data skips by us." He also indicated that he has a "better handle on the number of students with disabilities [because] we have meetings to discuss individual education plans with sending schools."

Similarly, local postsecondary administrators reported that their capacity to provide accurate data varied across *Perkins* subpopulations. Several confirmed challenges identified at the secondary level and indicated that self-reporting undermined data quality. For example, one local postsecondary administrator stated that her institution did a pretty good job of collecting information on disabilities, gender, race/ethnicity, and single parents but had a much more difficult time identifying displaced homemakers. "We can only collect data on single parents from financial aid applications, which [cover] only about 75 percent of single parents," she reported. "Disabilities and ethnicity are self-reported, [but] most of our students do fill out that information." Another IHE administrator in this state said that he used similar data sources for *Perkins* reporting. "We are reporting only single parents who have applied for financial aid," he said. "Economically disadvantaged is anybody who's spending full Pell [financial aid grants]. . . . Students with disabilities self-report." He also noted that his institution did not collect data on displaced homemakers.

A local postsecondary administrator in another state indicated that she had a high level of confidence in data collected and tracked on campus but distrusted data obtained from external sources. Noting that some data tracked on campus stem from self-reporting of disabilities or self-identification as a foster youth or a displaced homemaker, she asserted that "any student who self-identifies in a category is easy to track." However, she also acknowledged that self-reporting can often be equated with underreporting. "There are all kinds of studies and statistics about the theoretical number of students with unreported learning disabilities on a college campus," she explained. "They may not self-identify because they don't want to share; they may not self-identify because they don't know."

The Burden of *Perkins* Accountability Reporting

Several administrators at both state and local levels were quick to note that the cost of *Perkins* accountability systems far exceeds the human and financial resources available for this purpose and thus poses a substantial burden. Some went as far as to suggest that the accountability requirements represent an unfunded mandate. One state CTE director and local administrators in at least two other states reported that some subgrantees were giving up *Perkins* funds because of the burden and complexity of reporting requirements. A local postsecondary administrator said that one IHE that used to participate in *Perkins* had decided that the reporting requirements were too burdensome for the amount of money received. "They threw in the towel," he observed. "They weren't getting very much money . . . about $150,000 a year, maybe $180,000, in that neighborhood. They just decided it wasn't worth it anymore."

A CTE director in another state reported similar observations about eligible recipients opting out of *Perkins* funding: "If they want this mountain of data and they want technical assessments, they need to pay for [them]. I know some people opted out of even applying for *Perkins*; they didn't think it was worth it." A state-level postsecondary administrator in this state reinforced his point: "How would you feel if someone gave you less than two percent of your funds for operating your business and walked in and said 'I'm going to tell you how to run it?'" He added, "There are lots of them at the program level who don't want the money because they don't believe . . . that it's worth filling out all the paperwork."

The state's secondary *Perkins* coordinator concurred, noting that "we have actually had local districts . . . release money because [they say] 'it's too much work for the money you're giving me.'" He suggested that the burden of *Perkins* reporting requirements was a major impetus for reorganizing state staffing for CTE. "At the state level, a lot of the reason for creating the new *Perkins* unit and increased staffing had to do with the burden of all the new requirements, not only under *Perkins IV* but even under *Perkins III*," he reported. "It used to be we collected data, and we sent it to the feds aggregated for the state. That was the end of it. Now we not only have to aggregate all those statewide data . . . but I've got to look at each separate [local] agency and identify those that are low-performing." He asserted that the vol-

ume of work exceeded the capacity of the two people then assigned to monitor all local programs, which led to the decision to create a *Perkins* unit within the state department of education. Pointing to the reporting requirements of *ESEA*, he noted that it is easier to "force districts through large dollars to abide by those accountability measures" but asked, "How can you push that on districts for [a much smaller] dollar amount?" He said that *Perkins* data collection has "been very burdensome, especially for the locals."

Secondary CTE officials in two other states shared his assessment. "I think they're feeling the burden at some of the small schools," one state CTE director observed. "At one of our tiny area CTE centers . . . the guidance coordinator is the data person and also serves as the equity representative, and I think she's also the safety coordinator or something. . . . So it is a burden, particularly for that center. They only get about $38,000. . . . That doesn't even pay her salary." He also noted that at least three of the area CTE centers in the state had mentioned the possibility of dropping *Perkins* funds. "They're saying this just isn't enough money to warrant this upheaval."

The director of professional development for the eligible agency in another state suggested that the *Perkins* burden was not limited to small, rural districts. "I think the biggest burden [the LEAs] have is keeping up with the data," he stated. "It's really difficult; I think the problem is the method or system that's used and the communication to the key people on how to go in and gather data." He reported that teachers typically provide information through local data administrators who can make their own decisions about how to code certain things and may have different perceptions about what is important.

A state administrator in another state suggested that the burdens of collecting data differed at the secondary and postsecondary levels. He acknowledged the effort required for local districts to hand-code completers, obtain Social Security numbers, enter technical skills assessments, and submit a completer file for the follow-up survey conducted by a third-party vendor. He acknowledged that we have to struggle with "every one of those things. . .and we have a general problem. In contrast to [postsecondary], secondary is understaffed for data quality control and even understaffed for analysis." A postsecondary colleague at the state level, however, reported needing additional staff to comply with *Perkins* reporting requirements: "We used to have one staff member [who] did it, and now we have two because there are so many extra pieces."

An official in another state suggested that the state's budget crisis and subsequent staff cuts had made *Perkins* data collection and reporting more difficult. Even so, she regarded the data-reporting requirements as important, noting that it was unrealistic that the state should collect millions of dollars in federal funds without having "to be accountable for [them]." After speculating that reporting requirements were probably "less burdensome on us than some states," she acknowledged that "we would have to do that for the state money that we

get, regardless of whether or not we get any federal money. Everybody has a management information system in this state; [*Perkins*] doesn't force them to have a system. But at the margins, it can produce work for everyone."

In contrast, the CTE director in another state said that data collection had become less burdensome over the past five years. He attributed the change to a new state data system, noting that data were previously "done by hand . . . at the school level, with people going through transcripts and counting courses. Once we got the statewide longitudinal data system in place, suddenly data became less burdensome and more valuable, because you can pull [them] out of the data warehouse, you can manipulate and get down to what you really want to know." A colleague suggested that local districts probably would have said the new system was burdensome in its first year, "but now I think they kind of reached this point of, 'Oh, this is just telling you who our kids are' and then we give them all the data back. . . . So when we provided that tool and resource to them for free, that was kind of a big win perceptually for the districts."

At the local level, district and IHE administrators often complained about the burden imposed by *Perkins* reporting requirements, and many questioned the effort required to produce data that were generally not perceived to be useful. This pattern generally held across all of the case study states, regardless of the level of sophistication of the state's *Perkins* reporting system.

In a state in which the data system was widely touted, one secondary local staff person with data-reporting responsibilities said, "It's time-consuming the way the system is now—the process, the fields we have to enter. Some of them are redundant; you've answered something in one, you're repeating it in another, and they kind of have to match." She suggested, however, that she anticipates the process becoming easier in the future. "With this new system or new data, I can see light at the end of the tunnel," she remarked. "I'm hoping that it will be easier, and my intent is accuracy. But I can only be as accurate as the information I'm given, so there are ways to cross-reference what the teachers submit."

Several local CTE administrators commented on how *Perkins* accountability requirements affected district data or information technology staff. "District-level people have been very good when I've asked them for these multiple reports, because there are some things we can't [do] here in our office," one local CTE director reported. "They might roll their eyes when they see me coming [and say], 'Oh now what does he want?'" A local *Perkins* coordinator in another state said that reporting is not hard, just time consuming and indicated that the LEA's "information technology department is always overwhelmed."

Other local CTE administrators voiced frustration about the amount of time they devoted to reporting responsibilities. One local CTE director noted that much of his job "is managing

data." While acknowledging the need for data that show the "funding is working," he also noted, "The more time we spend on that, the less time we have on actually teaching kids." The principal in that district said he wished that federal and state officials could streamline their reporting requirements. "Different indicators are worded a bit [differently], although they might want the same information," he noted. He also suggested that budget constraints exacerbated the difficulty associated with data collection requirements.

Local staff and administrators in another state expressed similar concerns about the time devoted to collecting and reporting data. One counselor described the state's reporting system as "very antiquated" and noted that "it takes hours to input a lot of information." After having worked with a temp for days to enter information at the start of the school year, she commented, "The fact that we don't have a web-based system in this day and age baffles me." She also noted that the absence of live files makes it cumbersome to change information: "If I have to make a change or if I've made a mistake, they have to call me and tell me to change mine, and they have to change theirs at the same time to make sure that both of them stay consistent." Although teachers at this area CTE center played a major role in collecting placement data, the CTE director noted that a small percentage of CTE teachers had refused to conduct follow-up phone calls from home at night.

The CTE director in another area center in this state found the reporting requirements less burdensome. "Data reporting responsibilities are more than reasonable," he remarked, noting that he has an employee who collects data locally and submits them to the state. His counterpart in another community commented on the changes to the reporting requirements and level of effort associated with *Perkins* funds: "Back in the day, if we didn't use the data, we didn't report them. Some years are worse than others in terms of the hoops we're required to jump. Next year . . . it's going to be probably the most severe in terms of tying the money to the accountability data." He also said that his institution did not spend "an inordinate amount of time in order to draw the [*Perkins*] money down [from the state department of education. . . . Right now the balance seems to work pretty well for me. . . . From my perspective, $200,000 is $200,000, so . . . it would have [to have] a lot of strings attached to for me to say 'I don't think I'll take this.'"

Local administrators in another state were similarly divided about the burden associated with *Perkins* accountability requirements. "A lot of what we have to do for the state is paperwork," one local CTE director noted. "Now I have money in there for these three assistants, one at each school, to help me with the reports." He went on to emphasize the impact of *Perkins* reporting on teachers. "There is no question that it is time-consuming for teachers," he asserted. "They have so many test scores to deal with already." Another local administrator in this state said that the reporting requirements were "overall, not a huge burden," but raised questions about quality control in data entry, particularly in districts with many high schools and a transient student population.

Local postsecondary officials echoed many of the themes articulated at the secondary level, with emphasis on the time and effort required to produce *Perkins* accountability data. Some acknowledged the need for documenting the results attained with *Perkins* funding, and at least a few indicated that the information produced is valuable.

"I could be real glib and say all the reporting [is a downside of *Perkins*], but if you're taking somebody's money, they want to know it's well spent," a local IHE administrator said. "So reporting is reporting. . . . As a receiver, I would love to see less stringent reporting and more trust, but I understand why the constant improvement must be shown [and why institutions] need to report in all the areas. . . . But that's what is time consuming on my part and means that I don't get to do the actual work in the field." A counterpart at another IHE in this state reported that she was able to coordinate *Perkins* reporting with another federally funded program that collects similar data: "So we've got some extra staff trying to collect that information, so it makes it a little easier for us. [We] don't have a designated institutional research person, but [we] do have another staff person who fulfills some of that role."

Two local IHE administrators in another state reinforced the claim that collecting *Perkins* data is labor intensive and therefore expensive. Explaining that the state system that aggregates student information is "very, very, very old," one noted that the system posed staffing challenges. "They were going to re-host it 15 years ago . . . and it's never happened. It's so cumbersome for the colleges to get any data out of it." A colleague in the same community was much more explicit in attributing additional costs to *Perkins* accountability requirements. "Both of our institutions have now hired a researcher to track data for us," he reported. "It's a very, very big expense. This is again my bias . . . that the outcome is higher reporting as opposed to higher accountability."

Local IHE administrators in a state with an advanced data system also questioned the value of the measures used in the *Perkins* accountability system, and one suggested a graduated reporting system tied to amount of funds received. "If I'm a legislator, I want to see where the money I gave you had an impact . . . and what that impact was, instead of just some arbitrary measurement," remarked a dean at one IHE. Another IHE administrator proposed an alternative funding strategy to accommodate reporting costs: "An alternative would be to distribute the money [in a way] that those who received a certain dollar amount or less weren't held accountable to all these standards that are very challenging."

Using Perkins *Accountability Data*

Although some state and local respondents reported using *Perkins IV* data for program improvement, others indicated that they made little or no use of these data. Very few were able to identify uses of special populations data.

States

Several state CTE administrators could identify specific ways in which they used *Perkins* accountability data to identify areas for improvement. One secondary state CTE administrator referred to accountability data as the "statewide report card" for secondary schools. She said that examining the data enables staff to map out deficiencies and work to boost enrollment and scores. The CTE director in another state described initial efforts to disaggregate *Perkins* performance indicator data to the level of CTE participants or concentrators and then to some of the special populations (e.g., race and ethnicity). "When we do that, there are some horrible performances coming out," he reported. Citing a longer-range plan to provide disaggregated data on academic performance to all secondary schools in the state, he said his preliminary research identified 14 or 15 high schools in which "100 percent of the students that they sent to area CTE centers were at the lowest proficiency level in both math and reading."

In a third state, a secondary state CTE administrator described use of instructor-level data to improve teacher performance: "We have been able to look at programs and see if we thought the teachers were doing a good job and make recommendations for professional development in a much more prescriptive way than we've been able to in many years." Officials in this state also noted innovative plans to help local subgrantees make better use of *Perkins IV* data for program improvement. A member of the state's *Perkins* leadership team indicated that state staff members are developing a data tool for producing customized performance reports for local subgrantees: "One of the things that we hope to launch for *Perkins* is a business improvement project. . . . We have the [reports] by school, by program, and then the sub-indicators that we hope to be able to share to give [subgrantees] the resources they need to identify problems."

Administrators in one state reported changing its local *Perkins* application to encourage districts to reflect more on accountability data and use them to make funding decisions. These officials also said that they emphasize the importance of using data when they provide statewide technical assistance to districts. The CTE director noted, "We're constantly taking [district staff] back to the data, and that's just paramount." His deputy provided a more concrete example of how an analysis of special populations data led to a decision to target nontraditional expenditures at the middle school level.

Using Perkins *Data for Programmatic Change*

A state-level administrator described using *Perkins* data on nontraditional training and employment to target funding more effectively:

[W]e have flat-lined on our nontraditional forever. No matter what we did, about 14 percent of our participants were nontrad by gender. . . . We put grants out; we did all kinds of stuff. . . . And I don't think we were wasting the money, but we weren't doing anything significant enough. So a year and a half ago—we'd always put our nontrad money out in competitive grants—we took a year off and did a major study that said, what are the absolute barriers that are out there? What's an analysis of how we're serving special populations? We hired a consultant. She did a year's worth of work. She did focus groups; she visited all the places. One of the things that we discovered was we were spending our money at the back end of the system, a lot of community colleges, etc. The research says, "If you're going to change attitudes about gender stereotypes, start on the front end. This is a Band-Aid." So we've shifted [the way] we're doing our funding [now] to say, "We're going to do more work with middle school. We're going to do more work with our career information system." We want to make sure that there is nontraditional information on that system that encourages students to use that to explore careers.

Another state secondary CTE administrator commented on the need to "get out to the *Perkins* coordinators and have them look at their own local data" and observed that academic teachers were introduced earlier to the importance of data because of the *NCLB* legislation. "Academic teachers and administrators are really starting to use the data for improvement, but I think, with CTE teachers, we're just starting to do that," he explained. "CTE teachers . . . have often times not been trained to use data because under *NCLB* there were no CTE data. Some of the CTE teachers haven't even been exposed to using data to improve instruction." This administrator also said that *Perkins* data are shared annually with the state legislature.

A postsecondary colleague emphasized the critical importance of collecting data about single parents because they have special barriers. "We can do things about those barriers," he said. "We provided evidence that if you collect this information, you can make big differences." He noted that some colleges that have been collecting data on single parents for a long time have implemented programs to break down the barriers: "So their students in those categories are doing fine, and they watch [that they don't] fall below the mainstream performance levels."

In contrast, state postsecondary administrators in two states suggested that *Perkins* data were only used to secure continued funding. As one summarized, "I think that the attitude among states is . . . if [the Department] wants some numbers, we'll give them numbers—not that they're necessarily valid or reliable." His sentiments were echoed by a postsecondary counterpart in another state. "Do we use them for policy?", she asked rhetorically. "No. We're collecting the data for compliance reasons."

LEAs

While some district staff discussed analyzing and reflecting on the *Perkins* accountability data to improve their programs, the majority reported not using the data. Several local administrators in one state, which had invested significantly in a new database, explained that *Perkins* data only reveal what they already know. As one local superintendent observed, "Somebody in Washington [may know] that we have 17 kids. . . . But that doesn't do me a darn bit of good. . . . It's not helping us accomplish our mission in helping educate kids." The high school curriculum director reinforced concerns about the value of *Perkins* data compared to the effort required: "For the effort put in for what we're getting out of it, it doesn't seem like much. I mean it's like working all day for a dollar." However, a CTE director in another district said that both administrators and instructors use *Perkins* data to reflect on their programs.

In contrast, a local CTE director in another state reported extensive use of *Perkins* data. He said, "We brought all the principals together and shared the data with them so they could see the progress that their CTE students have achieved." Another local CTE director in this state linked data to schools' ability to help struggling students: "In our types of programs . . . we get kids who are right on the cusp. . . . It's the data that help us know how to help those kids and push those kids in the direction they need to go."

Three local CTE directors in a third state explained why they did not use *Perkins* data at the local level. One conceded a compliance approach to *Perkins* data: "I do what's asked for, get [the data], look at them, and report them rather than act on them." While she said she paid attention to numbers that dropped between semesters and looked at information related to special populations, she observed that *Perkins* data were not "always aggregated or disaggregated in a grouping that will meet my question." Another indicated that there was no reason to use the data because the district met or exceeded its performance targets. He indicated that the data might be shared with teachers in the future if the district's performance drops: "If it should come to pass in the next application that we have to address a certain area, then . . . I will photocopy [the data] and see if any of my teachers want to look at them." The third questioned the state's "shotgun way of approaching" data collection: "The feds told us we have to report something, so here are the numbers. . . . If the goal is really to improve our programs, I'm all for that, but I need accurate information in order to do that." Nonetheless, this official also cited local plans to create a "data dashboard" system that would allow teachers to look at how many special education or free or reduced-price lunch students they have in their classes.

Local CTE directors in another state identified similar reasons for limited use of *Perkins* data. "I haven't had to use [the data] for program improvement," one local CTE director asserted. "I look at the data and share them with teachers annually so we know where we [are], but we pretty much already know it anyway, because we try to pay attention to what's going on in

our programs." Another local CTE director said that she didn't use data for program improvement, indicating that they were more useful to state administrators for monitoring purposes: "I think . . . it's making sure that that we're following the regulations that the state sets and that we're utilizing the money correctly." A third local director suggested that the data were linked to future funding: "Mainly, they're used for us to earn *Perkins* dollars for next year . . . to show that our programs are successful enough with students that we can continue to receive funding."

A local CTE administrator in yet another state was more explicit about why he did not use disaggregated *Perkins* data. "I have no confidence in that report because I don't know how it's put together," he stated. "I have to gauge our work with subpopulations by talking with teachers, but I can't report on it. . . . The composite data are a mess; we don't have good composite data." He went on to describe disaggregation of data in the state as "garbage in, garbage out," noting that there is "lots of distrust" about data. He said, "I probably couldn't tell you how many special education kids have dual enrollment. There is no single place that data are collected together and can be manipulated. Data are in separate places. It all depends on the question you want to ask."

IHEs

Perspectives on the value and utility of *Perkins* data also varied at the postsecondary level. A few IHE administrators provided examples of how they used *Perkins* data to identify opportunities for program improvement, but more respondents indicated limited use of these data and questioned their value. Several others said that *Perkins* data were a starting point from which they conducted more in-depth local analyses and reported that local data were more useful.

In a state with a more sophisticated data system, one IHE administrator displayed a publication that links *Perkins* data with institutional data to provide summaries of outcomes, including graduate earnings, by program area. "We're getting most of the *Perkins* accountability data at an aggregate level," he reported. "When we're trying to disaggregate it, we're doing it from our local data." Noting the absence of a direct match between the two data sources, he described the process of taking *Perkins* reports generated at the state level to "maneuver and manipulate . . . into the measures that we've established for program effectiveness at the college."

A counterpart at another IHE in this state said that "locally generated evaluation data are more useful than reports from the state. We're more interested . . . at our local level [in] what our students are saying. . . . State data . . . tell us where we're retaining well and that sort of stuff . . . but we already know that. Why are we not retaining well in some programs? I want to talk to the students who are leaving. I don't want aggregated information from the state."

Local IHE administrators in another state agreed that locally generated data were used more frequently and raised serious questions about the quality of data generated at the state level. "It's really hard for us at this institution to talk about *Perkins* data because we've tracked all of this stuff just for ourselves," one IHE official commented. "We have a program effectiveness process that looks at each of our programs, and each faculty member works with that. . . . We can disaggregate that more on our campus to look at particular populations." He also noted his cynicism about the state data system and his distrust of the information it produces: "I think that the accountability stuff has created a whole industry of researchers. . . . I don't think it's doing great economic development things for our communities." He said the "state provides this institution with lots of data, and then we have to find some additional data for the report. . . . When I went through the report, I thought 'We've got some data problems; we've got some coding problems.'" Nonetheless, he acknowledged that *Perkins* data were used to redirect resources when the college was notified that it met enrollment criteria but not its completion targets: "It did allow us to look at that specifically, to put some more resources into that to change those numbers." A colleague in this community indicated that she used *Perkins* data for program improvement and to direct resources, whether it's to close a program or to fund something else.

In another state, a local postsecondary administrator pointed specifically to the limited use of special populations data in his institution. "Internally, we're not too interested in these numbers," he acknowledged. "Program managers are interested in the total number of concentrators and participants in their programs, but they aren't that interested in these special population numbers because a lot of our students fall into one of these categories." He explained, "We don't see significant differences in outcomes for subpopulations. For example, completion was 53 percent overall. For individuals with disabilities it was 50 percent . . . single parents 54 percent, limited-English proficiency 58 percent."

In at least two states, IHE administrators expressed concerns about the accuracy of *Perkins* placement data, particularly for employment. "Some of those data are really not all that accurate and useful," one IHE administrator remarked. "They're better than nothing, but they leave a lot out. They lag in time. They leave out anybody self-employed . . . and for some areas like IT, they're completely useless. You can't tell if someone's working in IT; they may report that they're working in healthcare, but they're in health IT." A peer at an IHE in another state concurred, "[W]e're still looking at our placement measures, recognizing that they're the best data available, but they're not the most accurate. They're two years old . . . and they're [limited] to those that were found." Both of these respondents cited the limitations of placement data derived from administrative records matching because they cannot identify whether a former student is employed in a training-related occupation. As one observed, "Some of the larger employers . . . have divisions that would cross many, many different occupations and many different training programs."

Adjusted Performance Levels

As was the case with *Perkins III*, *Perkins IV* specifies adjusted levels of performance as the mechanisms for tracking states' performance on each of the core accountability indicators. Statutory language requires eligible agencies to identify "objective, quantifiable, and measurable" (Sec. 113(b)(3)(A)) levels of performance expressed in a percentage or numerical form for each of the core indicators as well as plans for improving the performance of CTE students, as measured by these indicators. *Perkins IV* does not define "adjusted levels of performance," but interviews with state CTE directors suggested that performance levels vary across states and target continuous improvement in successive years. The Department, acting on behalf of the secretary of education, negotiates performance levels with eligible agencies as a condition for receipt of *Perkins* funds.

As noted previously, *Perkins IV* extends the requirement for negotiated performance levels to eligible recipients. By requiring state CTE officials to negotiate performance levels with LEAs and IHEs, *Perkins IV* creates a two-tiered accountability structure. State administrators must negotiate sequentially more challenging targets for state performance on the core indicators, but they also are given a new tool for holding eligible recipients accountable for their respective roles in meeting the state's performance levels.

State Negotiations with the Department

State administrators reported a wide range of experiences in negotiating performance levels with the Department. Administrators in most states expressed some frustration with the process and suggested ways to improve it while others commended the Department.

One state assessment director described the negotiation process as "proposal-counter proposal conducted via email with the regional accountability specialist [RAS]. . . . There was apparently no room for negotiation on 1S1, 1S2, and 4S1 with our RAS. It was quite clear that we were going to be held accountable for the [*ESEA*] standards that had not been negotiated for CTE . . . and we did capitulate." The CTE director in another state explained how frustrations with the negotiation process almost led his state to pull out of *Perkins* participation:

> [Our] population is not your typical secondary school population; we're oversubscribed in special education. So [our RAS] got that [we] couldn't just follow [*ESEA*] growth charts, yet still negotiated fairly. For instance, for math in the CTE population, we were at 11 percent proficiency. . . . We had negotiated 20 or 22 percent proficiency, even though we knew we were only at 11 percent; then they came back and wanted 35 or 37 percent. . . . Neither our agency nor [the Department] would budge. I said, "Then I don't know what options we have here, except we're not going to take the

> money if it's based on this. This is crazy. I can't agree to this." . . . It was not a rational discussion at all.

This administrator explained that the state agency ultimately ended up setting a 22 percent proficiency target (for secondary academic attainment indicators) and expressed further frustration about what he perceived to be the Department's reluctance to collaborate on longer-range solutions to this reporting challenge: "I offered to fund a statistical review to map out a five-year plan of what would be realistic for our cohort of CTE students, but [the Department] wasn't interested in that approach."

Another state CTE director had similar perceptions about the Department's flexibility in the negotiation process: "It felt like there was this random push to elevate everything. We want to be challenged by the [performance levels], but don't make them unrealistic. In our negotiation, I think the comment was made, 'This is what is expected, so I really can't even negotiate with you.'"

The *Perkins* coordinator in a fourth state gave the Department good marks for the negotiation process but raised broader concerns about the content of the negotiations. He described the negotiations with the Department as very professional: "We made some suggestions, explained why we made those suggestions, and [the Department] responded." He also noted, "I don't like that the accountability measures are target-based. . . . Maybe Congress needs to say 'we would like to know this' rather than saying 'collect this information.'"

A state assessment director also wanted to see better explanations from the Department about what information is needed and how targets are established: "It's not really clear what methodology they're [using to select] a target. If it was more transparent [and] . . . we knew what their goal was, we . . . could figure out what to do. . . . It also makes if difficult when there's supposed to be coordination with a liaison . . . when we don't know by what standard the negotiations are occurring."

This individual was one of several state CTE administrators who emphasized that 100 percent targets were unrealistic: "The negotiations . . . were based on reaching 100 percent. . . . We all know that was not a reasonable supposition that anyone will ever reach 100 percent in [the] eight-year period that was negotiated under [*ESEA*], but we were held to those [targets]." In another state, a postsecondary administrator with assessment responsibilities was even more direct in his criticisms of the 100 percent targets: "I think it's irrational to say 100 percent of all students entering your institution will be in each measure."

A postsecondary administrator in a third state concurred: "The feds think 100 percent on everything is reasonable in a 10-year growth model and it's not." He was somewhat more positive, however, in his assessment of the negotiation process with his state's RAS: "We

didn't get our way the first time, but we talked about what's reasonable. What could we look at as far as a growth model? I'm very pleased; working with him has been good."

State Negotiations with Local Subgrantees

Perkins IV requires eligible recipients to accept their state's adjusted levels of performance or negotiate their own for the appropriate set of core indicators. Although *Perkins IV* suggests that the state process for negotiating adjusted performance levels with eligible recipients mirrors the one used by the Department for negotiations with states, significant variations in interpretation and processes were found across states.

Administrators in three states reported that their processes for establishing local performance levels were not based on negotiations. A secondary CTE administrator in one state acknowledged, "We have defaulted to not really negotiating, but it's more requiring that they meet a state goal." A postsecondary state administrator in another state termed the process a "dictated negotiation" because locals were given the choice of adopting the state performance levels or adding 3 percent to their current performance levels. She explained that the 3 percent option recognized that all participating postsecondary institutions weren't at the state level but incorporated an expectation of improvement.

The secondary *Perkins* coordinator in a third state questioned the value of negotiating local performance levels: "Negotiating with locals is ridiculous. Frankly, we didn't do it. We told our locals you have to accept the state levels or ask to negotiate because that's what the law says." He noted two specific problems associated with local negotiations: the lack of state staff to perform the task and the risk associated with lowering targets for some districts. Of the latter, he said, "For every agency I negotiate a lower number, that puts the state target in jeopardy. If you truly looked at the core indicators of quality programs, why would I hold somebody else to a different standard?" This administrator reported that no school district had asked to negotiate local performance levels.

A postsecondary *Perkins* administrator in the same state described a different approach to establishing performance levels for postsecondary institutions. He said that his agency "adopted [the Department's] method for negotiating with our locals" but identified what he perceived to be one major difference: "We were reasonable. [The Department] was not. And in most cases, people met their targets." He reported that only six of the 72 participating postsecondary districts failed to meet at least 90 percent of one or more performance targets this year and attributed this success to workshops conducted across the state on "naïve forecasting." As an example of the challenges associated with setting realistic targets, he asked, "How do you . . . negotiate achievable targets that demonstrate continuous improvement in an economy that's going to drop six percent [of its workforce] in the next year?" Nonetheless, he said, "We want the targets. We want the leverage with faculty of saying 'I need continuous improvement here, folks.' This is not business as usual."

CTE administrators in one state indicated that they "tried to mirror the process that [the Department] handled with us" and improve it. They reported developing explicit criteria for negotiation that were shared in advance with eligible recipients. The secondary state assessment coordinator noted, "We provided much more information than [the Department]—explaining the process and giving [the local subgrantees] scenarios and examples of the process." The state CTE director concurred, "What I like about [this process] is that [locals] know the rules up front. So we don't have the issue that we have with [the Department]. Are they negotiating with me differently? We are very consistent."

She also explained that a work group of local practitioners helped state CTE administrators design a primarily web-based process for establishing local performance levels. The state CTE assessment coordinator reported, "We developed an online system that locals can access to see their performance measures. To accept, they just click. To negotiate, they . . . submit an official request to negotiate, with supporting justification on that particular measure." At the state level, CTE staff reviewed requests to determine whether the state could afford to make adjustments. This analysis was said to entail running calculations and providing local administrators with recommendations, which were subsequently incorporated into formal notifications of adjusted measures once they were accepted at the local level.

While this state's negotiation process appeared to be the most sophisticated among the six states, other states used elements of its approach. For example, the secondary CTE staff member responsible for assessment in another state reported that teachers and local CTE directors can access the state's web-based data management system to view their past performance levels and decide whether to accept the state performance level or negotiate a local one.

The CTE director in another state reported using a 10-year growth model to negotiate performance levels on an individual basis on all but the nontraditional indicators. He said that state staff encountered no problems because "we took a realistic perspective." He confirmed observations from staff in other states about the importance of realistic goals, noting that the suggested local performance levels were based on current performance levels for both area CTE centers and IHEs. A postsecondary administrator in this state reinforced the importance of using past performance data to negotiate performance levels: "Our state target for placement is a lot lower than it used to be . . . because we knew when we negotiated these targets that having to count the leavers was going to depress these. We ran all the data from 2006–07 . . . on a trial basis to get a sense of what our performance measures were going to look like and then we negotiated."

Local Perceptions of the Negotiation Process

Reflecting the variation in state-level approaches to setting local performance levels, local staff had varying perspectives on the performance levels and process by which they were es-

tablished. School district and postsecondary administrators were generally aware of the extent to which negotiation was an option in their states, but some were more concerned than others about what they perceived to be limited opportunities for input into the local performance targets. Several respondents cited the utility of using prior performance data to negotiate *Perkins IV* performance targets. Even within states, there were divergent perceptions of the process.

Differences in Local Perspectives on One State's Web-Based Negotiation Process for Establishing Local Performance Levels

LEA and IHE administrators reported limited opportunities to negotiate local performance levels:

Now the state sets our targets for us—and they raise those targets every year based on the performance we had the year before. We haven't negotiated; we're allowed to, but we haven't. (Secondary CTE director)

We've always exceeded what the state requires for minimum figures. When they require a certain percentage of placement, they do not take into consideration the unemployment rate—and our unemployment rate is hovering around 14 percent. We have a minimum of 70 percent placement in their fields, which is extraordinary with that type of unemployment rate, but they don't take that into consideration. (Secondary CTE instructor)

They came to us and said: "Here are your performance measures. Here's what we're looking at." You either accepted the percentages that they said you're going to meet, or you negotiated with the state. If you negotiated with the state, it delayed the *Perkins* funding for your district. (Secondary CTE director)

The state says we can negotiate, but we can't. (Local postsecondary administrator)

There were only two colleges in the state that negotiated. . . . We got the pretty clear message that there wasn't much room [for negotiation]. (Local postsecondary administrator)

We have outperformed the state in 11 of 12 of those measures. Therefore, we are in the group that are required to make nominal progress of .5 percent on our actual performance. . . . So we are really at a point where we are competing against our previous year's performance. . . . I think that the .5 . . . quantifies what's sufficient progress. . . . We didn't try to negotiate the targets. . . . We just accepted the local targets based upon improving on our previous year performance. (Local postsecondary administrator)

We have a window of time when the application is released to go online and submit our application to negotiate, and there's a form. We have a complete process. I've never done it. I've always just accepted the state indicators. I honestly do not have the time. . . . I looked at our past numbers when I made this decision and what the new numbers were and said it's close enough. (Local postsecondary administrator)

A local secondary administrator in one state described a constructive process that compels local CTE directors to focus on the current status of their programs: "The negotiations are

good because [they] cause some of the old directors to be more accountable . . . and make them better understand the process. When they have to sit down at the table, and they have to be able to talk intelligently about it. . . . I think we're in a time where that is going to be . . . the big white horse in the room that everybody's going to have to deal with. . . . I like the way the state goes about it: let's negotiate so you can meet it.."

A regional CTE director in another state reported similar satisfaction with the negotiation process: "We were given a sense of where we stood historically on those indicators . . . and they said, 'Make some projections for improvement over a three-year period.' . . . Assuming the historical data were a good place to start, we added miniscule increases to show improvement. . . . The advice we got from the state was don't make outrageous projections that you can't possibly meet because you'll be writing improvement plans in the future." Another director in that state said that he wasn't forced to negotiate because his center was above state averages: "We set goals slightly higher but not too much. So far they have had no impact on our school."

Secondary CTE directors in another state saw no options for negotiating performance levels with state officials. A CTE director in a small rural community said, "From our little school to the state, there's no negotiation. . . . Here's our number, here's the state number. We have to be within 80 percent of something, [but] we're blowing the state numbers away anyway." The *Perkins* coordinator in another LEA was even more direct: "It's either you meet it or you don't."

Local practitioners in two states argued for greater transparency in how state administrators calculate targets for each subgrantee. An IHE administrator in one state commented that he would like to see "not just what the formula is, but how the state got the numbers for each institution." A local CTE director in another state expressed frustration about the lack clarity regarding the negotiation criteria used by state administrators: "It has not been made clear what [the criteria are for] them to accept the negotiating rate. If I came in and said, 'Well, I want 72 percent as we get farther down the road,' I'm unclear as to how they would make a determination of whether to accept it or not."

An IHE administrator in another state noted the disconnect between performance targets and local plans. "The rigor of reporting on the objectives of the local plan never matched the rigorous data for the performance measures," he observed. "POS is a good example. You develop a local plan with a big emphasis on developing POS . . . but you're not asked to report any hard data on that, like we do on these other measures. The plan often doesn't deal with improving performance measures that we have to report."

Use of Local Performance Data

Perkins administrators in most case study states reported using local performance target data to identify programs in need of improvement. In five states, administrators specifically mentioned flagging LEAs that were below 90 percent of any performance target (as specified in *Perkins IV*). An administrator in one state described a color-coding system with green, yellow, and red report flags in the state's database to show "whether or not locals met their targets, were within 90 percent of their targets, or were [within] less than 90 percent of their targets."

Several state administrators mentioned program improvement or corrective action plans that are required of local subgrantees that fail to reach the 90 percent threshold for any indicator. For example, a state-level professional development director outlined a "risk-based monitoring" process in which LEAs failing to meet 90 percent of a negotiated performance level are subject to closer monitoring and required to write a corrective action plan focusing on the core indicators on which they came up short. A secondary administrator in another state said that "a lot of our school districts" are putting *Perkins* in their broader school improvement plans, but she also noted that districts questioned the performance reports generated from the state's database. She explained, "There are quite a few school districts that actually appealed their performance on 4S1 [student graduation rate] because they didn't think that the data were accurate and encompassed all of their CTE."

One State's Accountability Hierarchy

A state CTE administrator described the hierarchical scoring system used to identify programs in need of improvement:

Any agency scoring at or above 90 percent, they'd be compliant. If an agency is below 90 percent in one [of its annual performance targets], it is classified [as] *Needs Improvement*. Agencies scoring below 90 percent in three or more of [their] approved annual performance targets or scoring below 60 percent of any single annual performance target are considered *priority improvement agencies*. Agencies scoring in the lowest percentage of overall performance, as determined by composite ranking of all performance level measures, will be considered *monitored agencies* and will be subject to monitoring visits. This year we're looking at the bottom 10 percent only because we're limiting travel, but really we want to look at the bottom one-third. This is the first year we've used *Perkins* data as a determinant on who gets a [monitoring visit]. Priority improvement districts are to complete a self-assessment tool that's aligned with the 11 elements from our state plan and then, if they have found problematic areas, they can request technical assistance from us.

The state CTE director in another state reported that a majority of secondary *Perkins* subgrantees will be cited this year and required to develop program improvement plans. He also indicated that performance data will become more useful for identifying programs needing improvement after the full complement of data on all indicators is collected and analyzed, something that "didn't happen in the first year." A local director in this state, however, cited some challenges associated with developing those plans: "This was actually the first time this year where the state gave us data and said, 'These pieces of data are deficient. You need to

write a plan around making the data better.' And then our turnaround is, 'We had no control over these data.'" He explained that students take the assessment used for the *Perkins* academic indicator in the fall of their junior year, which also is when students typically enter area CTE centers: "So they're taking [the test] once . . . and they're never tested that way again. . . . Not even the high school could tell you if those kids improved or not, and we're being asked to write improvement plans around those data?"

A postsecondary administrator in another state agreed that the 2009–10 school year will be "the definitive year" for local accountability reporting. She summarized what she learned in compiling the state's Consolidated Annual Report and how she anticipated using the information for program improvement: "There were a couple of colleges that I identified that were having trouble kind of across the board, and I was looking for some patterns. They tended to be some small towns, rural, and so that's something that I want to investigate further. I'll be able to say, 'What's going on that you're having trouble with all of these indicators? You either missed them, or you almost missed them a couple of years.'"

Some state administrators cited the importance of working with local subgrantees to ensure a common understanding of the data. A state secondary administrator said, "We can't do [program improvement] in isolation from the locals. So understanding the strategies they're going to use and the recommendations that we might make, you pull those together, then that's where we see the improvements that are going to take place." A postsecondary administrator in another state described how he plans to work with staff at individual IHEs to encourage review and use of *Perkins* data. He noted that some IHEs will meet the negotiated target for the nontraditional indicators, but the disaggregated data will reveal problems in the performance of some subgroups. "We even make them count how many of these special population groups are below their district negotiated targets in their programs," he explained. "We could do it electronically, but we make them count just so we know they looked."

In several states, local practitioners reported limitations in using performance data received from state officials. One local CTE coordinator talked about how accountability data cannot help her local leadership team identify programs in need of improvement, because the data are not disaggregated by school or program. She said that disaggregated data "would be more informative to me than 'Here's how all of your CTE kids are doing.' . . . We can brainstorm as a group, but having [data] disaggregated by CTE program would be much more valuable." A high school principal in another state echoed her concerns: "The report doesn't identify [the data] down to the school level or the program level," he said. "It tells you the local target, percent increase, total increase required to meet the target, and that sort of thing . . . but it's very difficult because it's not specific to the program. . . . You might have one program that has one completer, you might have another program that has 20, and no way is that broken down for you to make anything out of it."

Local administrators offered varied opinions about the extent to which local performance targets actually led to improved performance. One local CTE director remarked, "I don't think there's been any big impact because we're reviewing all students, whether they're in a CTE program or not. . . . We are data-driven. We progress-monitor our kids to death probably . . . but we are constantly looking at data and determining what's our action plan and what are we going to do with those students." A counterpart in a large district in another state suggested that the reporting standards "raise the bar" for CTE programs but indicated that local staff would be looking at the data anyway:

> I think the fields in career and tech education are only as strong as the weakest link. . . . We were going to do it anyway, but I don't want to trust that somebody else is going to do it and have it negatively impact the programs. So, in that sense, I think anything the legislation does to . . . create strong standards for everyone is a good thing. It's a headache, but it's not a bad thing.

State and local CTE administrators offered mixed views on whether negotiated local performance levels should be maintained in future reauthorizations of *Perkins*. One state-level administrator questioned the value of negotiating with individual LEAs and IHEs. "It's very bureaucratic," she observed. "The bottom line is that it takes a lot of staff time to do it. If the state is being held accountable for a target, . . . I don't know why we would differentiate the performance in our local levels for something that we expect everyone to be doing." She also expressed concern that the negotiation process could delay funding awards in the future: "If you're going through this analysis process and they don't want to accept your recommended adjustment level, we can be at this game for a long time. To what benefit?"

A local CTE director in another state supported the concept of local performance targets but insisted that those targets should be appropriate for each state. "Hold us accountable for things that we have control over," he said, noting that indicators appropriate in comprehensive high schools or four-year technical high schools are probably not appropriate for use in a shared-time, half-day model. "It makes you wonder, on a federal policy level, is it possible to design accountability that is not just one set of accountability requirements? Can the accountability system be adjustable based on the kind of model that's offered in the state?"

Sanctions for Inadequate Performance

Perkins IV requires states and local subgrantees to develop and implement program improvement plans if they fail to achieve at least 90 percent of the performance level for each core indicator. It also outlines a sequence of additional sanctions, including possible loss of *Perkins* funding, for those that fail to improve performance.

Several state officials expressed concerns about the use of sanctions at the local level and questioned whether they would lead to improved local performance. One postsecondary state CTE administrator bluntly asserted that sanctions could lead to less oversight of local CTE programs: "When it was about program improvement and not sanctions, give me a carrot and I can lead them on. Give me sanctions, and they just don't want to participate anymore, which means that I have less influence over what they're doing in their programs because they don't want my money." A secondary colleague emphasized steps taken by state staff to limit the need for sanctions. "What we want to do is provide . . . the help and assistance you need so you're not sanctioned," he said. "That's why we set up this data monitoring process and are helping the locals clear up their data."

A *Perkins* administrator in another state also emphasized the importance of working with local subgrantees to improve performance. She reported that state administrators had mentioned the possibility of sanctions but had yet to institute a formal sanctions process: "What we said is that, rather than taking money away, which doesn't make sense if you're struggling, is that we would have them focus their funds. . . . They wouldn't lose those *Perkins* funds, but they would be obligated to spend either all . . . or a portion . . . on improving the performance data that are falling behind. They'd lose that discretionary opportunity."

A secondary administrator in a third state acknowledged the potential power of sanctions as a program improvement tool but emphasized that local subgrantees are expected to shoulder significant responsibilities for *Perkins* accountability data. "In the grand scheme of things, [*Perkins* funding] is not very much money for a number of the districts," he observed. "For them to go through the process of submitting data, following through with all of the other assurances and requirements associated with it, and then be flogged publicly and told you can't use your money for this particular purpose without fixing something, it undermines the process." A counterpart in another state used similar language: "We want to move down the road to more of a performance-based carrot approach, in that you're rewarded for doing well as opposed to smacking people over the head or somehow publicly flogging people for not doing well."

Although most state administrators cited the 90 percent threshold as a trigger for an improvement plan, several also described longer-range strategies based in part on the lag time in *Perkins* reporting. As one secondary administrator observed, "We're looking at a multiyear process to identify whether or not someone really has a problem. That's the real key—some sort of additional intervention, other than having the right program improvement [strategy], would be required to help if they're seriously deficient." Noting that state CTE team members believe the Department should review performance based on three years of data, she cautioned that they have not seen enough years of local *Perkins IV* data to identify real problems and underscored the possibility of considerable variability from year to year.

An administrator in another state (A) cited challenges associated with the timing of the mandatory program improvement plans, which are supposed to be developed and implemented the year after subgrantees fail to meet performance targets. "It doesn't make sense to have subgrantees put together plans and have only six months to influence data that get reevaluated the next year," he explained. "So we have indicated that it's a two-year plan and that they have to be working toward the targets in the first year."

A postsecondary administrator in a third state noted that local subgrantees would not be subject to directed funding requirements until they miss performance targets for three consecutive years. She also indicated that state officials would require IHEs facing these sanctions to include budget lines for program improvement in their plans for the next year.

Officials in two states reported that they had developed specific plans for financial sanctions, and one reported already using them. In one of these states, the CTE director said that subgrantees failing to attain performance targets for two consecutive years "will no longer be included as CTE programs eligible for continued *Perkins* funding." In the other state, a postsecondary administrator reported withholding funds for an institution that "did not complete the purpose of its grant . . . or spend all of its money." She also emphasized that the nontraditional indicators are the only ones for which she anticipates more widespread problems with reaching targets, primarily because small populations increase the potential for percentages to be inaccurate and unreliable.

Administrators in two states identified data quality issues as a potential barrier to the use of sanctions. "Occasionally . . . we have a data reporting problem that has to get fixed that may have affected performance," a secondary administrator acknowledged. In the other state, a postsecondary administrator reported a programming error in the state data system that led to the suspension of sanctions from last year: "Even though there were sanctions last year and people wrote to them and planned for them, there will be no second-year sanctions this year. We're starting as if this was the first year again."

At the state level, CTE administrators reported relatively little progress on implementing reward structures for high-performing *Perkins* subgrantees; only one of the six states had a reward process. In this state, some postsecondary subgrantees were eligible to apply for an additional $150,000 in their competitive grants if the "program warrants it and is large enough in scope." Administrators in at least two other states expressed interest in offering rewards or moving to performance-based funding in the future. As one state CTE administrator remarked, "Our ultimate goal is to reach a point where we can provide performance-based funding [for] school districts and/or community colleges." In another state, a CTE administrator acknowledged, "We haven't talked rewards; we don't have the funds for rewards."

Local respondents generally were able to describe potential sanctions and the types of performance deficiencies that would trigger them, but some questioned the targets that could lead to sanctions. For example, one postsecondary administrator suggested that sometimes the performance goals "are just not realistic for certain populations or certain regions of the state, and yet we're all beholden to those reporting efforts." A local CTE director in another state indicated that he should have negotiated more appropriate performance targets: "I told them we wouldn't be able to meet the goal. The next time around, I will not let them put us in that position, because it's negotiated. . . . We are a low, low-performing district. When you look at the students with whom we're working, I knew we couldn't meet that goal."

Local CTE administrators in some communities were concerned about the possibility of financial repercussions from their *Perkins* accountability data. One reported that "You get a sanction . . . and a decrease in funding if you miss your targets for two years in a row." A counterpart in another state indicated that *Perkins* funding was tied to improvement plans: "If we don't write the plans, we won't get next year's *Perkins* money. So there is a money sanction tied to it."

Other local practitioners were less critical of the prospect of sanctions. "I don't like the thought of potentially losing funding if you didn't make one of your outcomes," one IHE administrator acknowledged. "But . . . if you don't meet one, you get time to submit an improvement plan. . . . It's strict, but reasonable." A colleague in the same institution was less clear about when sanctions might be applied: "In theory, I think we know that if we haven't met the measures, then you're supposed to develop an improvement plan. If your improvement plan doesn't lead to improvement in the measures, then you can face a sanction. We didn't meet our placement target last year. I'm waiting to see if there are sanctions to that."

A local secondary CTE director in that state was more philosophical about the possibility of sanctions. "I have heard of sanctions," he said. "But if we lose $150,000, we will continue to do good things." His counterpart in a larger district reported that the state CTE director did not anticipate local sanctions in the foreseeable future: "My impression is that there's more pressure on the state with the feds than there is with us with the state in terms of sanctions."

One local administrator actually ascribed benefits to the local performance targets and possible sanctions, suggesting that they would apply only to subgrantees that "underperform consistently." *Perkins* "is a program that makes us feel good," she explained. "When you don't have to make any excuses about why you're doing so poorly because you met the criteria, you feel pretty good."

Implementing *Perkins IV* Programs of Study Provisions

Perkins IV required LEAs and IHEs to offer "career and technical education programs of study" (POS). This section describes the status of POS implementation in case study states and communities. Particular emphasis is placed on the processes used to develop, approve, and implement POS and the challenges encountered in these efforts.

Major Funding Provisions in Perkins IV

Perkins IV introduced POS to increase coordination within the CTE system, strengthen integration of academic and technical instruction, and enhance connections between secondary and postsecondary education. As defined in Sec. 122(c)(1)(A) of *Perkins IV*, POS

- incorporate secondary education and postsecondary education elements;
- include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, nonduplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education;
- may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits; and
- lead to an industry-recognized credential or certificate at the postsecondary level or an associate's or baccalaureate degree.

Perkins IV requires states to address how they would develop and implement POS as part of their *Perkins* state plan submitted to the Department for approval. Local subgrantees are required under *Perkins IV* to offer one or more POS. In early 2010, the Department released its *Programs of Study (POS) Design Framework* (Framework), which consists of 10 components that expand upon and clarify the four minimum components of POS identified in *Perkins IV*.

POS Design Framework

1. *Legislation and Policies*—Federal, state, and local legislation or administrative policies that promote POS development and implementation.
2. *Partnerships*—Ongoing relationships among education, business, and other community stakeholders that are central to POS design, implementation, and maintenance.
3. *Professional Development*—Sustained, intensive, and focused opportunities for administrators, teachers, and faculty involved in the design, implementation, and maintenance of POS.
4. *Accountability and Evaluation*—Systems and strategies to gather quantitative and qualitative data on both POS components and student outcomes to aid ongoing efforts to develop and implement POS.
5. *College and Career Readiness Standards*—Content standards that define what students are expected to know and be able to do to enter and advance in college and/or careers.
6. *Course Sequences*—Nonduplicative sequences of secondary and postsecondary courses within POS that ensure that students can make a transition to postsecondary education without duplicating classes or requiring remedial coursework.
7. *Credit Transfer Agreements*—Credit transfer agreements that provide opportunities for secondary students to gain postsecondary credits, supported by formal agreements between secondary and postsecondary partners.
8. *Guidance Counseling and Advisement*—Guidance counseling and advisement that help students make informed decisions about which POS to pursue.
9. *Teaching and Learning Strategies*—Innovative and creative instructional approaches that enable teachers to integrate academic and technical instruction and students to apply academic and technical learning in their POS coursework.
10. *Technical Skill Assessments*—National, state, and/or local assessments that provide ongoing information on student attainment of the necessary knowledge and skills for entry and advancement in postsecondary education and careers in their chosen POS.

While POS is new under *Perkins IV*, the idea draws on previous CTE reform initiatives such as Tech Prep and curriculum integration. Tech Prep programs under *Perkins III* were expected to combine at least two years of secondary and two years of postsecondary education in a sequential, nonduplicative course of study. This "2+2" design, founded on articulation agreements between LEAs and IHEs, was intended to help students acquire academic knowledge and technical skills by integrating academic and technical instruction and to lead them to an associate or baccalaureate degree or a postsecondary certificate in a specific career field.

Key Findings

State CTE administrators in most states indicated that they incorporated the four statutory POS components into technical assistance efforts and approval criteria used for local POS. Although most state administrators expressed opposition to regulatory language defining POS, a number said that the Department's Framework would have been helpful earlier in the process of POS development and implementation. At both the secondary and postsecondary levels, perceptions of POS varied considerably: some CTE officials identified the POS concept as the most important change in *Perkins IV*, while others viewed it as simply a new name for an existing approach. Key findings related to the implementation of *Perkins IV* funding provisions are summarized below:

- Processes and policies for POS development, approval, and implementation varied across and within states—and most CTE administrators advocated for continued flexibility in these areas.
- Development of effective partnerships between the secondary and postsecondary systems was a major hurdle for many states, LEAs, and IHEs, even though there was widespread understanding that coordination between the two systems was a major goal of *Perkins IV*.
- Relationships and processes established under Tech Prep played a major role in POS development and implementation in many locations, regardless of whether the state had merged Tech Prep and basic grant funds.
- State and local CTE administrators were rarely able to provide data on POS enrollment or outcomes, and none reported systemic capacity to track students from secondary to postsecondary education.
- Most barriers to POS development and implementation were embedded in the institutional structures and organizational cultures within which people were developing POS, reflecting the fact that POS, by definition, attempt to bridge divides such as the traditional separation of CTE and academic studies.

State Support for Federal Guidance on POS Components

Most state CTE staff interviewed said that federal guidance would have been helpful earlier in the process of their development and implementation of POS. Several specifically praised the quality of the Department's Framework, however. As one state CTE director commented:

> The work that was recently done out of [the Department] around programs of study, I wish we would've had that three years ago. That should've come out immediately. We wouldn't have the mess we're in right now [with the] diversity of [approaches in different] states. . . . So it's going to be more difficult now, because states have already gone down certain roads. We've got to figure out how to create some national structures that make sense. I'm not a big proponent of the federalization of education. However, there are components that just make sense [so] that we can talk the same language and look the same in some ways.

Another state director asked for further guidance about "exactly how we are to use that framework. Are we going to be accountable for that, or is that just simply a tool that we use? I would say some additional guidance would be needed."

A few state officials said they preferred no federal guidance under any circumstances, while staff from four states expressed mistrust of regulatory guidance or statutory language that would be used to define POS. As one senior state administrator noted, "I think if federal regulations were going to happen for POS, it needed to happen at the time it was rolled out. I think that the cow is out of that barn. To call it back now and say, 'Oh, no, you're doing it all wrong.' I don't think you can go back and do that and have it an acceptable way of doing business." Another observed, "Having structure and a framework isn't bad, [but] requiring us to do certain strategies strips the innovation out of it."

Several CTE administrators expressed a philosophical objection to guidance from the Department, opposition that was based on their perspectives for the appropriate roles for state, local, and federal governments in CTE. As one state administrator observed:

> The problem with regulatory [guidance], in my opinion, is who provides input to make decisions? . . . If they do something on the national level to get the practitioners involved in deciding what the regulatory guidance is, I don't have a problem with it. But if it's just somebody up there in the Beltway, who may or may not have been in a CTE program or hasn't been in one in a long time or has their own vision of what it is, then I think you have a hard time trusting regulatory guidance without appropriate input.

Support for Federal Guidance on POS

State officials in several states described the types of specific federal guidance they would support:

[Some states seem to think POS is just about] organizing CTE curriculum . . . that's why we needed that guidance, needed the push to say: . . . "This is about the whole alignment of secondary and all these components." (State CTE director)

What are the outcomes you want from a program of study? . . . Congress could save time, money, and paper by looking at what they really want from the postsecondary, focus the legislation on those few items [or] outcomes, and then allow states the flexibility to mount possible solutions to attain those outcomes. (State CTE administrator)

POS [should be tied to accountability measures.] . . . having some clear guidance from [the Department] in terms of the measurement approach that we use for [POS] would also be very helpful. (State CTE director)

Maybe the new legislation will better refocus the system, because I think you've added and added, . . . but the money has stayed pretty much the same. So you're watering down the soup, and at some point a refocusing of the program is probably going to be necessary. (State CTE administrator)

A representative from another state observed: "I don't like rules coming down from the top. . . . Small states want regulation. They think that they can influence their legislature. Our legislature could care less what *Perkins* requires. Just because [the Department] requires something in regulation doesn't mean that they are going to follow that path."

Administrators in several states noted that one positive result of less stringent direction from the federal level is that it encourages buy-in and collaboration. As one said, "We have close partnerships with our other agencies, and we work together to figure it out. . . . If it had been mandated and there had been regulations governing it, what we have may not be as effective as it is, because there wouldn't be the ownership that we have now."

A few state administrators said they did not favor regulatory guidance on POS because regulations from the Department on other statutes had not taken into account differences across the states. As one explained, "If they could take into account rulemaking that would treat small states and large states, rural schools and urban schools, shared time regional systems and four-year comprehensive technical high schools . . . with equity somehow. I've been doing this 30 years or something and so far I haven't seen intelligent rulemaking come along too often."

Developing and Implementing POS: State and Local Progress

An important goal of *Perkins IV* is "increasing State and local flexibility in providing services and activities designed to develop, implement, and improve career and technical education, including tech prep education" [Sec. 2(3)]. This flexibility was evident in the processes for development and implementation of POS, which varied widely across and even within states. All state administrators reported that every local subgrantee offered one or more albeit rudimentary) POS, because this was a condition for receiving grant funds and a part of the local plan approval process. In contrast, administrators in at least one LEA acknowledged

they were not yet offering POS, and other local practitioners described offerings that fell considerably short of the required components.

State and Local Definitions of POS

Guided by the four components of POS outlined in *Perkins IV*, most state CTE officials indicated that they defined POS precisely as the term is defined in the law. Several states included a minimum number of credits or hours of secondary coursework to be considered a "sequence" of courses in their definition. Although there seemed to be an understanding in all states that POS are meant to incorporate elements of secondary and postsecondary education, there was a broad tendency to focus on the secondary side of POS. This focus occurred despite states' adoption of POS definitions that emphasized links to postsecondary education. A state administrator in one state, for instance, defined POS as "a sequence of courses leading to postsecondary education."

In four of the six states, POS were seen as leading to—rather than inclusive of—postsecondary education. A staff member at one postsecondary state agency explained, "We define secondary POS and postsecondary POS differently." State administrators in only one state emphasized the coordinated, nonduplicative secondary-postsecondary aspects of POS when asked to define the term. The disconnect between the secondary and postsecondary sectors in how they defined POS was also readily apparent in other states.

States communicated their definitions of POS to local subgrant recipients in several ways. These included the state *Perkins* plan, statewide and local conferences and meetings, visits by state technical assistance providers to schools and districts, and print and web materials. It was evident, however, that state definitions of POS were not always well understood at the local level. Local definitions of POS generally reflected at least some part of the federal and state definitions, but with significant variation, and, in some cases, confusion and ambiguity. More than half of local subgrantees referred to secondary-postsecondary connections in their POS definitions, with an equal number noting a rigorous sequence of courses.

Local POS Definitions

Local secondary practitioners explained their understanding of POS:

- Working with the local postsecondary institutions, so that graduates from your program have either completed some college-level work before they graduate and/or go on to a related course of study at the postsecondary institution.
- A [program of study] is a student roadmap, but it also helps the teacher . . . to keep that vision that what they're doing can extend to the bigger picture.
- Our [POS] here [are] is the course listings and descriptions provided for students and parents to look at as they choose classes and programs [in which] to enroll.

Less than one-fourth of local subgrantees explicitly mentioned dual or concurrent enrollment in their POS definition. A postsecondary administrator in one state said, "I'm not sure if dual enrollment is actually part of the POS. It's very confusing what is and is not part of the POS." Nearly a third defined POS as leading to an industry certification or degree. One local CTE director could not recall receiving a POS definition from the state but appreciated "the academic and professional freedom to grow and make mistakes." A postsecondary administrator in the same state said, "I don't think there's a written-down statewide definition of POS in place."

Some confusion or ambiguity in defining POS at the local secondary level may be related to use of the "programs of study" terminology, which in some districts was already in use before *Perkins IV* to refer to something entirely different, such as a course catalog. In many cases, local administrators defined POS in relation to their understanding of "pathways," "career pathways," or "career clusters." Some of these definitions were based on the 16 career clusters of the States' Career Clusters Initiative,[3] while the general understanding of POS in some communities appeared to be based on a more localized or informal conception of an industry- or career-themed sequence of courses. Administrators and faculty in many LEAs used the terms "pathways," "career academies," and "POS" with little distinction. A staff member in one district described POS as "a tool that we use as a career pathways program to make certain that each of us in the process is doing what we're supposed to be doing." Many local officials seemed to view POS as the paper manifestation, in the form of a completed template, of a career-themed sequence of courses.

Some local secondary respondents expressed the view that POS were "nothing new" but either an expansion of an existing concept or merely "new language" applied to an old idea. In four states, this view was espoused by one or more respondents in at least one local community; in another state, this view seemed to prevail in all local districts. According to an administrator in a small district in this state, POS were "just sticking another title to [the term] and seeing how it fits into some kind of jigsaw puzzle that somebody came up with."

State Support for POS Development and Implementation

Despite the relatively small amount of *Perkins* funds in the context of state and local education budgets, some state CTE directors said they attempted to use *Perkins* strategically as a lever for change in CTE. According to the CTE director in one state, "It's a generational

[3] A *career cluster* is a grouping of occupations and broad industries based on commonalities. The 16 career clusters provide an organizing tool for schools, small learning communities, academies, and magnet schools. The 16 career clusters are Agriculture, Food, & Natural Resources; Architecture & Construction; Arts, A/V Technology & Communications; Business Management & Administration; Education & Training; Finance; Government & Public Administration; Health Science; Hospitality & Tourism; Human Services; Information Technology; Law, Public Safety, Corrections & Security; Manufacturing; Marketing; Science, Technology, Engineering & Mathematics; and Transportation, Distribution, & Logistics (http://www.careerclusters.org/list16clusters.php).

change here, and we're hanging program[s] of study out there as the banner that we're going to change things under, but we're getting it from both sides." Similarly, the state director in another state described POS as "the most important thing in the *Perkins* legislation" and part of a larger vision for high school redesign around pathways. The use of *Perkins* as a catalyst for change was noted in a third state, whose state director said, "When we talk about school reform, actually *Perkins* over the last few years has provided us with some resources to become a driver [of change]."

State staff have provided many forms of leadership, support, and technical assistance to local subgrantees as they developed and implemented POS. While there were some common categories of support, the intensity of support varied somewhat according to state agencies' capacities and readiness to support POS and state-level legislation and policies (or lack thereof) related to CTE.

State Capacity and Readiness

States exhibited varied capacity to support POS development and implementation, and staff across the states expressed diverse views on whether the Department had provided the information and technical assistance they needed to support POS efforts in LEAs and IHEs. State agency staff in two states indicated that they had anticipated the requirements of *Perkins IV* and laid some preparatory groundwork for implementing POS. An agency official in one of those states said, "We saw it coming. We were out there doing workshops and telling districts way before *Perkins IV* was even authorized that this is coming down the chute, and this is the way it looks like it's going to happen." By contrast, a staff member in another state described staff at the Department as being "very guarded about what they tell us."

State administrators in several states explained that previous work on Tech Prep under *Perkins III* and an understanding of related ideas like the career clusters provided advantages in developing POS. In some states, however, the short turnaround time required for POS implementation after passage of *Perkins IV* was described as a source of frustration.

CTE directors in several states commented on the Department's release of the Framework in early 2010. Arriving three years after the passage of *Perkins IV*, the *Framework* was viewed by most state CTE directors as useful but tardy information. As mentioned previously, many state administrators stated that earlier guidance would have been helpful. As a state agency technical assistance provider explained, "It seemed like there wasn't a complete vision at the federal level, as far as what they really expected and wanted. Yet they were expecting us to implement something that they didn't really know what it was."

States' capacity to support POS development and implementation has also been undermined by budget constraints and staff reductions. In one state, budget difficulties had reduced staff

at the state department of education to the extent that only one staff member remained to provide services to local subgrantees.

State Leadership and Policy Guidance

State-level legislation and policies related to POS specifically and CTE in general varied greatly and affected administrators' abilities to influence POS development and implementation. In one small state with no state CTE rule or statute, state agency staff relied heavily on *Perkins* to promote new CTE initiatives such as POS. In contrast, an official in a state where the eligible agency played a central role in POS development statewide reported that CTE is "embedded in . . . our laws [and] in our department policies." In a third state, the legislature had passed CTE legislation and the current gubernatorial administration was seen as supportive of CTE, but there had been no effort to align this state legislation with *Perkins* or enact state law on POS.

While many state administrators relied on *Perkins* funds to promote change, they met resistance from some local subgrantees when attempting to implement policies not explicitly required by *Perkins IV*. One state director said, "These people [local subgrantees] have no problem picking up the phone and calling the Department and saying, 'This is another unfunded mandate. I don't have to do this.'" Local resistance, in most cases, seemed to be based not in recalcitrance, but in the immense challenges of implementing a large-scale initiative like POS with some measure of replicability in a "local control" state. According to a veteran staff member in one state, "What we haven't managed to really do is sell this idea that POS is the way to do it . . . to deliver CTE."

State agency representatives in five of the six states characterized their states as being guided by "local control" or "local determination" policies, whereas officials in the sixth state regarded policy as more centralized. The implication was that state agency staff in local control states cannot mandate curriculum or the specific format of POS. As staff in one state explained, "We would like to hope there was a typical process for POS development, but we are a state that is concerned about local determination and . . . there are some implications in a lot of divergent approaches to developing POS." A lack of cooperation between secondary and postsecondary agencies at the state level also could complicate states' efforts to deliver a consistent message on POS, as was the case in this state. By contrast, three state-level agencies in another state had cooperated on a statewide POS template and the delivery of technical assistance on POS.

Despite some resistance at the local level, state agencies in local control states were attempting to exert some influence over POS development and implementation. As one state CTE director remarked, local control "doesn't excuse an absence of state leadership." The most common method for imposing some measure of consistency in POS development was the creation and dissemination of POS templates (either a single template or several templates

customized according to career cluster areas). State administrators noted some degree of collaboration between secondary and postsecondary stakeholders as well as local input into the creation of these templates, but local perceptions of state responsiveness to local needs varied considerably. State agencies required local subgrantees to submit completed POS templates with local plans, and, in most cases, the template could be modified to account for local needs. In the local control states, the templates were viewed as the clearest example of state involvement in POS development.

Another approach commonly used by states in developing POS was the creation of "model" POS, which LEAs and IHEs were encouraged to adopt. These model POS were developed in different ways. In one state, for example, local consortia involving secondary and postsecondary education and industry competed for $100,000 grants to develop model POS. Another state had planned but not yet implemented an RFP process to award grants to area CTE centers statewide to develop model POS. To date, the state agency's main role in this state had been convening statewide teams of CTE instructors and industry representatives to develop common capstone assessments for POS. An official in a third local control state said that the state is leveraging *Perkins* and POS to send a message to local districts and colleges: "You will align your curriculum, and you will create the sequence of courses. And we don't want students shot-gunning all over the place and then showing up at the postsecondary doorstep taking a bunch of remedial courses." In all of these states, whether they relied on model POS or common capstone assessments, "what you see a lot of is encouragement to go in the right direction," said one state official.

In another state, administrators described a state-level partnership composed of secondary and postsecondary education and business representatives that was using the 16 career clusters to develop POS through a multi-year process of standards revision, curriculum framework development, and professional development. Local districts were encouraged to "plug in" their courses to the model POS. LEAs in this state had the option of developing their own POS, but those who did were unlikely to be approved. According to an administrator at the state eligible agency, "[Local districts] can create their own sequence of courses with their justification with everything that they put in, and we were pretty rigid on that. We held them to a high standard. Some were approved, [but] most were not, because they did not have the justification that made sense."

Local Reactions to State-Level POS Development

In one state where the state agency was leading POS development, local secondary and postsecondary officials expressed some dissatisfaction with the process:

"Our frustration at the postsecondary level is [that the state education department] is setting this up. [The department] didn't even talk to the advisory groups at the community colleges. . . ." A frustrated secondary administrator said, "What we thought we could get for our students and what they needed is different from what [the state agency is] telling us . . . there [are] some things that just didn't meet up the way they should have."

Although leaders in another state also cited a local control system, the eligible state agency played a much larger role in developing statewide POS strategically in the career clusters that state staff considered most important to the state economy. This state released POS-specific templates for these strategic clusters that could be modified to fit local needs; local officials responded by looking to the state for guidance. Several dozen statewide articulation agreements were in place in this state, and there were plans to create more. Meanwhile, the state encouraged local subgrantees to go beyond the minimum of one or more POS and develop multiple POS suited to the local economy.

The state role in POS development and implementation was markedly different and more centralized in another state. POS were developed by a statewide committee, divided into seven program areas and composed of local CTE directors, secondary and postsecondary faculty, state department of labor staff, business partners, teacher educators, national experts, CTE and academic consultants, and staff from the state eligible agency, and local districts relied on the eligible agency for guidance. There were nearly six dozen state-approved POS within the 16 career clusters and almost 50 statewide articulation agreements. Local perceptions of this POS "menu," likened by one high school counselor to a college catalog, were mixed, with different administrators in the same urban district describing it as "tremendously fragmented" and as "great." Staff in a small district in this state described the difficulty of applying the state-designed framework locally because of limited course offerings and instructional capacity.

State administrators in four of the six states described how they were using *Perkins* funds to serve a third population, adult learners in noncredit CTE programs.[4] State officials in at least one of these states said that serving adults may present challenges for the POS concept, which they regarded as having been designed to work most smoothly within a model of four years in secondary education with a direct path into postsecondary education.

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[4] *Perkins* allows state grantees to use funds "to provide career and technical education programs for adults and school dropouts to complete the secondary school education, or upgrade the technical skills, of the adults and school dropouts" [Sec. 135(c)(15)].

State-Provided Technical Assistance

State staff in all six states provided technical assistance to local subgrantees in a variety of ways. The most common form of technical assistance was conferences, held both statewide and regionally. At these conferences, state staff might walk local practitioners through the *Perkins* application process, explain the legislation, share best practices, or respond to specific questions from local subgrantees. Staff in one state indicated that they had provided more technical assistance under *Perkins IV* than under *Perkins III*.

In at least half of the states, much of the technical assistance was directed toward helping local subgrantees complete and update their local *Perkins* plans. In several cases, staff helped local practitioners revise POS to meet state standards for approval. Administrators in two states specifically reported providing technical assistance on POS to guidance counselors. In one state, some local workshops focused on sequencing coursework in a specific career cluster.

Depending on the size of the state, state staff might meet with local representatives as often as monthly or as rarely as bi-annually or annually. Administrators in one state agency held monthly conference calls with local subgrantees, alternating the calls between secondary and postsecondary CTE directors. Agendas for these monthly calls were based on questions submitted by staff in LEAs and IHEs; one of the most popular topics identified by local subgrantees was how to convert a local CTE program into a POS.

Local respondents in all states indicated that state staff members were generally available to respond to specific queries on POS specifically or *Perkins IV* in general via phone or e-mail on a regular basis. Some larger states had set up a regional structure in which designated staff members were responsible for providing technical assistance and responding to inquiries from specific districts on POS and other *Perkins*-related topics. In many states, the eligible agency's POS template was viewed by local subgrantees as a form of technical assistance from the state. Staff in one state shared completed POS templates with local subgrantees when high-quality products were submitted.

In many states, travel budget cuts at the state level had curtailed state staffers' ability to visit local subgrantees and provide on-site assistance. Commenting on the state's education agency, one local CTE director said, "They're not a big department . . . and there's only so much you can expect out of those few people." Local recognition of the effects of the economy on state departments was widespread, but met with varying degrees of acceptance. In one state, a postsecondary administrator summed up his view by saying, "I'm sure they're underfunded and have a lot of responsibilities, but we're pretty much on our own." According to a local secondary administrator in another state, "There was pressure to implement one [POS] but, besides that, little guidance."

Local perceptions of the amount and quality of technical assistance provided by the state varied among local communities in the same state. While some local representatives were generally satisfied with the technical assistance provided by the state, others said it was insufficient or not helpful to all audiences. Several factors might have contributed to this inequity, local officials suggested. In one state, a postsecondary administrator asserted that secondary officials had greater access to technical assistance than postsecondary officials. Assessing the quality of technical assistance, a secondary administrator in another state said, "To be brutally honest with you, it all depends on the consultant [from the state agency]" and noted that technical assistance was sometimes undermined by personality conflicts. In some communities, technical assistance from the state was seen as inadequate overall.

State Processes for POS Approval

All six states had adapted their application and review process for local *Perkins* plans to incorporate POS submission and approval. At least three states had adopted the "language of the law" as criteria for approving POS. All or most states appeared to allow applicants to revise and resubmit their plans if they did not pass the first review. Beyond these commonalities, there was much variety in the approval processes, reflecting the diversity of CTE structures across the states (Exhibit C.17).

Exhibit C.17.
State processes for POS approval

State	Process for approval
A	Eligible local applicants submit POS for approval through an electronic portal along with the local *Perkins* application. Plans are reviewed by state CTE staff for compliance with the intent of the law, correct data, and alignment with assessment rubrics.
B	Three collaborating agencies created a "program of study assurance," a checklist for the minimum POS requirements in *Perkins IV*, that appropriate parties must complete before the POS is approved and *Perkins* funds are distributed. The statewide POS template must be attached to the curriculum and also submitted for approval. If appropriate paperwork is not submitted and there is no evidence of POS, applicants risk the loss of funding.
C	Regional consultants at the eligible agency review local secondary *Perkins* plans to determine that the four required POS components are in place. The state approves the plan overall, rather than the POS separately, and the review process does not assess the quality of the POS. If applicants do not propose a viable POS, the state either provides technical assistance or declines to fund the plan. At the postsecondary level, the community college system approves programs, and the state postsecondary agency reviews the rigor of the courses offered. The system does not examine secondary courses. Before a course or program reaches the state system office, it must be endorsed by the local curriculum committee and then one of seven regional CTE consortia. The system uses an online application requiring applicants to address POS requirements, including linkages between secondary and postsecondary levels, and explain how they target funds based on areas of need and expected outcomes.
D	Local secondary and postsecondary subgrantees must state in their local *Perkins* plan how many POS they have developed and how many they will convert to the state-developed, cluster-specific POS templates. For approval, POS must be in high-skill, high-wage areas and based on local needs. The eligible agency reviews and signs off on each local application. If the applications are incomplete, there are discussions between the eligible agency and local subgrantees about revisions.
E	The eligible agency has adapted the state program approval process into a POS approval process. Local applicants must submit a program design document identifying a cluster and pathway and demonstrating that the pathway is high-skill, and either high-wage or high-demand or both, with supporting labor market data. The document must also include an assessment plan, applicable industry certifications, a sequence of courses from grade 9 forward, and community partners, including postsecondary institutions, to be involved in POS development.
F	LEAs are required to identify a minimum of one or more POS linked to postsecondary education to receive *Perkins* funds. If state-developed POS are already in place, they are automatically approved by the state. If a LEA proposes different POS, it must follow standard criteria and obtain state approval. At the postsecondary level, each applicant must demonstrate at least one link with a secondary agency as prescribed by *Perkins IV*, provide labor market data to support the demand, and include plans for sustaining the program. Applications are sent first to the state board of regents and then to the state higher education commission for acknowledgement and approval.

Most state administrators said they allowed local subgrantees to revise and resubmit POS plans and were willing to provide technical assistance to help subgrantees get to that point. In one state, for example, administrators received 65 applications for *Perkins IV* Title I funding in 2008–09; of these, only 25 were approved as submitted, but 40 were approved after revision and resubmission. According to state agency staff in this state, "It's my responsibility with the consortiums or schools that I'm assigned to, to get that [*Perkins*] plan [including

the POS] approved, and if it's wrong, then I work with them to make sure it is approved." In the one state that had rejected several POS, submission of an inadequate POS plan could result in rejection of the entire local *Perkins* plan. The state CTE director explained how some local districts had lost funding:

> A few districts lost funding because of the inability to get coherent POS in place; [they were] mostly rural, isolated districts. Local plans are reviewed by regional consultants at [the state agency] to determine that they have the various required components in place. If they don't have [them], then [the state agency] doesn't approve the application. And we get some really shaky ones in. Good example: people trying to use a CTE course sequence of marching band, jazz band, and choir. Well, that's not a serious CTE course sequence.

Local POS Development and Implementation

Beyond the requirement that each local subgrantee offer one or more POS, *Perkins IV* does not prescribe a process for POS development and implementation. Consequently, considerable variation was evident in how POS were developed at the local level. This section describes local processes for POS development and implementation in accordance with the four POS components outlined in *Perkins IV*.

Incorporating Secondary and Postsecondary Education Components

While at least half of local respondents said that they understood that *Perkins IV* requires both secondary and postsecondary education components in POS, they also reported that promoting coordination between two very different institutions, namely LEAs and IHEs, was difficult. Local CTE officials were divided on whether leadership for POS efforts came from the postsecondary or secondary side, with slightly more respondents indicating that leadership had come primarily from IHEs. In one state, postsecondary leadership on POS resulted from a state directive, but in other states the process was guided by local decision-making.

A lack of coordination between secondary and postsecondary agencies at the state level in one state was reflected in local programs. In the three districts studied in this state, there had been little attempt to create formal links between secondary and postsecondary institutions. State agency staff suspected that some secondary subgrantees had completed the postsecondary portion of the statewide POS template simply by looking at the local community college's course catalog and filling in plausible options for connecting coursework. In one rural district in this state, this indeed proved to be the case. In another community, the disconnect was so profound that the secondary *Perkins IV* coordinator made a call while researchers were present to ask someone to identify the *Perkins IV* coordinator at the local community college.

Local secondary administrators identified several barriers to effective secondary and postsecondary partnerships, including college officials' unwillingness to work with secondary officials, their lack of understanding of secondary programs, and geographic distance. At one site, the local CTE director reported that the reluctance of postsecondary faculty members to cooperate with secondary teachers posed a barrier to formalizing connections with K–12 programs.

Two postsecondary partners in another state had very different attitudes toward working with secondary agencies. One had established a staff position dedicated to working with secondary partners, while the unionized faculty at the second institution balked at aligning their courses with secondary offerings, despite their supportive administrators. In isolated rural districts in five of the states, distances between schools and colleges and poor weather and road conditions made access to postsecondary programs difficult. Community colleges in these rural areas also were likely to be serving many far-flung districts, posing an additional challenge to forming effective partnerships. One rural site was using distance learning and online learning to help the local community college reach a larger secondary audience.

Less frequently, challenges in establishing secondary-postsecondary relationships were reported as resulting from unwillingness on the secondary side to work with a college with limited program offerings. In one local district, the CTE coordinator recounted how one of its programs had been rejected for articulation by the community college because "there was nothing with which to articulate it." He noted that a community college coordinator had visited the local high school and told him that that he "should be teaching these [courses] at the college"—to which he responded, "No, you should be teaching something better so I can articulate with you. The kids can do this."

In many other local districts, lack of progress in effectively connecting secondary and postsecondary systems resulted not from unwillingness, but from the inability to overcome institutional barriers and logistical problems with scheduling and transportation. In many of the local communities, the strenuous effort required to forge these connections, and the lack of time and resources on both sides of the secondary-postsecondary bridge, were frequent refrains. As one postsecondary administrator explained, "I've got a full-time job as a dean, and I took this on. It's difficult to spend the amount of time it would take to really do it right."

Success in forming effective secondary-postsecondary partnerships depended largely on relationships between representatives of the two types of institutions at the local level and the commitment of individual administrators and instructors. Variation was evident, even among schools in the same district and between comprehensive high schools and area CTE centers, in the number and effectiveness of secondary-postsecondary partnerships.

In one state, articulation agreements were formed between individual secondary and postsecondary teachers, meaning that a retirement or relocation could end the articulated program. Another state required IHEs to demonstrate links with one or more local school districts to receive *Perkins* funding. Even in that state, however, respondents at one local site said the strength of these relationships varied. Communication across different types of secondary institutions also was problematic; in several districts, comprehensive high schools were not aware of POS offerings available in area CTE centers and vice versa. Nevertheless, there were a few examples of secondary and postsecondary educators were working closely together to forge connections to benefit students.

Effective Collaboration between Secondary and Postsecondary Partners: An Example

A local secondary CTE coordinator explained the rationale for collaborating with postsecondary CTE colleagues:

Early on, way early on, it was about [secondary instructors and postsecondary faculty] getting to know each other, getting to understand this [POS] process if we're going to work together. And in some ways we're competitors, but in more ways we really are a team to make good things happen for students, and when we remember that it's always about the student, there [are] plenty of students and . . . plenty of ways to help students go through different pathways.

In one state, cohesiveness at the state level was mirrored by collegial working relationships between secondary and postsecondary officials in the three local communities visited. In two of these districts, secondary and postsecondary staff had been working closely together since the 1990s. A high school principal in a large district in this state explained the cooperation by saying, "What would be the opposite, a course in isolation? That doesn't make any sense." The local community college there maintained a single multi-institution articulation agreement for each POS. This more systematic, multi-institution approach to articulation also was being used in local communities in another state, where previous attempts at articulation had been "haphazard."

Interagency cooperation and coordination in another state were described as modeling cooperation for local subgrantees. When submitting POS for approval, local subgrantees in this state "need to have a signed agreement from both secondary and postsecondary, along with their program of study template, so that [POS students] know [which college] the program is leading to . . . and which courses they need to take at the college level."

Many districts were also reaching down into middle schools or the earlier high school grades as they considered the future of POS. In one state, area CTE centers were beginning to offer "pre-tech" courses that would prepare 9th- or 10th-graders for entry into POS in 11th grade, while one district in another state provided a 10-week career exploration class for all 8th-graders (without using *Perkins* funds).

Alignment with Standards in a Nonduplicative Progression of Courses

Administrators across the states were using a variety of strategies to align POS with state or national standards, but these efforts were limited in most states and local communities. Officials in two states reported developing standards that were specifically attuned to career skills, not just to academic skills. A state administrator in one state reported, "All CTE programs have frameworks that build in employability and leadership skills and are built to skill standards." A secondary CTE instructor in this state recounted participating in a statewide committee to align CTE programs with core standards. The CTE program standards developed in these statewide committees were available on the state agency's website. State staff were unsure, however, how widely these standards were being used at the local level, and indeed, a secondary instructor in another district in this state reported a lack of consistency in standards. "We're all over the place," he said. "And that to me is frustrating." Another state was developing a set of career-ready standards that include, according to a state administrator, "socio-emotional kinds of things about critical thinking and team work and responsibility."

State directors in two states reported using assessments to drive alignment with standards. One state director described how the state was using nationally available third-party assessments in these efforts. The CTE director in another state reported efforts to innovate standards-aligned exams that would be used across the state. Statewide committees in this state were developing common capstone assessments in four POS areas, which the director described as a two-year process of "validating the competencies and standards [in all POS] and then developing the assessment." According to this state director, developing these common assessments "is the only way we have of honing in on common state standards for program areas and common outcomes."

In several states, the state-provided POS templates reflected an effort to encourage local practitioners to conceptualize and codify nonduplicative course sequences that bridge secondary and postsecondary education. One state required local *Perkins* applications to include a standardized articulation form that had been developed by the Tech Prep directors; four of the other states also required local applicants to list POS course sequences that encompassed both secondary and postsecondary elements on POS templates.

In some cases, these efforts had begun well before *Perkins IV*. Officials in one LEA reported that they had started looking at core content areas and developing POS for students a few years before *Perkins IV* was passed. An official in another state said that *Perkins IV* "made us streamline our courses to make sure that they fit the new formula. We only offer those that can make a cluster." A similar notion was expressed in a small district in another state, where the CTE coordinator explained a shift that came with *Perkins IV:* "I said, okay, I don't want to articulate [individual] courses anymore. We articulate programs."

Meanwhile, officials from small rural districts were likely to say that the requirement to align secondary and postsecondary education in the POS definition was not conceived with rural needs in mind. Rural districts often lacked the staff to offer the appropriate sequential courses, and postsecondary partners were likely to be relatively inaccessible. A secondary CTE director in one state described the challenges facing rural districts: "I meet the requirements for having a [program of study] , but it is aligned with a college 90 miles down the road in a different county."

In addition to specific efforts to align POS with standards in nonduplicative course sequences, officials in many LEAs and IHEs expressed a commitment to the broader goal of increasing CTE's rigor, in part by integrating academics into CTE course sequences. These integration efforts might focus on integrating academic and CTE content into the same course, as was the case in one state, or they might focus on including one or more academic courses in the POS. For example, academic classes, including AP economics and personal finance, were part of the POS in one LEA. Staff at area CTE centers in two states also reported that they had academic teachers on-site to integrate academic and CTE instruction.

Though there was still some of the old "vocational stigma" attached to CTE in several communities, many local administrators indicated that these innovations, along with intensive marketing efforts, were changing perceptions. According to a district CTE director in one state, "No longer is CTE seen as a dumping ground, but more of a proving ground." As part of their efforts to integrate academics and CTE in coordinated sequences, a few local schools or districts had explored making CTE a graduation requirement, even where it was not required by the state. One district administrator explained, "We're trying to do a better job of integrating CTE with overall instruction. As we increase the number of credits required for graduation, we'd like to have at least one credit of CTE required. This is part of our effort to integrate CTE with academics."

Not all respondents were comfortable, however, with fusing CTE and academic instruction. In a small community in one state, for example, a community college administrator observed, "I don't even think the academic teachers understand where they fit into [POS]."

Opportunities for Dual or Concurrent Enrollment

Secondary and postsecondary educators in many local communities used the terms "dual enrollment," "articulation," and "dual credit"—or some combination thereof—interchangeably. In many cases, they were not sure how each of these options was defined in the state. Based on descriptions from practitioners in these districts, either articulated credit or dual enrollment arrangements—or both—appeared to be in place in many communities.

Articulation agreements between secondary and postsecondary institutions or individual faculty members at the two levels generally specified the conditions under which high school stu-

dents might be eligible for postsecondary credit for a course taken at the high school. In *dual credit* arrangements, secondary students typically received both high school and college credits for successful completion of a college-level course. For *dual enrollment,* students were enrolled concurrently in both high school and college.

Some LEA and IHE officials acknowledged the weaknesses of articulation agreements under the Tech Prep system, especially the complicated processes usually necessary for students to obtain postsecondary credit. Findings from the 2004 NAVE report, *The Structure and Challenges of Vocational Education Funding and Accountability Systems* revealed several barriers to students' ability to claim articulated credit under Tech Prep (White et al. 2004, p. 146). These barriers included requirements that a student complete additional courses or attain a specific score on placement tests to have the credits appear on the postsecondary transcript; the length of time between high school completion and college enrollment; and policies requiring students to identify the college-level courses they completed in high school and make formal requests for articulated credits.

Some LEAs and IHEs had not yet developed effective strategies for addressing such challenges, and the "portability" of credits remained a major stumbling block for the majority of local subgrantees. One postsecondary administrator described the process at her IHE: "The old model was [that] students would complete a [college]-approved course at the [area CTE center], and as long as [they demonstrated] by the time they graduated that they met college-level placement scores, then they could apply for the credit and it was retroactive. They had a couple-year window of time. . . . It was confusing and not effective. It didn't make sense."

Although some local practitioners had come up with solutions, others had not devised ways to address the problems. Even when these arrangements were working, some LEA staff said they had a hard time convincing students and parents. According to one district administrator, "The biggest problem that we've had with dual enrollment is making folks really believe they're getting the credit."

Some LEAs and IHEs had maintained articulation agreements established under Tech Prep and, in some cases, expanded or enhanced them or modified them into dual credit or dual enrollment arrangements. Most secondary-postsecondary partnerships revisited articulation, dual credit, or dual enrollment agreements at regular intervals, whether established for Tech Prep or for POS. These intervals ranged from one to three years, though annual meetings seemed to be the norm. Postsecondary partners typically hosted these meetings, where instructors and administrators met to discuss the status of the agreement, curriculum alignment, and course materials and equipment. A district CTE administrator described the process: "In September or October of [each] school year, we will have articulation meetings that are set by the postsecondary institution. . . . The most important person to go is our teacher, who is the expert in each area. . . . We'll talk about the articulation, how it stands,

[and address] any questions or problems. [We consider] do we need to revise it, or do we need to continue on for the next year? And some years there are no revisions, and then things will change and we'll do some major revisions."

At times, these meetings also resulted in more opportunities for secondary students to earn postsecondary credit. For example, a district CTE administrator described several instances when local community college representatives "discover[ed] that we do something more here than they were even aware of. . . . They say, 'Well, gee, if you're doing that, we can give you credit for this.'" These meetings also served to build and reinforce relationships between secondary and postsecondary colleagues in many cases.

In at least one state, the postsecondary partners were reported to have final say in accepting or rejecting secondary curricula. According to a postsecondary administrator, "If [an area CTE center] wants to offer a course for dual enrollment, then they demonstrate that their course content is equal to the course content that we have. . . . Through our curriculum approval process, the program manager approves the essential objectives for our course. The [college] program manager makes that determination."

Courses offered for dual or articulated credit might be taught by secondary instructors who met community college criteria, community college instructors, or adjunct community college faculty. Dual enrollment or dual credit options for CTE coursework were more common at area CTE centers in most of the states, and they were also were offered in comprehensive high schools in many LEAs. Most of these courses were taught on secondary campuses, either at the high school or area CTE center. Joint assessment, or "credit by exam" (in which secondary students earn college credits by successfully passing the same final exam given in the associated postsecondary course), was another option for providing postsecondary college credit to secondary students in at least two states. Joint assessments, however, were not used by all districts in these states. IHEs in two states required that secondary students take the state's college entrance exam (Accuplacer or the equivalent) to determine their eligibility for dual enrollment.

Respondents were divided about whether the opportunity for postsecondary credit motivated students to enroll in POS. Administrators in several districts indicated that this was more of a motivator for parents than for students. Some districts were using POS to market CTE to students and parents as an option that could lead to postsecondary education. In one district, students enrolled in POS could earn as many as 36 college credits for participation, but the fact that secondary students paid half-price postsecondary tuition for these credits was seen as a factor limiting participation.

Many districts had developed dual credit or dual enrollment options outside of the POS framework, including Advanced Placement (AP) and International Baccalaureate (IB)

coursework. In fact, these other options could be somewhat of an obstacle to POS enrollment because students might be forced to choose among POS, AP coursework, or other electives such as foreign languages. Some LEA officials reported these choices typically resulted from increasingly stringent graduation requirements for academic coursework, which were seen as impeding districts' ability to offer CTE courses and students' ability to enroll in those courses that were offered. In one state, CTE courses were cut to offer more academic classes. In another state, electives (in which CTE is included in this state) also were cut in favor of academic courses. Some local districts have explored ways to address this challenge, including extended time (offering more class periods per day) and creative scheduling.

At both the state and local levels, some respondents suggested that increased graduation requirements also can be a major obstacle for area CTE centers operating on a shared-time model, with students typically taking academic classes in their home high school and CTE courses at these centers. Time spent away from the home high school can affect students' ability to meet graduation requirements. At least one area CTE center in one state had begun offering academic courses on-site to reduce this obstacle.

Pathways to Certificates or Degrees

Secondary and postsecondary respondents in most communities generally regarded the potential for POS to lead to certificates or degrees as a worthy goal, but this rarely was described as a major focus of POS development and implementation efforts. Secondary respondents seemed to see this mission largely as the responsibility of their postsecondary partners, whereas postsecondary partners focused more on forging connections with secondary agencies when describing their roles in POS. The primary concern expressed by respondents was the emphasis placed on getting secondary students *into* postsecondary education with relatively less attention paid to what happened to students after they got there. This may reflect the fact that initial implementation of POS was unfolding at the time of the case study visits.

In several states, state and local secondary administrators questioned the practice of administering assessments to provide industry certifications to secondary POS students. In one state, local subgrantees were allowed—but not required—to offer industry certification or licensure examinations. A state secondary administrator explained, "There are some areas that simply don't have industry certification or licenses." A postsecondary administrator in the same state argued that third-party (i.e., industry) assessments might not be developmentally appropriate for secondary POS students and described getting "emotional about the third-party assessment thing. We don't agree that they're pedagogically sound to implement. Yet [the Department] has made it a guiding principle for implementation of skill attainment." A state administrator in another state expressed a similar sentiment, noting that appropriate industry certifications might not be achievable within the scope of the secondary component of POS.

Roles of Employers and Business Partners in State and Local POS Development

In the majority of LEAs, the primary role of business and industry partners was membership on advisory committees. The degree of engagement of these advisory committees varied from superficial to deeply involved, but there was consensus across most LEAs that industry was more substantively involved than in the past. Several states maintained industry-specific advisory councils at the state level, while almost all local districts reported having advisory committees in at least one industry area and typically in more than one. Advisory committees reviewed curricula, supplied labor market data, identified the technical and "soft" skills they want in new hires, and, at some sites, provided guidance on assessments. An administrator in one mid-sized district commented on the importance of these relationships: "If a system does not have strong ties to the employer community, then it won't have valid career and technical education programs. You can't have meaningful POS unless you know where your students are going, and you have business and industry coming in and working with the students and helping you to understand where you're going and steering you in the right direction."

Some small, rural districts reported having difficulty finding appropriate representatives to serve on advisory committees; a small district in one state resolved this issue by contacting an alumnus, now a business owner in another state, to serve as a virtual advisor, providing guidance online and by phone. The district also had received donated equipment from this industry partner. According to the district CTE coordinator, "We've got to scratch and wiggle . . . to offer programs to kids that want it. Just because we're out in the country, doesn't mean that it's a spot that doesn't need a program."

Transition from Tech Prep to POS

Four case study states merged their Tech Prep and basic grant funds, and two maintained Tech Prep as a separate funding stream. Administrators in three states decided to merge Tech Prep and basic grant funds largely because articulation agreements under Tech Prep were not seen as effective in helping students make a transition into postsecondary education. In all of these states, administrators observed that few students who earned articulated credits were actually using them, perhaps because of the convoluted processes required of them once enrolled in community colleges. "Transportability" of these credits was also an issue, as credits earned under an articulation agreement with one postsecondary institution could not always be transferred to other institutions. In one state, officials were devoting considerable effort at the state level to make a transition into a dual enrollment process that would allow postsecondary credits to "follow" secondary students more easily.

In the fourth state, Tech Prep and basic grant funds were merged because state administrators considered it important to bring components of POS to all students, not just the subset served by Tech Prep. As one state administrator explained, "We felt like all of the things that were so important throughout the career pathways programs of study initiative, that seamless

system . . . were important for all students, and so we really did not want to just have that subset; we wanted to make all of that available and have the districts [be] responsible."

Nevertheless, articulation agreements originally established in these states under Tech Prep were maintained in some districts even after Tech Prep funds had ceased to be a separate funding stream. In at least one local site in one state, local funds were being used to continue Tech Prep programming that was no longer supported by *Perkins* funds. In some districts, POS were seen as virtually indistinguishable from Tech Prep. In many other districts, POS were seen as building upon and continuing the work of Tech Prep, and some local district and postsecondary staff continued to use the language of Tech Prep. Local district administrators in another state lamented the loss of Tech Prep coordinators. One local CTE administrator said that "rigorous inclusion of academic quality with technical content" distinguished POS from Tech Prep, while others cited the POS emphasis on industry credentials as an important distinguishing feature.

Very different attitudes toward Tech Prep prevailed in the two states that had maintained separate funding. In one state, secondary and postsecondary state agencies disagreed on whether to merge Tech Prep with the basic grant, but the separate funding stream was maintained after a shared advisory committee for the two bodies reached an impasse in successive rounds of voting. The secondary agency eventually agreed to the postsecondary agency's argument for keeping Tech Prep because the alternative was seen as "politically unpalatable," according to the CTE director at the secondary state agency. Secondary staff described having little to show for Tech Prep efforts and were concerned that continuing Tech Prep amounted to "dumping money into a black hole." Postsecondary staff, however, saw Tech Prep as having built a strong and continuing foundation for POS. As an administrator at the postsecondary agency explained, work now conducted under POS involved merely "popping the hood" and updating articulation agreements already established with Tech Prep rather than starting from scratch with POS. Another state postsecondary administrator described one rationale for maintaining the Tech Prep funding stream:

> The reason we argued to keep it and won that battle was gender equity. When [funding for] gender equity [coordinators] went away, so did gender equity. When there was no person on the campus responsible for that activity, it went away. We didn't want the same thing to happen with the articulation agreements that were being updated annually, the connections being made between teachers and faculty at the community colleges, and the alignment of CTE curriculum. If we don't fund a Tech Prep coordinator on a campus, that activity will go away, because there are no funds to support it.

In the other state that maintained separate Tech Prep funds, there was consensus across state agencies about the strength of the Tech Prep program, and Tech Prep directors played a key role in facilitating the development and implementation of POS. In local districts across the state, Tech Prep directors facilitated communication and partnerships between secondary and postsecondary levels because they had existing "natural links." One local district specifically used the term "Tech Prep program of study" to refer to programs developed with Tech Prep directors facilitating them. In this state, districts that already had well-developed Tech Prep programs were described as more likely than others to have well-developed POS.

POS Availability

According to state administrators, local applicants in all six states were required to offer one or more POS to receive *Perkins* funding. In some states, the minimum, in practice, was typically two or three POS. It was apparent, however, that understanding of and commitment to POS varied significantly across local subgrantees.

Both state and local respondents spoke at length about their plans for expanding POS offerings in the immediate and long-term future. Plans for expansion were guided by a variety of factors: responsiveness to industry, including both local labor market opportunities and emerging state or national trends; responsiveness to popular career choices (such as child care, health, business); and responsiveness to the interests of local administrators and faculty members. Of course, these factors sometimes overlapped.

Administrators in one state focused on developing statewide POS in the career clusters most important to the state economy. "We have taken the statewide perspective based upon industry certification and developed that," said one administrator. A second state engaged in a series of visioning and planning sessions using economic data to identify which POS to develop. An administrator in this state described these planning sessions: "What programs of study based on projected economic data, based on the postsecondary employment options and postsecondary training institutions are best for [this state]? Why should we be investing *Perkins* funds, time, effort, and energy into creating POS that may not be available to students in this state as future employment options? So those [issues] really helped set the context of what the program of study is going to look like."

Local CTE administrators in several LEAs described the development of POS specifically attuned to a local or regional business or industry. For example, local administrators in two states noted the creation of a logistics POS in response to the development of a shipping port in one case and to a major trucking nexus in another. Another district developed a hospitality and tourism POS in response to the building of a major new resort that will need hundreds of employees with a variety of skills.

In other discussions at the local level, it was less obvious that the expansion plans were based on an assessment of industry needs. New POS appeared to have been selected because they were focused on popular careers or because they reflected the interests of individual administrators or faculty members. Comments on POS selection included "I kept hearing a lot about biotechnology"; "I saw more need in health sciences"; and "Marketing and tourism are big."

In some areas, POS expansion was connected with the policy and vision that college and career readiness are desirable outcomes for all students graduating from the K–12 system. One local administrator observed how valuable it would be if CTE teachers used POS more extensively as part of their career planning units, if school counseling staff used POS to advise students on career paths, and if administrators used the POS concept to organize their thinking about the importance of both career and college for students. A state CTE director noted that "part of the message that we bring is the fact that this is about college and career readiness for all students."

POS Quality

Although state staff reported that one or more POS were in place for each local subgrantee, the quality of these POS varied considerably. The CTE director in one state described a continuing conversation at the state level about how to identify high-quality POS: "As these [POS] come into our [state agency], what criteria are we using other than that they have the [four] components? What would we expect to see in a high-quality POS? We want to know what 'good enough' is and what other levels of 'good' are."

State Assessments of POS Quality

Representatives of three states said that they did not yet have any assessment or evaluation process for measuring POS quality. Administrators in two of these states said that compliance with basic requirements is probably the norm, with some exceeding that level. One state CTE director said, "My gut tells me that we're at the compliance level, with some people beyond that. But most people are probably at the compliance level." These states documented only the presence or absence of POS. The third state did not yet have any POS beyond the draft stage of development.

Staff from the other three states concluded that their POS are of good quality based on the monitoring systems currently in operation. Two of these states emphasized the effort and attention that state staff had given to technical assistance and standard setting for POS. As one state CTE director observed, "Our staff has gone out and done regional workshops where they've brought people in, sat them down, and said, 'Now, understand, these are the expectations.' We've put a lot of time and energy into that type of technical assistance. So we feel pretty good about where we are." A representative from another state explained, "We're working hard not only to boost rigor within the program standards of our CTE offerings,

but then also to recommend really rigorous complementary academic [coursework] for that student in that career pathway."

Several states had incorporated POS review into consolidated program reviews that included other non-CTE programs at the secondary and postsecondary levels. In one state, consolidated program reviews were conducted on a cycle by the state secondary education agency and the state board for community and technical colleges for secondary and postsecondary entities, respectively. Administrators in one state described a consolidated program review of all federal programs in all school districts on a four-year cycle. Respondents in another state department of education, however, noted that monitoring visits have been reduced dramatically due to budget cuts, leaving them with no way to enforce quality control other than reading POS descriptions in the local *Perkins* plans. Several equated the quality of POS with evidence of outcomes such as transitions into postsecondary education or into employment, but none provided such evidence.

Local Assessments of POS Quality

A majority of local administrators, faculty, and staff offered positive assessments of the quality of POS they were developing or implementing and offered a range of explanations for how they determined quality. Several used outcomes to judge the quality of POS. As one community college director of workforce development stated, "I assess the quality based upon the number of students that we know are coming into postsecondary education. So the tremendous success is that we know students have started in secondary and are here, and we can tell you some of those students then are in bachelor's [degree] programs with our local university." Other criteria for assessing POS quality offered by LEA and IHE representatives in several states included rigorous curriculum; technology; very high expectations for students; quality of instruction, equipment, and students; active student organizations; and student success in competitions.

Local respondents also noted that administrative buy-in to POS was crucial in promoting POS quality. For example, one CTE director noted his engagement in curriculum mapping of content areas to reflect the recent revision of state CTE frameworks and to ensure that everything required by the frameworks and the industry certifications is included. Another administrator noted the willingness of secondary administrators to speak to community college administrators about poor instruction in dual credit courses at the college. Another college administrator discussed an effort to meet the state objective of improving academics in CTE by strengthening the mathematical requirements of an instrumentation program.

Efforts to Improve POS Quality

Some state and local officials had moved beyond assessing the quality of POS offerings to strengthening these offerings in terms of POS criteria. Administrators in one state decided to seek opportunities to link technical assessments with industry certifications rather than at-

tempt to create state technical assessments for every program. They also wanted to find nationally recognized assessments. According to a senior state official, "We decided we don't know enough about it to start big, so let's start small. We've been bringing together focus groups in specific areas and having conversations with the faculty and with industry and talking about what truly is happening." A local CTE director in a different state observed, "*Perkins* lit the fire under us for doing more industry certifications. When we complete that program of study, and we hand it to a student, we want to be able to say, 'And here's the industry certification you can get.'"

Another approach to strengthening POS was to eliminate programs that did not meet the criteria at a high level of quality. For example, one state CTE director observed, "It's making sure we have the right programs of study for the kinds of workforce economic development opportunities that are here in the state or that regionally we can support." A high school principal in another state said that their decisions on whether to close CTE programs would depend on such factors as enrollment, placement, and whether the POS met the high-wage, high-demand, high-skills criteria.

Representatives from three states reflected on their efforts to improve the quality of POS. One state CTE director noted that attempts to strengthen POS focused on alignment both with postsecondary education and with academic courses and indicators of student success. This state also had established a detailed process for improving POS by engaging industry. A state agency official added that state staff determined where the weaknesses were and targeted technical assistance accordingly. The CTE director for a second state noted that the state is improving POS quality by engaging with teachers to improve the quality and consistency of classroom instruction. This state's CTE director explained, "We're in the second year of a pilot to help teachers to more knowingly do instruction: [design] assignments [and identify] quality indicators [of student performance]." In a fourth state, the CTE director observed that it was not so much the POS that needed improvement as their local implementation.

Factors Facilitating POS Development and Implementation

State and local respondents offered insights into the circumstances that promoted POS implementation and development in their states. States tended to attribute the existence of Tech Prep programs and structures with supporting POS, while local providers often credited knowledgeable and committed faculty and staff with driving successful POS implementation.

State Perspectives

State administrators identified an array of factors that had facilitated POS development and implementation. The most common response across states was that prior work in Tech Prep and the continued presence of Tech Prep directors and staff strengthened POS development and implementation. Officials in three states credited "foundational work with Tech Prep"

as a very important factor in POS development. As one state department of education official observed, "For a lot of the school districts with strong Tech Prep consortiums, [program of study] is a natural and an easy fit." An official in another state noted the state's history of establishing nationally recognized consortia. In these three states, people who had once been engaged in Tech Prep also took leadership roles in POS development. As one state representative explained, "We've had the luxury of having good local people who know how to do Tech Prep. They know how to develop local articulation agreements."

State Perspectives on Facilitating Factors for POS

State staff cited three factors that facilitated POS development and implementation:

- *Initiative by district CTE directors:* According to a senior state department of education official, many school districts "see the benefit of program[s] of study now. A lot are venturing out. They're being very innovative with their CTE programs, and they're looking for colleges that will articulate some of the programs with them."
- *Initiative by postsecondary institutions:* In another state, a state official described examples of IHEs choosing to pursue POS development in an industry sector in which they knew several high schools already had a sequence of courses.
- *Funding flexibility:* One state provided an extra year of funding to local subgrantees to help in the transition from Tech Prep to POS. The state placed no restrictions on how much of recent grant funding was used to meet the state requirements for POS implementation as long as local subgrantees demonstrated that they were acting in partnership with either a secondary or postsecondary provider and meeting state criteria.

CTE directors in two states identified provisions of *Perkins IV* as crucial in promoting POS development. One noted that the *Perkins* requirements "gave us the anchor for this work." Another credited the specific *Perkins* requirement for aligning CTE and academic education as having "made it easier to sell programs of study, because career tech teachers feel like they're at the table [and] they're accepted more, because they're part of this whole process. Suddenly we're all on the same chart."

In another state, state policy shifts in response to evidence of the effectiveness of CTE facilitated POS development and implementation. In this state, the discovery that the graduation rate for CTE concentrators exceeded that for the general population by 10 percent led the state board to decide to adopt the three-unit sequence of study for everyone. This gave CTE programs a considerable boost, because they had just implemented POS and academic programs had no experience with this structure.

Local Perspectives

Knowledgeable CTE teachers and cooperation across education levels were often cited as advantages in POS development and implementation. Several local administrators identified the critical roles that experienced CTE teachers assumed. One superintendent said, "They're the ones that drive it, really—they're the ones that want to make sure they're aligned—that their curriculum is aligned, that their kids are prepared." Another *Perkins* coordinator attributed progress in POS development to teachers with industry knowledge, personal connections at colleges, and a strong interest in POS. Cooperation between secondary and postsecondary levels and respect for the contribution each can make to the preparation of students was another influential factor. One local director observed, "Having those meetings, where we sat together and worked the [POS design] out, helped us locally."

Barriers to POS Development and Implementation

State and local secondary and postsecondary respondents identified barriers to POS implementation and development, most of which were embedded in the institutional structures and organizational culture of the entities charged with developing POS. Barriers also reflected the fact that POS, by definition, attempt to cross such divides as secondary-postsecondary boundaries and to change habitual patterns, such as the traditional separation of CTE and academic studies.

State Perspectives

State officials cited several barriers in developing POS. Officials in five states said remote, rural school districts face particular challenges in POS development because many do not have easy access to an IHE. As one state CTE director noted, "There are remote school districts where [students] have to travel 100 miles or 50 miles to a community college. . . . A lot of our small school districts . . . offer exploratory programs and not necessarily preparatory programs. And so for the students to actually achieve [in] preparatory CTE programs, they would have to venture out to either a community college that could be 50 miles or more [away], or a neighboring school district, which could be 50 miles or more [away]."

Related issues for rural school districts included having few major businesses with which to partner and having too few qualified CTE teachers. One state made a special effort to provide technical assistance to struggling rural districts that requested state assistance, assigning staff to assist each district in examining its current programs and workforce needs and creating three POS per rural district. These efforts included helping to establish an active business partnership in each district.

State officials in five states cited their status as "local control" states as limiting their ability to guide local education policy and practice. In one state, local control is a philosophy that pervades the education system and is supported by the current governor, as well as some state department of education staff. As one senior official noted, "What you see is a lot of

encouragement to go in the right direction, rather than mandates. . . . The one thing I really like about having *Perkins* money is that with a new plan, we have decided, because we are a local control state, to use *Perkins* as the leverage."

The CTE director in a second state described the impact of working this way: "What that basically means is that they take a lot of pride and responsibility at the local level for what's going on. We don't mandate textbooks; we don't mandate a lot. . . . And so what we did was took a look at what *Perkins IV* was giving us the opportunity to do, and then we looked at how we might provide the leadership to raise the bar of career technical education."

In a third state, one IHE leader identified support for local control throughout the state and the plethora of local school boards in small districts as factors that make statewide consistency in POS more difficult. That state also had met resistance from some local subgrantees on *Perkins IV*, officials in the state noted.

Most states identified one or more barriers relating to cooperation and coordination between secondary and postsecondary education in POS development and implementation. These included mismatches in organizational structures as well as attitudes and misunderstandings that discouraged cooperation. For example, a barrier to POS development in one state was the requirement that community college teachers providing instruction to high school students have a secondary teaching certificate; a recent act of the legislature seemed to have remedied this situation. In another state, a few IHEs resisted meeting the minimum requirement of offering one or more POS, which was a significant issue in places where as many as 15 high schools fed into one college. A secondary state administrator described the local postsecondary attitude in these cases: "We don't have to serve the other 14 schools; we have our one." The community college system provided some assistance with this issue, and other community colleges in this state were very willing to work with multiple school districts on POS.

According to one state official, other barriers were the time and effort required to walk faculty through the steps and challenges of aligning secondary and postsecondary curriculum; arranging the nuts-and-bolts sessions on the step-by-step process of developing articulation agreements; and dispelling "those preconceived notions [about secondary students] that exist sometimes on the part of the postsecondary faculty."

Another barrier cited in some states was the lingering perception that "vocational education" was a place to send "problematic" students or those who were not considered "college material." One state CTE director reported contracting with an outside agency to conduct research and create a communications plan. Based on the consultants' recommendations, several initiatives were implemented to change public attitudes and perceptions of CTE.

These included changing the name from vocational education to CTE, which took an act of the state general assembly.

State officials identified a number of other barriers to POS. These barriers included lack of guidance from the Department; pervasive budget issues that led CTE educators to worry more about program survival than POS; and lack of knowledge among school counselors and scarcity of materials for educating the public and students about POS, sequential courses of study, and similar CTE efforts.

Local Perspectives

Local district officials identified many of the same barriers as state officials did, including the challenges facing rural schools, resistance to federal efforts based on a philosophy of local control, and lack of coordination between secondary and postsecondary education.

Local secondary CTE administrators shared a number of difficulties they had encountered in working with postsecondary partners. They said that IHEs did not see the benefit of articulation agreements; that IHEs were more interested in the money than in the benefits to students; and that IHE faculty were ambivalent about working with secondary educators. IHE administrators offered parallel concerns about working with secondary educators, such as maintaining standards in the high school class and ensuring that the software used, for example, was current.

Local districts identified another set of barriers to POS development that reflected the circumstances of small rural school districts. These included transportation among widely dispersed schools and colleges; lack of staff to deliver POS courses; and a poor "fit" between POS and small schools (i.e., requirements that might make it impossible for a school with one teacher in a CTE area to provide POS).

Local Perspectives on POS Barriers

Local respondents described specific barriers that might be based on attitudes to POS and logistical challenges to collaboration between LEAs and IHEs:

- Postsecondary educators with negative attitudes toward dual credit courses offered by secondary schools or about the readiness of secondary students for dual credit or enrollment opportunities in several communities;
- In a few communities, students were required to pay tuition to receive community college credit for dual credit coursework;
- In many communities, program and course scheduling challenges made it difficult for students to study at two different education institutions at the same time;
- Placement exams for IHEs that secondary students must pass to take a dual enrollment course served as a barrier in local communities in at least two states; and
- Curriculum differences between secondary and postsecondary programs in the same content area.

Local administrators also noted the complexities posed by coordination and tracking for a college with a mandated service area that includes many high schools and multiple college campuses serving thousands of students.

State and Local Capacity for Collecting Data on POS Enrollment

The six states and 18 local districts relied on a patchwork of data systems and practices to track CTE students. *Perkins IV* neither offers a statutory definition of a POS student nor holds state agencies or local subgrantees accountable for reporting on the number of students participating or their outcomes. As a result, relatively few state or local *Perkins IV* subgrantees are able to produce data on student involvement in these programs. Similarly, few of these systems were equipped to track students from secondary to postsecondary education in a systematic way. A few local districts tracked their students through informal networks and telephone surveys, but none focused on students in POS. One state had implemented a longitudinal system for tracking K–12 students into postsecondary education and beyond but nonetheless lacked a systematic process specifically for tracking POS students, primarily because this reporting is not required. In some states, administrators were planning or taking steps to implement longitudinal data systems, and some states had a few elements of such systems in place.

Current Procedures for Identifying POS Students

Of the six state departments of education, five reported having some system in place that could identify secondary CTE students. In the sixth state, a stand-alone agency (not the state department of education) operated a data system that could identify some secondary CTE students; the system, however, lacked unique student identifiers and local subgrantees, with the exception of those in Tech Prep consortia, were not required to submit data. Most state and local respondents could not distinguish POS students from other overlapping categories like CTE students, dual enrollment participants, or Tech Prep students. One senior state administrator explained the lack of capacity to identify POS students in the state's data system:

> [Tech Prep and POS are] two different systems. . . . Our districts identify their Tech Prep students through that articulation agreement with the colleges and credits received at the college. But our program of study is just a program of study that school districts must have to comply with *Perkins IV*. And [we do not collect]ny additional information that we would submit for further study to see if a student was actually in this specific program of study [or] went to the college. We don't have that kind of a longitudinal data following our students in our program of study.

Only one state had a nascent capacity to distinguish students enrolled in the secondary portion of POS from those enrolled in CTE programs overall due to a relatively new student-level data system. This state department of education's electronic portal, in which all secondary schools and consortia register their POS, was also the point of access for *Perkins* accountability data collection. Subgrantees provided data on a template organized by POS program codes for the 16 career cluster-based POS developed at the state level. In this system, each student has a unique identifier, enabling disaggregation of the data. Because LEAs provided data on every student's level of participation by program code and student identifier, state administrators will soon be able to improve their tracking of POS enrollees. As one state administrator explained, "Ultimately once we start collecting course code data, then we'll be able to align the database of the programs of study that are approved with the courses that are indeed offered and the students [who] take those courses."

While one state had a longitudinal data system in place for tracking K–12 students, the system was not set up to track POS students. The CTE director in this state asserted that POS need to be tied to performance accountability measures and said that "having some clear guidance from the Department in terms of the measurement approach that we use for that [purpose] would be very helpful."

Less comprehensive systems in other states gathered some data on students' transition from secondary to postsecondary CTE programs. For example, one state had a system designed to collect dual credit and dual enrollment data for secondary students. Another state also had continuation data for dual enrollment students entering community colleges or the state college system. In a third state, the Tech Prep program recently installed a new data system that could track students from secondary to postsecondary education. As one administrator noted, "This is the first time that the two systems are going to be able to talk to each other, and so data down the road will be better . . . because they will then be able to track [Tech Prep students] with the student information from high school to college into the courses of study."

In addition, most states had databases of postsecondary students, but these typically were limited to one postsecondary system (i.e., community colleges, but not the state four-year college system). They also might not yet have the capacity to distinguish students on a CTE track from those on an academic trajectory or to distinguish those participating in POS.

Tracking Secondary Students into Two-Year or Baccalaureate Institutions

Few data systems had the capacity to track secondary students into postsecondary institutions. Those that did were not comprehensive; they could only track a subset of CTE students into a subset of state postsecondary institutions. Two states reported that they could track Tech Prep or dual enrollment students from secondary education into the state postsecondary system; in one case, this included the ability to track dual enrollment students into

both the community college system and the state four-year college system. None of these systems was yet capable of distinguishing students engaged in POS from those engaged in CTE or Tech Prep programs. As one state official from a state with substantial data-collection capacity observed, "The answer is we currently don't have an easy way at either system office to watch students move from one segment to another."

One state operated a longitudinal data system that tracked secondary CTE students into postsecondary institutions. The system also tracked student occupational competencies outlined in the state curriculum frameworks and tied them to a standard classification code. Many students could not be tracked, however, because not all state colleges—including the state university system—participated in the system.

In at least three states, administrators reported participating in the National Student Clearinghouse (NSC) to track students in postsecondary education. One state purchased a "statewide license," which gave LEA staff free access to the NSC and enabled state staff to locate some CTE concentrators who had moved into postsecondary education through a data match. According to the staff person in charge of this process, "We're in our second year of doing a data match, where we're able to take the big file of all the concentrators from [the state's] data warehouse, send it up to the Clearinghouse, and then get back a report that says, 'Of those kids that you sent up, these are the ones that we found. Here are the ones that are full-time, half-time, and [here are the] institutions they're going to, which ones they transferred to.'" The same staff person described the results of this data matching: "The first time that we did it, we had basically a 72 percent college-going rate for our concentrators compared to a 68 percent overall college-going rate for the state in general."

Plans for Developing Tracking Systems

Most of the plans for new data systems apparently were motivated by the desire for the state to have the capacity to track CTE students after they leave secondary education. One state's next steps in the development of its data system included plans to create an "automated CTE high school graduate follow-up system." Three states were seeking substantial funding for longitudinal systems: one state had plans for a longitudinal data system, for which they were hoping to receive federal Race to the Top support; another state was pursuing a Statewide Longitudinal Data System (SLDS) grant for the same purpose; and a third state had submitted a proposal for funds to establish a longitudinal data system across all the levels of postsecondary and K–12 education as well as for data matching with the employment development department and Unemployment Insurance (UI) wage data.

In one state where the existing secondary database was operated by a stand-alone agency, the state department of education was also establishing a new database that would improve its capacity to collect student-level data. The database was intended also to address the quality

of the CTE data. One state administrator explained how the database under development would work:

> We [will] have identifiers at the district, school, course, section, and student levels. With those, we can have discrete measures relative to CTE, or we can put attributes on things. For an agricultural biology course, for example, they can list it and code it as a biology course, but the district can indicate that it's also a CTE course. What we were talking about doing . . . once this huge data reservoir is there, [is dipping] our straw into that. If we have a computerized application that describes what the school or the district's POS is, we should be able to electronically match up their application with what actually shows up in the data.

Barriers to Collecting Data on POS Enrollment

State officials identified several barriers to tracking POS student outcomes. Three states reported that challenges related to the *Family Educational Rights and Privacy Act* (*FERPA*) or the use of student Social Security numbers impeded their efforts to establish new databases that bridge secondary and postsecondary education.

Officials in two states bluntly referred to the concept of tracking POS outcomes as "an unfunded mandate." As one state official explained, "Had that been built into *Perkins IV* legislation, then we would've looked at it differently, definitely, of course. But it wasn't, and so we just followed the language of the law." The second official observed, "All of us [states] will have to be buying degree audit software that will allow us to classify students into multiple POS."

In addition, officials in one state questioned whether the data would be useful, even if they could be gathered. They noted that data on the number of students who enrolled in and completed POS cannot reveal the success of the POS because students who participated in POS but determined that a particular career pathway was not for them may nonetheless have valuable outcomes. Even if the goal is simply to measure how CTE students are progressing along the educational continuum, POS would be too limited a category. Officials from several local districts made similar observations—in other words, that students who leave a program early to obtain employment, or students who attend multiple colleges to complete their training, will not be "counted the way they should be counted."

Summary

The study team conducted case study visits in six states and three local communities within each state during the second year of *Perkins IV* implementation. Interviews with more than 130 respondents revealed that most ot these state and local practitioners were making serious efforts to develop and implement POS, establish more sophisticated accountability systems, and stretch limited *Perkins* funds to comply with statutory expenditure requirements and limitations (e.g., caps on administrative and leadership funds). Although the interviews occurred relatively early in the life cycle of *Perkins IV*, they revealed a number of creative approaches at the state and local levels. State and local administrators described steps taken to move to web-based reporting systems for collection and compilation of *Perkins* accountability data, strategies for engaging secondary and postsecondary administrators and faculty in the creation of POS that respond to labor market needs, and efforts to use limited *Perkins* funds to strengthen CTE programs and enhance coordination—both between academic and CTE instruction and across the secondary and postsecondary levels.

Variations across and within states provided dramatic evidence of the flexibility inherent within *Perkins IV*. While all respondents described efforts to comply with the same statutory provisions, the case studies revealed significant differences in interpretation and a range of adaptations based on state and local context, needs, resources, and priorities. Although some implementation strategies were reportedly working better than others, no state, LEA, or IHE could be identified as having all of the statutory elements in place and as working effectively for all populations. Most respondents were quick to point to their accomplishments with regard to POS, accountability systems, and uses of *Perkins* funds—and equally willing to acknowledge the limitations or shortcomings of strategies attempted in their states or communities.

Nonetheless, a number of common themes, strategies, concerns, and frustrations were identified at all or most of the case study sites. These findings may not be representative of all states, LEAs, and IHEs, but they provide a detailed exploration of the status of *Perkins* implementation in six states specifically chosen for location, size, and demographic diversity and in urban, suburban, and rural communities within these states. The next three sections provide a recap of key findings in the three main topic areas: *Perkins IV* expenditures; accountability systems; and POS.

Finance Systems

Despite reports of serious budget constraints, all of the case study states and most of the LEAs and IHEs provided funding for CTE through categorical grants or general budget expenditures for teachers, administrators, facilities, and classroom materials. Nonetheless, almost all respondents indicated that the need for *Perkins* funds exceeded the dollars available.

State CTE administrators reported that administrative funds were inadequate, especially with the new requirements of *Perkins IV*. They also noted that the amount designated for leadership funds was insufficient to cover expanded categories of required and permissible uses. Similarly, LEA and IHE administrators agreed that the amount of *Perkins* funds they received was insufficient to meet needs and statutory requirements.

Across the states, decisions about the secondary and postsecondary funding split were based on factors such as data analyses, competitive grant processes, the number of eligible providers, and comparative enrollments. Four of the six case study states merged Tech Prep funds with their basic *Perkins* grants, and four used the reserve option to enhance flexibility, increase funding for rural communities, and support innovation and technical assistance. In most of the states, a sizeable number of LEAs and IHEs formed consortia to meet the minimum allocation threshold.

Accountability Systems

Almost all state and local CTE administrators interviewed recognized the need for a *Perkins* accountability system, but many questioned whether some of the core indicators are appropriate measures of performance (specifically, the indicators for academic attainment and nontraditional participation and completion) and cited numerous barriers to collecting the required data. Nonetheless, most state and local CTE administrators and faculty appeared to be taking the new reporting requirements seriously and placing greater emphasis on collecting and reporting valid and reliable data. The sophistication of the *Perkins* accountability systems varied significantly across (and sometimes within) the case study states. State and local administrators identified shortcomings in all of the accountability systems, with none reporting the capacity to track CTE students systematically from secondary to postsecondary education. Although state CTE administrators generally exhibited a thorough understanding of *Perkins* reporting requirements and a commitment to helping LEAs and IHEs provide valid and reliable data, local case study visits suggested significant differences in their understanding of the state's performance measures and the populations to be reported.

State CTE administrators generally appreciated the nonregulatory guidance provided by the Department, but they liked the flexibility to create their own definitions and performance measures based on state data sources, reporting capacity, and program delivery structures. All of the case study states used at least one of the Department's recommendations for measurement populations and performance measures, but none adopted all of them.

Reporting capacity within the states ranged from sophisticated longitudinal systems to more rudimentary systems that required local staff to compile or "cut and paste" data from other sources. A number of administrators noted that the cost of *Perkins* data collection and reporting far exceeds the human and financial resources available for this purpose, and most

cited the need to identify other funding sources to support the development of sophisticated accountability systems. State administrators often reported using local *Perkins* performance data to identify programs in need of improvement, but local administrators offered varied opinions about the extent to which local performance targets actually led to improved performance. Similarly, state administrators typically expressed confidence in their ability to report disaggregated data on most of the special populations identified in *Perkins IV*, but local CTE practitioners were less sanguine about their capacity to provide these data and more explicit in their descriptions of the challenges associated with collecting them.

Programs of Study

State CTE administrators in case study states indicated that they incorporated the four statutory POS components into technical assistance efforts and approval criteria used for local POS, but interpretation of the four components was not always consistent across or within states. Although most state administrators expressed opposition to regulatory language defining POS, a number said that the Department's *POS Design Framework* would have been helpful earlier in the process of POS development and implementation. At both the secondary and postsecondary levels, perceptions of POS varied considerably: some CTE officials identified the POS concept as the most important change in *Perkins IV,* while others viewed it as simply a new name for an existing approach.

Processes and policies for POS development, approval, and implementation varied across and within states—and most CTE administrators advocated for continued flexibility in these areas. Development of effective partnerships between secondary and postsecondary systems was a significant hurdle in many sites despite widespread understanding that coordination is a major goal of *Perkins IV*. The relationships and processes established under Tech Prep played a prominent role in POS development and implementation in many places. With no accountability measures required for POS in *Perkins IV*, state and local CTE administrators in case study sites were rarely able to distinguish POS participants from other CTE students. None reported systematic capacity to track POS enrollment or outcomes

Concluding Thoughts

Despite variation in approaches to *Perkins IV* implementation across and within states, the case studies identified many commonalities—including a common resistance to the possibility of losing the flexibility afforded by the current legislation. The case studies highlighted the trade-offs associated with providing flexibility at the state and local levels while seeking consistency in data collection and reporting. Although both flexibility and consistency are important goals, the case study findings indicate that it may not be possible to achieve both simultaneously and suggest that priorities may need to be determined in future *Perkins* reauthorizations.

Attachment A. Interview Protocols

State Secondary CTE Director

Context/Perspective

1. What are your current roles/responsibilities in the implementation of *Perkins IV*? (Probe on changes since *Perkins III*, role related to CTE funding, role related to CTE accountability, and role related to programs of study [POS].)

2. How does CTE fit into your larger state education reform efforts?

Programs of Study

PROGRAMS OF STUDY CREATION: This section will help us to understand how POS were developed within the state. See the relevant state survey questions for background.

3. What progress has the state made toward developing POS? What is the working definition of a POS in your state and how was it developed? How was it communicated to local education agencies (LEAs) and postsecondary institutions?

4. What is the approval process for POS in the state? (Probe on approval criteria and obtain a copy if there are written criteria.) Have you rejected any POS submitted to the state for approval? (If yes, probe on how many and why. If no, probe on reasons for which a POS might be rejected.)

5. In your state survey you indicated that your state agency played the following roles in developing POS (list from state survey). Can you provide us with additional details or clarifying information on POS development?

6. How would you characterize the typical process used to develop POS within local communities? For example, was POS development at the local level usually led by school districts, postsecondary institutions, or the two working as partners? How did employers and other business groups participate in the development process?

7. How comparable are POS in similar pathways (e.g., construction or health) that are offered by different local providers? Are common curricula and assessments used in similar POS across the state?

8. Would your state support the development of statutory language and/or federal regulations defining the components of POS? If yes, what types of language would you support? If no, why not and what type of direction, if any, would you support?

POS IMPLEMENTATION: These questions will help us understand how implementation of POS occurred at both the state and local levels.

9. What progress has the state made toward implementing POS? Specifically, what factors have facilitated implementation? What barriers have you encountered? (Probe on specific facilitating factors and barriers.)

10. Did you have sufficient information to support districts and their postsecondary partners in developing POS that include the statutory elements? (Probe on what information was available and what wasn't.) What types of additional information or support from the Office of Vocational and Adult Education (OVAE) would have been helpful?

11. In your state director survey, you indicated that your state provides the following types of technical assistance (review list) related to implementation of POS. Are there any other types of support that were offered? To what extent have districts and postsecondary institutions participated in these technical assistance activities? Which ones were most successful? Least successful?

12. Is at least one POS currently available in each district or consortia? (Probe on why or why not.) What percentage of local providers is offering more than one POS? What is the state's plan for expanding POS offerings in the future?

13. What is your assessment of the general quality of the POS offered in the state? (Probe on the characteristics of high-quality POS and the steps that are being taken to improve quality if there are concerns in this area.)

ASSESSING OUTCOMES OF POS IMPLEMENTATION: Although states are not required to report on POS outcomes, these questions will help us understand how states are measuring the effects of these programs.

14. Do you have a statewide system or process for tracking POS enrollment? For tracking POS outcomes? (If yes, who maintains it? Is it differentiated by program? Does it contain data on both secondary and postsecondary students?) If the state does not have a tracking system, are there plans to develop one?

15. Do you have the capacity to track or follow secondary POS students into two-year postsecondary institutions in the state? Into baccalaureate institutions? Is this capacity limited to secondary students who remain in the same POS from secondary to postsecondary or those who remain within an established secondary/postsecondary partnership? (Probe on extent of state's capacity to track secondary to postsecondary transitions and ask for summaries or examples of tracking data that show extent to which students who begin a POS at secondary level continue at postsecondary level.)

Funding

DISTRIBUTION OF FUNDING: These questions will help us understand how the existing allocation formula supports or inhibits POS development in particular and the attainment of the Act's provisions in general.

16. In your state plan update, you indicated that your state is allocating the following percentages of funding to the secondary and postsecondary sectors: [Provide information]. What are the reasons for this split? (Probe on how determined and changes from *Perkins III*.) If applicable, how does your state allocate *Perkins IV* dollars to area or regional vocational/technical schools? (Probe on changes since *Perkins III*.)

17. Your state plan indicated that you **ARE or ARE NOT** using the reserve fund. Please tell us a little more about the reasons for this decision. (If state is using the reserve fund, probe on how the funds are being targeted.)

18. What must local education agencies (LEAs) do to obtain *Perkins* funding? (Probe on application process, use of RFPs, use of local plans, and reasons why a district might not get funding.)

19. Were there any districts or postsecondary institutions in your state that were unable to qualify for the minimum allocation **and** unable to form consortia? If yes, were waivers used to provide *Perkins* funding? (Probe on why or why not.)

20. How are *Perkins* state leadership funds used? (Probe on changes since *Perkins III* and whether leadership funds are sufficient to support required and permissible uses, including POS development.)

21. How are *Perkins IV* state administrative funds used? (Probe on changes since *Perkins III*.) How has the state met matching requirements for use of *Perkins* administrative funds? (Probe on whether funding is sufficient to support POS development, accountability provisions, and other administrative functions.)

22. What suggestions would you offer for changes in funding provisions in future *Perkins* legislation? (Probe on specific changes to uses of reserve, leadership, and administrative funds.)

23. Have expenditures for non-traditional training and employment changed under *Perkins IV*? Why or why not? (Probe on whether state believes continuation of nontraditional measures and programs is warranted.

24. You indicated in your state survey that your state (HAS or HAS NOT) merged its Tech Prep funding into its basic grant.

- **If your state DID NOT merge Tech Prep,** how are Tech Prep funds distributed and why? (Probe on formula vs. competitive and criteria for distribution. If formula, what is it?)
- **If your state DID merge Tech Prep,** what has happened to existing network of Tech Prep programs and coordinators? (Probe on benefits/drawbacks of merger.)
- **In either case,** how does a Tech Prep program differ from a POS?

25. Did CTE receive ARRA funds in your state? (Probe on why or why not and for what purposes, if yes.)

Accountability

ACCOUNTABILITY SYSTEM DESIGN: These questions will help us understand how your state measures *Perkins* outcomes and how federal nonregulatory guidance has supported development of its accountability system.

26. According to your state five-year plan submission, your state has defined a CTE participant as [fill in the blank] and a CTE concentrator as [fill in the blank]. How has your state communicated these definitions to LEAs? How do LEAs identify these individuals and how consistent are these populations across agencies?

27. What steps does your state take to support the collection of valid and reliable *Perkins IV* accountability data from local subgrantees? (Probe for designation of responsibilities [i.e., who does what], types of training and TA provided, types of follow up to assure data quality, and changes since *Perkins III*.)

28. How did the state use the nonregulatory guidance provided by the OVAE to support its efforts to construct measures and define measurement populations? (Probe on extent of use and why.) Do you believe that OVAE should issue regulations regarding measurement populations, measure construction, and reporting processes for *Perkins*? (Probe on why or why not.)

29. In our review of your state plan submission, we see that your state has adopted the following measure constructions. [Insert measure constructions.] How does your state gather information to report on these measures? What challenges are associated with data collection? (If the state chose not to follow OVAE's nonregulatory guidance for one or more measures, probe on reasons for selection of different measures.)

DIFFICULTY IN COLLECTING DATA: These questions are intended to assist us in understanding the obstacles states face in collecting data on the measures and specific subpopulations of students.

30. What is your state's capacity to report on special populations and subpopulations (e.g., individuals with disabilities, single parents including teen parents, displaced homemakers, economically disadvantaged students including foster children, academically disadvantaged students, English language learners, students pursuing occupations that are nontraditional for their gender)? How useful is this information? What changes, if any, would you suggest that future legislative efforts address?

31. How burdensome are the *Perkins* accountability measures at the state, district, and school/institution levels? What recommendations would you suggest to reduce burden in future legislation?

32. What investment has the state made in data systems or staffing to meet *Perkins IV* data requirements? (Probe on changes in staff FTEs and resources required to build or adapt management information systems, design surveys, train staff, etc.) How will the adoption of state longitudinal data systems affect future reporting? Have the new accountability requirements required investments at the local level?

USE OF DATA TO SUPPORT PROGRAM IMPROVEMENT: These questions will help us understand how the state and local agencies are using data.

33. How are accountability data used by the state? By eligible recipients?

34. How were adjusted performance levels on core indicators negotiated with OVAE? (Probe on suggested changes to the negotiation process.)

35. How were adjusted performance levels on core indicators negotiated with districts and postsecondary institutions? To what extent have these local performance targets affected the state's ability to identify programs in need of improvement? To what extent have they contributed to improved performance at the state level? Should local performance targets be included in future legislation? (Probe on why or why not.)

36. What rewards and sanctions are available and used? (Probe on criteria for threshold levels for state actions, process used, and impact on local programs.) Have any local programs been subject to the specific sanctions outlined in *Perkins IV* and, if so, have the sanctions led to program improvement?

Other

37. How is information about CTE communicated to the state superintendent, the state board of education, and the general public? (Ask for examples of reports or agenda items.)

38. Does the state award **academic** credit for coursework completed in a CTE subject area or class? Does the state have any plans to introduce or expand this option?

39. What are the certification requirements for CTE teachers in the state? Are they similar to the certification requirements for other secondary teachers? Is alternative licensure an option for CTE teachers? (Probe on challenges associated with finding qualified CTE teachers and options for getting them into the classroom.)

State Postsecondary CTE Director

Context/Perspective

40. What are your current roles/responsibilities in the implementation of *Perkins IV*? (Probe on changes since *Perkins III*, role related to CTE funding, role related to CTE accountability, and role related to programs of study [POS].)

Programs of Study

PROGRAMS OF STUDY CREATION: This section will help us to understand how POS were developed within the state. See the relevant state survey questions for background.

41. What progress has the state made toward developing POS? What is the working definition of POS in your state and how was it developed? How was it communicated to postsecondary institutions and local educations agencies (LEAs)?

42. What is the approval process for POS in the state? (Probe on approval criteria and obtain a copy if there are written criteria.) Have you rejected any POS submitted to the state for approval? (If yes, probe on how many and why. If no, probe on reasons for which a POS might be rejected.)

43. In your state survey you indicated that your state agency played the following roles in developing POS (list from state survey). Can you provide us with additional details or clarifying information on POS development?

44. How would you characterize the typical process used to develop POS within local communities? For example, was POS development at the local level usually led by school districts, postsecondary institutions, or the two working as partners? How did employers and other business groups participate on the development process?

45. How comparable are POS in similar pathways (e.g., construction or health) that are offered by different local providers? Are common curricula and assessments used in similar POS across the state?

46. Would your state support the development of statutory language and or federal regulations defining the components of POS? If yes, what types of language would you support? If no, why not and what type of direction, if any, would you support?

47. POS Implementation: These questions will help us understand how implementation of POS occurred at both the state and local levels.

48. What progress has the state made toward implementing POS? Specifically, what factors have facilitated implementation? What barriers have you encountered? (Probe on specific facilitating factors and barriers.)

49. Did you have sufficient information to support postsecondary institutions and their district partners in developing POS that include the statutory requirements? (Probe on what information was available and what wasn't). What types of additional information or support from the Office of Vocational and Adult Education (OVAE) would have been helpful?

50. In your state director survey, you indicated that your state provides the following types of technical assistance (review list) related to implementation of POS. Are there any other types of support that were offered? To what extent have postsecondary institutions and districts participated in these technical assistance activities? Which ones were most successful? Least successful?

51. Is at least one POS currently available in each postsecondary institution? (Probe on why or why not.) What percentage of postsecondary institutions is offering more than one POS? What is the state's plan for expanding POS offerings in the future?

52. What is your assessment of the general quality of the POS offered in the state? (Probe on the characteristics of high-quality POS and the steps that are being taken to improve quality if there are concerns in this area.)

53. Assessing Outcomes of POS Implementation: Although states are not required to report on POS outcomes, these questions will help us understand how states are measuring the effects of these programs.

54. Do you have a statewide system or process for tracking POS enrollment? For tracking POS outcomes? (If yes, who maintains it? Is it differentiated by program? Does it contain data on both secondary and postsecondary students?) If the state does not have a tracking system, are there plans to develop one?

55. Do you have the capacity to track or follow secondary POS students into two-year postsecondary institutions in your state? Into baccalaureate institutions? Is this capacity limited to secondary students who remain in the same POS from secondary to postsecondary or those who remain within an established secondary/postsecondary partnership? (Probe on extent of state's capacity to track secondary to postsecondary transitions and ask for summaries or examples of tracking data that show extent to which students who begin a POS at secondary level continue at postsecondary level.)

Funding

DISTRIBUTION OF FUNDING: These questions will help us understand how the existing allocation formula supports or inhibits POS development in particular and the attainment of the Act's provisions in general.

56. In your state plan update, you indicated that your state is allocating the following percentages of funding to the secondary and postsecondary sectors: [Provide information]. What are the reasons for this split? (Probe on how determined and changes from *Perkins III*.) If applicable, how does your state allocate *Perkins IV* dollars to area or regional vocational/technical schools? (Probe on changes since *Perkins III*.)

57. Were there any districts or postsecondary institutions in your state that were unable to qualify for the minimum allocation **and** unable to form consortia? If yes, were waivers used to provide *Perkins* funding? (Probe on why or why not.)

58. What must postsecondary institutions do to obtain *Perkins* funding? (Probe on application process, use of RFPs, use of local plans, and reasons why an institution might not get funding.)

59. Your state plan indicated that you **ARE or ARE NOT** using the reserve fund. Please tell us a little more about the reasons for this decision. (If state is using the reserve fund, probe on how the funds are being targeted.)

60. How are *Perkins* state leadership funds used? (Probe on changes since *Perkins III* and whether leadership funds are sufficient to support required and permissible uses, including POS development.)

61. How are *Perkins IV* state administrative funds used? (Probe on changes since *Perkins III*.) How has the state met matching requirements for use of *Perkins* administrative funds? (Probe on whether funding is sufficient to support POS development, accountability provisions, and other administrative functions.)

62. What suggestions would you offer for changes in funding provisions in future *Perkins* legislation? (Probe on specific changes to uses of reserve, leadership, and administrative funds.)

63. Have expenditures for nontraditional training and employment changed under *Perkins IV*? Why or why not? (Probe on whether state believes continuation of nontraditional measures and programs is warranted.)

64. You indicated in your state survey that your state (HAS or HAS NOT) merged its Tech Prep funding into the basic grant.

- **If your state DID NOT merge Tech Prep,** how are Tech Prep funds distributed and why? (Probe on formula vs. competitive and criteria for distribution. If formula, what is it?)
- **If your state DID merge Tech Prep,** what has happened to existing network of Tech Prep programs and coordinators? (Probe on benefits/drawbacks of merger.)
- **In either case,** how does a Tech Prep program differ from a POS?

65. Did CTE receive ARRA funding in your state? (Probe on why or why not and for what purposes, if yes.)

Accountability

ACCOUNTABILITY SYSTEM DESIGN: These questions will help us understand how your state measures *Perkins* outcomes and how federal nonregulatory guidance has supported development of its accountability system.

66. According to your state five-year plan submission, your state has defined a CTE participant as [fill in the blank] and a CTE concentrator as [fill in the blank]. How has your state communicated these definitions to postsecondary institutions? How do postsecondary institutions identify those individuals and how consistent are these populations across institutions?

67. What steps does your state take to support the collection of valid and reliable *Perkins IV* accountability data from local subgrantees? (Probe for designation of responsibilities [i.e., who does what], types of training and TA provided, types of follow up to assure data quality, and changes since *Perkins III*.)

68. How did the state use the nonregulatory guidance provided by OVAE to support its efforts to construct measures and define measurement populations? (Probe on extent of use and why.) Do you believe that OVAE should issue regulations regarding measurement populations, measure construction, and reporting processes for *Perkins*? (Probe on why or why not.)

69. In our review of your state plan submission, we see that your state has adopted the following measure constructions. [Insert measure constructions.] How does your state gather information to report on these measures? What challenges are associated with data collection? (If the state chose not to follow OVAE's nonregulatory guidance for one or more measures, probe on reasons for selection of different measures.)

70. Difficulty in Collecting Data: These questions are intended to assist us in understanding the obstacles states face in collecting data on the measures and specific subpopulations of students.

71. What is your state's capacity to report on special populations and subpopulations (e.g., individuals with disabilities, single parents including teen parents, displaced homemakers, economically disadvantaged students including foster children, academically disadvantaged students, English language learners, and students pursuing occupations that are nontraditional for their gender)? How useful is this information? What changes, if any, would you suggest that future legislative efforts address?

72. How burdensome are the *Perkins* accountability measures at the state, district, and school/institution levels? What recommendations would you suggest to reduce burden in future legislation?

73. What investment has the state made in data systems or staffing to meet *Perkins IV* data requirements? (Probe on changes in staff FTEs and resources required to build or adapt management information systems, design surveys, train staff, etc.) How will the adoption of state longitudinal data systems affect future reporting? Have the new accountability requirements required investments at the local level?

Program Improvement

USE OF DATA TO SUPPORT PROGRAM IMPROVEMENT: These questions will help us understand how the state and local agencies are using data.

74. How are accountability data used by the state? By eligible recipients?

75. How were adjusted performance levels on core indicators negotiated with OVAE? (Probe on suggested changes to the negotiation process.)

76. How were adjusted performance levels on core indicators negotiated with postsecondary institutions and districts? To what extent have these local performance targets affected the state's ability to identify programs in need of improvement? To what extent have they contributed to improved performance at the state level? Should local performance targets be included in future legislation? (Probe on why or why not.)

77. What rewards and sanctions are available and used? (Probe on criteria for threshold levels for state actions, process used, and impact on local programs.) Have any local programs been subject to the specific sanctions outlined in *Perkins IV* and, if so, have the sanctions led to program improvement?

Other

78. How is information about CTE communicated to community college administrators, governing bodies (e.g., boards of trustees or governors), and the general public? (Ask for examples of reports or agenda items.)

79. What are the employment criteria for postsecondary CTE instructors in the state? Are they similar to the criteria for other postsecondary instructors? (Probe on challenges associated with finding qualified CTE instructors and options for getting them into the classroom)

Local Secondary CTE Director

Context/Perspective

80. What are your current roles/responsibilities in the implementation of *Perkins IV*? (Probe on changes since *Perkins III*, role related to career and technical education (CTE) funding, role related to CTE accountability, and role related to programs of study [POS].)

81. How does CTE fit into your district's broader education reform efforts?

Programs of Study

POS CREATION: This section will help us to understand how POS were developed within the state. See the relevant state survey questions for background.

82. What progress has the district made toward developing POS? What is the working definition of a POS in your state and how was it developed? How was it communicated to local education agencies (LEAs)?

83. What role(s) does the state agency play in the development of POS? Are POS developed at the state level, the district/consortia level, or both? Is there a template or format that the state uses to guide POS development?

84. What role(s) does the district play in the development of POS? Is POS development in your community typically led by secondary institutions, postsecondary institutions, or the two working as partners? How did employers and other business groups participate in the development process?

85. How comparable are POS within a given pathway (e.g., construction or health) across the state? Are common curricula and assessments used in similar POS across the state?

86. POS Implementation: These questions will help us understand how implementation of POS occurred at both the state and local levels.

87. What progress has the district made toward implementing POS? Specifically, what factors have facilitated implementation? What barriers have you encountered? (Probe on specific facilitating factors and barriers.)

88. What kinds of technical assistance does the state provide to districts for implementation of POS? (Probe for specific examples such as workshops or individual consultations.) To what extent did your district participate in these activities? Did you have sufficient information and support on POS development and implementation?

89. Is at least one POS currently available in the district? (Probe on why or why not.) What is the plan for expanding the district's POS offerings in future? Have you submitted all of your POS to the state for approval? Were any POS submitted by the district rejected? (If yes, probe on how many and why.)

90. What is your assessment of the general quality of the POS offered in the district? (Probe on the characteristics of high-quality POS and the steps that are being taken to improve quality if there are concerns in this area.)

91. How does a POS differ from a Tech Prep program?

92. Assessing Outcomes of POS Implementation: Although states are not required to report on POS outcomes, these questions will help us understand how states are measuring the effects of these programs.

93. Do you have a statewide system or process for tracking POS enrollment? For tracking POS outcomes?

    - **If yes**, who maintains it? Is it differentiated by program? Does it contain data on both secondary and postsecondary students?

    - **If no**, have you developed a local system for tracking POS enrollment and outcomes?

94. Do you have the capacity to track or follow secondary POS students into two-year postsecondary institutions in the state? Into baccalaureate institutions? Is this capacity limited to secondary students who remain in the same POS from secondary to postsecondary or those who remain within an established secondary/postsecondary partnership? (Probe on extent of capacity to track secondary to postsecondary transitions and ask for summaries or examples of tracking data that show extent to which students who begin a POS at secondary level continue at postsecondary level.)

Funding

DISTRIBUTION OF FUNDING: These questions will help us understand how the existing allocation formula supports or inhibits POS development in particular and the attainment of the Act's provisions in general.

95. How does the state allocate its *Perkins IV* dollars for secondary CTE? (Probe on details of allocation formula and changes since *Perkins III*.)

96. What are local subgrantees (i.e., districts and schools) required to do to obtain funding? (Probe on application process, use of RFPs, use of local plans, and reasons why a district might not get funding.)

97. What is the total (*Perkins*, state, and district) expenditure on CTE in the district? (Probe on proportion from each and changes since *Perkins III*).

98. How does the district spend its *Perkins IV* dollars? (Probe on changes in categories and percentages since *Perkins III*.) To what extent does *Perkins* funding complement or supplement state categorical funds?

99. What is the district's mechanism for allocating *Perkins IV* funds to schools? (Probe on proposal and funding processes including use of RFPs or formulas and changes since *Perkins III*.) What percentage of the district's *Perkins IV* allocation goes to schools?

100. Are there other funding strategies that might be adapted to *Perkins IV* allocations in the state to improve CTE programs and outcomes at the district level? (Probe for specifics.)

101. Have expenditures for nontraditional training and employment changed under *Perkins IV?* Why or why not? (Probe on whether district believes continuation of nontraditional measures and programs is warranted.)

Accountability

ACCOUNTABILITY SYSTEM DESIGN: These questions will help us understand how your state and district measure *Perkins* outcomes.

102. How does the district define CTE? What definitions does the district use for CTE participant and concentrator? (Probe on numbers in each group.) What guidance did you receive from the state agency with regard to these definitions?

103. How are *Perkins IV* accountability data collected in the district? (Probe for designation of responsibilities [i.e., who does what], types of training and TA provided, types of follow up to assure data quality, and changes since *Perkins III*.

104. What specific measures are used to collect data about *Perkins* core indicators in the district? What role did the state agency play in the construction of these measures? (Probe on why specific measures were chosen and extent to which there is confidence in the quality of the data.)

DIFFICULTY IN COLLECTING DATA: These questions are intended to assist us in understanding the obstacles states face in collecting data on the measures and specific subpopulations of students.

105. What is the capacity of the district and schools to provide *Perkins IV* accountability data? (Probe on which data are difficult to collect, the level of burden imposed on districts, and recommendations for reducing this burden.)

106. What populations are included in the district's *Perkins* reporting system? How much confidence do you have in the data that you report on special populations and subpopulations (e.g., individuals with disabilities, single parents including teen parents, displaced homemakers, economically disadvantaged students including foster children, academically disadvantaged students, English language learners, and students pursuing occupations that are nontraditional for their gender)? (Probe on capacity to report disaggregated data and suggestions for improvement.)

107. What investment has the district made in data systems or staffing to meet *Perkins IV* data requirements? (Probe on changes in staff FTEs and resources required to build or adapt MIS systems, design surveys, train staff, etc.)

Program Improvement

USE OF DATA TO SUPPORT PROGRAM IMPROVEMENT: These questions will help us understand how the state and local agencies are using data.

108. How are accountability data used by the district? By individual schools?

109. How were the district's adjusted performance levels on core indicators negotiated with the state? (Probe on suggested changes to the negotiation process.)

110. What is the impact of these performance levels in your district? How have they affected state and local capacity to identify programs in need of improvement?

111. Are you aware of rewards and sanctions related to local adjusted performance levels? (Probe on criteria for threshold levels for state actions, process used, impact on local programs.) Have any of your programs been subject to the specific sanctions outlined in *Perkins IV* and, if so, have the sanctions led to program improvement?

Other

112. How is information about CTE communicated to the superintendent, the board of education, and the general public? (Ask for examples of reports or agenda items.)

113. What are the certification requirements for CTE teachers in the district? Are they similar to the certification requirements for other secondary teachers? Is alternative licensure an option for CTE teachers? (Probe on challenges associated with finding qualified CTE teachers and options for getting them into the classroom.

Local Postsecondary CTE Director

Context/Perspective

114. What are your current roles/responsibilities in the implementation of *Perkins IV*? (Probe on changes since *Perkins III*, role related to career and technical education (CTE) funding, role related to CTE accountability, and role related to programs of study [POS].)

Programs of Study

POS CREATION: This section will help us to understand how POS were developed within the state. See the relevant state survey questions for background.

115. What progress has the institution made toward developing POS? What is the working definition of a POS in your state and how was it developed? How was it communicated to postsecondary institutions?

116. What role(s) does the state agency play in the development of POS? Are POS developed at the state level, the district/consortia level, or both? Is there a template or format that the state uses to guide POS development?

117. What role(s) does your institution play in the development of POS? Is POS development in your community typically led by secondary institutions, postsecondary institutions, or the two working as partners? How did employers and other business groups participate in the development process?

118. How comparable are POS within a given pathway (e.g., construction or health) across the state? Are common curricula and assessments used in similar POS across the state?

119. POS Implementation: These questions will help us understand how implementation of POS occurred at both the state and local levels.

120. What progress has the institution made toward implementing POS? Specifically, what factors have facilitated implementation? What barriers have you encountered? (Probe on specific facilitating factors and barriers.)

121. What kinds of technical assistance does the state provide to postsecondary institutions for implementation of POS? (Probe for specific examples such as workshops or individual consultations.) To what extent did your institution participate in these activities? Did you have sufficient information and support on POS development and implementation?

122. Is at least one POS currently available at the institution? (Probe on why or why not.) What is the plan for expanding the institution's POS offerings in future? Have you submitted all of your POS to the state for approval? Were any POS submitted by the institution rejected? (If yes, probe on how many and why.)

123. What is your assessment of the general quality of the POS offered at the institution? (Probe on the characteristics of high-quality POS and the steps that are being taken to improve quality if there are concerns in this area.)

124. How does a POS differ from a Tech Prep program?

ASSESSING OUTCOMES OF POS IMPLEMENTATION: Although states are not required to report on POS outcomes, these questions will help us understand how states are measuring the effects of these programs.

125. Do you have a statewide system or process for tracking POS enrollment? For tracking POS outcomes?

    - **If yes**, who maintains it? Is it differentiated by program? Does it contain data on both secondary and postsecondary students?
    - **If no**, have you developed a local system for tracking POS enrollment and outcomes?

126. Do you have the capacity to track or follow secondary POS students into two-year postsecondary institutions in the state? Into baccalaureate institutions? Is this capacity limited to secondary students who remain in the same POS from secondary to postsecondary or those who remain within an established secondary/postsecondary partnership? (Probe on extent of capacity to track secondary to postsecondary transitions and ask for summaries or examples of tracking data that show extent to which students who begin a POS at secondary level continue at postsecondary level.)

Funding

DISTRIBUTION OF FUNDING: These questions will help us understand how the existing allocation formula supports or inhibits POS development in particular and the attainment of the Act's provisions in general.

127. How does the state allocate its *Perkins IV* dollars for postsecondary CTE? (Probe on details of allocation formula and changes since *Perkins III*.)

128. What are local subgrantees (i.e., postsecondary institutions) required to do to obtain funding? (Probe on application process, use of RFPs, use of local plans, and reasons why an institution might not get funding.)

129. What is the total (*Perkins*, state, and other) expenditure on CTE at the institution? (Probe on proportion from each and changes since *Perkins III*).

130. How does the institution spend its *Perkins IV* dollars? (Probe on changes in categories and percentages since *Perkins III*.) To what extent does *Perkins* funding complement or supplement state categorical funds?

131. Are there other funding strategies that might be adapted to *Perkins IV* allocations in the state to improve CTE programs and outcomes at the institution level? (Probe for specifics.)

132. Have expenditures for nontraditional training and employment changed under *Perkins IV*? Why or why not? (Probe on whether institution believes continuation of nontraditional measures and programs is warranted.)

Accountability

ACCOUNTABILITY SYSTEM DESIGN: These questions will help us understand how your state and postsecondary institution measure *Perkins* outcomes.

133. How does the institution define CTE? What definitions does the institution use for CTE participant and concentrator? (Probe on numbers in each group.) What guidance did you receive from the state agency with regard to these definitions?

134. How are *Perkins IV* accountability data collected at the institution? (Probe for designation of responsibilities [i.e., who does what], types of training and TA provided, types of follow up to assure data quality, and changes since *Perkins III*.)

135. What specific measures are used to collect data about *Perkins* core indicators at the institution? What role did the state agency play in the construction of these measures? (Probe on why specific measures were chosen and extent to which there is confidence in the quality of the data.)

DIFFICULTY IN COLLECTING DATA: These questions are intended to assist us in understanding the obstacles states face in collecting data on the measures and specific subpopulations of students.

136. What is the capacity of the institution to provide *Perkins IV* accountability data? (Probe on which data are difficult to collect, the level of burden imposed on postsecondary institutions, and recommendations for reducing this burden.)

137. What populations are included in the institution's *Perkins* reporting system? How much confidence do you have in the data that you report on special populations and subpopulations (e.g., individuals with disabilities, single parents including teen parents, displaced homemakers, economically disadvantaged students including foster children, academically disadvantaged students, English language learners, and students pursuing occupations that are nontraditional for their gender)? (Probe on capacity to report disaggregated data and suggestions for improvement.)

138. What investment has the institution made in data systems or staffing to meet *Perkins IV* data requirements? (Probe on changes in staff FTEs and resources required to build or adapt MIS systems, design surveys, train staff, etc.)

Program Improvement

USE OF DATA TO SUPPORT PROGRAM IMPROVEMENT: These questions will help us understand how the state and local postsecondary institutions are using data.

139. How are accountability data used by the institution?

140. How were the institution's adjusted performance levels on core indicators negotiated with the state? (Probe on suggested changes to the negotiation process.)

141. What is the impact of these performance levels at your institution? How have they affected state and local capacity to identify programs in need of improvement?

142. Are you aware of rewards and sanctions related to local adjusted performance levels? (Probe on criteria for threshold levels for state actions, process used, and impact on local programs.) Have any of your programs been subject to the specific sanctions outlined in *Perkins IV* and, if so, have the sanctions led to program improvement?

Other

143. How is information about CTE communicated to community college administrators, governing bodies (e.g., boards of trustees or governors), and the general public? (Ask for examples of reports or agenda items.)

144. What are the employment criteria for CTE instructors at the institution? Are they similar to the criteria for other postsecondary instructors? (Probe on challenges associated with finding qualified CTE instructors and options for getting them into the classroom.)

Secondary CTE Instructor

Context/Perspective

145. What are your current roles/responsibilities in the implementation of *Perkins IV*?

Programs of Study

POS CREATION: This section will help us to understand how POS were developed within the state. See the relevant state survey questions for background.

146. What is the working definition of a POS in your state? How was it communicated to local education agencies (LEAs)?

147. Have you or other staff at this school contributed to the development of POS? **If yes,** probe on the nature of the contributions. **If no,** probe on why not.

148. What role(s) does the district play in the development of POS? Is POS development in your community typically led by secondary institutions, postsecondary institutions, or the two working as partners? How did employers and other business groups participate in the development process?

149. POS Implementation: These questions will help us understand how implementation of POS occurred at both the state and local levels.

150. What progress has the district made toward implementing POS? Specifically, what factors have facilitated implementation? What barriers have you encountered? (Probe on specific facilitating factors and barriers.)

151. Does your district or school offer dual enrollment courses or other opportunities for students to earn postsecondary credits at the secondary level? (If yes, probe for details on these opportunities and how they're defined.)

    - **For districts that offer opportunities for students to earn postsecondary credits,** ask what courses are offered by whom and what qualifications are required to teach these courses.
    - For districts that don't offer such opportunities, probe on why not and plans to do so in the future.

152. What motivates secondary students to enroll in a POS? Is college credit a motivator for secondary students? (Probe on why or why not.)

Funding

DISTRIBUTION OF FUNDING: These questions will help us understand how the existing allocation formula supports or inhibits POS development in particular and the attainment of the Act's provisions in general.

153. What is the district's mechanism for allocating *Perkins IV* funds to schools? (Probe on proposal and funding processes including use of RFPs or formulas and changes since *Perkins III*.)

154. How are *Perkins* funds used within your school? How are decisions made regarding use of *Perkins* funds?

Accountability

ACCOUNTABILITY SYSTEM DESIGN: These questions will help us understand how your state and district measure *Perkins* outcomes.

155. How does the district define CTE? What definitions does the district use for CTE participant and concentrator? (Probe on numbers in each group.) What guidance did you receive from the state agency regarding these definitions?

156. How are *Perkins IV* accountability data collected in your school? (Probe for designation of responsibilities [i.e., who does what], types of training and TA provided, types of follow up to assure data quality, and changes since *Perkins III*.)

157. Difficulty in Collecting Data: These questions are intended to assist us in understanding the obstacles states face in collecting data on the measures and specific subpopulations of students.

158. What is your school's capacity to provide *Perkins IV* accountability data? (Probe on which data are difficult to collect, the level of burden imposed on districts, and recommendations for reducing this burden.)

159. What populations are included in your *Perkins* reporting system? How much confidence do you have in the data that you report on special populations and subpopulations (e.g., individuals with disabilities, single parents including teen parents, displaced homemakers, economically disadvantaged students including foster children, academically disadvantaged students, English language learners, and students pursuing occupations that are nontraditional for their gender)? (Probe on capacity to report disaggregated data and suggestions for improvement.)

Program Improvement

USE OF DATA TO SUPPORT PROGRAM IMPROVEMENT: These questions will help us understand how the state and local agencies are using data.

160. How are accountability data used by the school?

161. Are you aware of sanctions related to *Perkins* performance? Have any of your programs been subject to the specific sanctions related to *Perkins* performance and, if so, have the sanctions led to program improvement?

Postsecondary CTE Instructor

Context/Perspective

162. What are your current roles/responsibilities in the implementation of *Perkins IV*?

Programs of Study

POS CREATION: This section will help us to understand how POS were developed within the state. See the relevant state survey questions for background.

163. What is the working definition of a POS in your state? How was it communicated to postsecondary institutions?

164. Have you or other staff at this institution contributed to the development of POS? **If yes,** probe on the nature of the contributions. **If no,** probe on why not.

165. What role(s) does the institution play in the development of POS? Is POS development in your community typically led by secondary institutions, postsecondary institutions, or the two working as partners? How did employers and other business groups participate in the development process?

166. POS Implementation: These questions will help us understand how implementation of POS occurred at both the state and local levels.

167. What progress has the institution made toward implementing POS? Specifically, what factors have facilitated implementation? What barriers have you encountered? (Probe on specific facilitating factors and barriers.)

168. Does your institution offer dual enrollment courses or other opportunities for students to earn postsecondary credits at the secondary level? (If yes, probe for details on these opportunities and how they're defined.)

    - **For institutions that offer opportunities for students to earn postsecondary credits,** ask what courses are offered and what criteria secondary schools, teachers, and/or students must meet for such courses.

- **For institutions that don't offer such opportunities**, probe on why not and plans to do so in the future.

Funding

DISTRIBUTION OF FUNDING: These questions will help us understand how the existing allocation formula supports or inhibits POS development in particular and the attainment of the Act's provisions in general.

169. How are *Perkins* funds used within your institution? How are decisions made regarding use of *Perkins* funds?

Accountability

ACCOUNTABILITY SYSTEM DESIGN: These questions will help us understand how your state and district measure *Perkins* outcomes.

170. How does the institution define CTE? What definitions does the institution use for CTE participant and concentrator? (Probe on numbers in each group.) What guidance did you receive from the state agency with regard to these definitions?

171. How are *Perkins IV* accountability data collected at the institution? (Probe for designation of responsibilities [i.e., who does what], types of training and TA provided, types of follow up to assure data quality, and changes since *Perkins III*.)

172. Difficulty in Collecting Data: These questions are intended to assist us in understanding the obstacles states face in collecting data on the measures and specific subpopulations of students.

173. What is the capacity of the institution to provide *Perkins IV* accountability data? (Probe on which data are difficult to collect, the level of burden imposed on institutions, and recommendations for reducing this burden.)

174. What populations are included in your *Perkins* reporting system? How much confidence do you have in the data that you report on special populations and subpopulations (e.g., individuals with disabilities, single parents including teen parents, displaced homemakers, economically disadvantaged students including foster children, academically disadvantaged students, English language learners, and students pursuing occupations that are nontraditional for their gender)? (Probe on capacity to report disaggregated data and suggestions for improvement.)

Program Improvement

USE OF DATA TO SUPPORT PROGRAM IMPROVEMENT: These questions will help us understand how the state and local agencies are using data.

175. How are accountability data used by the institution?

176. Are you aware of rewards and sanctions related to *Perkins* performance? Have any of your programs been subject to the specific sanctions related to *Perkins* performance and, if so, have the sanctions led to program improvement?

Attachment B. Performance Measures

Perkins IV identifies a set of core indicators to be used by states and local subgrantees to assess program effectiveness. While *Perkins IV* does not stipulate how *subgrantee*s should measure performance against these indicators, the Department's nonregulatory guidance includes performance measures that identify the proposed numerator and denominator for each core indicator. Attachment B provides a comparison of the Department's recommended performance measures with those adopted at the secondary and postsecondary levels in the six case study states.

Secondary Performance Measures

ACADEMIC ATTAINMENT—READING/LANGUAGE ARTS

OVAE guidance	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school **reading/language arts** assessment administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (*ESEA*) as amended by the *No Child Left Behind Act* based on the scores that were included in the State's computation of adequate yearly progress (AYP) and who, in the reporting year, left secondary education. **Denominator:** Number of CTE concentrators who took the *ESEA* assessments in **reading/language arts** whose scores were included in the State's computation of AYP and who, in the reporting year, left secondary education.
State A	Number of secondary CTE completers performing proficient or above on the *NCLB* assessment.
State B	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school assessment administered under *NCLB* and who have left secondary education in the reporting year. **Denominator:** Number of CTE concentrators who took the *NCLB* assessment and who have left secondary education in the reporting year.
State C	**Numerator:** Sum of 12th grade CTE concentrators with valid scores who have met the proficient or advanced level on the **reading/language arts** portion of the *NCLB* assessment and who left secondary education in the reporting year. **Denominator:** Sum of 12th grade CTE concentrators with valid scores on the **reading/language arts** portion of the *NCLB* assessment and who left secondary education in the reporting year.
State D	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.

ACADEMIC ATTAINMENT—READING/LANGUAGE ARTS—CONTINUED

State E	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school reading/language arts assessment administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (*ESEA*) as amended by the *No Child Left Behind Act* based on the scores that were included in the State's computation of adequate yearly progress (AYP). **Denominator:** Number of CTE concentrators who took the *ESEA* assessment in reading/language arts whose scores were included in the State's computation of AYP.
State F	**Numerator:** Used OVAE guidance. **Denominator**: Used OVAE guidance.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

ACADEMIC ATTAINMENT—MATHEMATICS

OVAE guidance	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school **mathematics** assessment administered by the State under Section 1111(b)(3) of the *Elementary and Secondary Education Act* (*ESEA*) as amended by the *No Child Left Behind Act* based on the scores that were included in the State's computation of AYP and who, in the reporting year, left secondary education. **Denominator:** Number of CTE concentrators who took the *ESEA* assessments in **mathematics** whose scores were included in the State's computation of AYP and who, in the reporting year, left secondary education
State A	Number of secondary CTE completers performing proficient or above on the *NCLB* assessment.
State B	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school assessment administered under *NCLB* and who have left secondary education in the reporting year. **Denominator:** Number of CTE concentrators who took the *NCLB* assessment and who have left secondary education in the reporting year.
State C	**Numerator:** Sum of 12th grade CTE concentrators with valid scores who have met the proficient or advanced level on the mathematics portion of the *NCLB* assessment and who left secondary education in the reporting year. **Denominator:** Sum of 12th grade CTE concentrators with valid scores on the mathematics portion of the *NCLB* assessment and who left secondary education in the reporting year.
State D	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State E	**Numerator:** Number of CTE concentrators who have met the proficient or advanced level on the Statewide high school mathematics assessment administered by the State under Sec. 1111(b)(3) of *ESEA* as amended by *NCLB* based on the scores that were included in the State's computation of AYP. **Denominator:** Number of CTE concentrators who took the *ESEA* assessments in mathematics whose scores were included in the State's computation of AYP.
State F	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

TECHNICAL SKILL ATTAINMENT

OVAE guidance	**Numerator:** Number of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year. **Denominator:** Number of CTE concentrators who took the assessments during the reporting year.
State A	**Numerator:** Lacking statewide skill assessments for all career programs of study, the state has determined that the most valid measure of technical skill attainment for core indicator 2S1 will be a similar process used under *Perkins III*. Locally determined methods that may include industry certification, third party assessment, locally developed criterion referenced assessments, or locally developed methodologies, that may include career and technical grade point average, are all options available to schools and depends upon the program of study area offered locally.
State B	**Numerator:** Number of CTE concentrators who have passed an industry-based assessment and who have left secondary education in the reporting year. **Denominator:** Number of CTE concentrators of programs with industry assessments and who have left secondary education in the reporting year.
State C	**Numerator:** Number of secondary CTE concentrators who passed an end-of-program technical skill assessment that is aligned with industry-recognized standards, including the State CTE model curriculum standards, during the reporting year. **Denominator:** Number of secondary CTE concentrators who took an end-of-program technical skill assessment during the reporting year.
State D	**Numerator:** Number of senior CTE concentrators who (1) earned an industry certified credential through a third-party assessment or (2) successfully passed a State-approved end-of-course or end-of program assessment. **Denominator:** Number of senior CTE concentrators who have left secondary education in the reporting year.
State E	**Numerator:** Number of CTE concentrators who passed state recognized technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year. **Denominator:** Number of CTE concentrators who took the state recognized assessments during the reporting year.
State F	**Numerator:** Number of 12th-grade concentrators who have mastered industry-validated career and technical proficiency standards in the reporting year. **Denominator:** Total number of 12th-grade concentrators who have left the system in the reporting year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

SECONDARY SCHOOL COMPLETION

OVAE guidance	**Numerator:** Number of CTE concentrators who earned a regular secondary school diploma; earned a General Education Development (GED) credential as a State-recognized equivalent to a regular high school diploma (if offered by the State) or other State-recognized equivalent (including recognized alternative standards for individuals with disabilities), or earned a proficiency credential, certificate, or degree, in conjunction with a secondary school diploma (if offered by the State) during the reporting year. **Denominator:** Number of CTE concentrators who left secondary education during the reporting year.
State A	**Numerator:** Number of 12th-grade CTE program concentrators earning a high school diploma by June 30. **Denominator:** Number of 12th-grade CTE program concentrators for the program year ending on June 30.
State B	**Numerator:** Number of CTE concentrators who have attained a high school diploma or GED certificate and who have left secondary education in the reporting year. **Denominator:** Used OVAE guidance.
State C	**Numerator:** Number of 12th-grade CTE program completers earning a high school diploma by June 30. **Denominator:** Number of 12th-grade CTE program completers for the program year ending on June 30.
State D	**Numerator:** Number of senior CTE concentrators who (1) attained a standard high school diploma, (2) GED credential or Adult High School diploma, or (3) a proficiency credential, certificate, or degree in conjunction with a secondary school diploma. **Denominator:** Number of senior CTE concentrators who have left secondary education in the reporting year.
State E	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State F	**Numerator:** Number of 12th-grade concentrators who attained a high school diploma, a State certificate, or a GED. **Denominator:** Number of 12th-grade concentrators who have left the system in the reporting year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

STUDENT GRADUATION RATES

OVAE guidance	**Numerator:** Number of CTE concentrators who, in the reporting year, were included as graduated in the State's computation of its graduation rate as described in Section 1111(b)(2)(C)(vi) of the *ESEA*. **Denominator:** Number of CTE concentrators who, in the reporting year, were included in the State's computation of its graduation rate as defined in the State's Consolidated Accountability Plan pursuant to Section 1111(b)(2)(C)(vi) of the *ESEA*.
State A	**Numerator:** Used OVAE guidance. **Denominator**: Used OVAE guidance.
State B	**Numerator:** Number of concentrators reported as graduated using our State's approved calculation for graduation rate as defined in our State's *NCLB* accountability workbook. **Denominator:** Number of concentrators who have left secondary education in the reporting year.
State C	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State D	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State E	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State F	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

SECONDARY PLACEMENT

OVAE guidance	**Numerator:** Number of CTE concentrators who left secondary education and were placed in postsecondary education or advanced training, in the military service, or employment in the second quarter following the program year in which they left secondary education (i.e., unduplicated placement status for CTE concentrators who graduated by June 30, 2007 would be assessed between October 1, 2007 and December 31, 2007). **Denominator:** Number of CTE concentrators who left secondary education during the reporting year.
State A	**Numerator:** Number of the 12th-grade CTE program completers in the military, enrolled in further education or training, or employed six months after the program year exited from high school. **Denominator:** Total number of the 12th-grade CTE program completers who exited the high school.
State B	**Numerator:** Number of CTE concentrators who were employed, enrolled in higher education, or enlisted in the military during the third post-exit quarter, based on administrative records or a student survey. **Denominator:** Used OVAE guidance.
State C	**Numerator:** The number of the 12th-grade CTE program completers in the military, enrolled in further education or training, or employed six months after exiting the high school. **Denominator:** The total number of the 12th-grade program completers who exited the high school.
State D	**Numerator:** Number of CTE concentrators from the prior year who completed secondary school and who were placed in postsecondary education, employment, and /or military service in the 2nd quarter (October–December) after leaving secondary education during the report year. **Denominator:** Number of CTE concentrators from the prior year who completed secondary school.
State E	**Numerator:** Number of known status CTE concentrators who left secondary education the previous school year and were identified as placed in postsecondary education or advanced training, in the military service, or employment in the second quarter following the program year in which they left secondary education (i.e., unduplicated placement status for CTE concentrators who left secondary education [i.e. graduated or withdrew] by June 30, 2007 and were identified by local survey as in placement between October 1, 2007 and December 31, 2007). **Denominator:** Number of known CTE concentrators who left secondary education during the previous school year.

SECONDARY PLACEMENT—CONTINUED

State F	**Numerator:** Number of concentrators who graduated in the reporting year and who were placed in postsecondary or advanced training, employment, or military within one year of graduation. **Denominator:** Number of concentrators who graduated in the reporting year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

NONTRADITIONAL PARTICIPATION

OVAE guidance	**Numerator:** Number of CTE participants from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE participants who participated in a program that leads to employment in nontraditional fields during the reporting year.
State A	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State B	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State C	**Numerator:** Sum of CTE participants from underrepresented gender groups enrolled in a program sequence that leads to employment in nontraditional fields during the reporting year. **Denominator:** Sum of CTE participants enrolled in a program sequence that leads to employment in nontraditional fields during the reporting year.
State D	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State E	**Numerator:** Number of CTE participants from underrepresented gender groups who participated in a program that, as specified by the National Assessment of Educational Progress (NAPE), leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE participants who participated in a program that, **as specified by NAPE**, leads to employment in nontraditional fields during the reporting year.
State F	**Numerator:** Number of CTE participants from underrepresented gender groups who participated in a course that leads to employment in nontraditional fields in the reporting year. **Denominator:** Number of CTE participants who participated in a course that leads to employment in nontraditional fields in the reporting year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

NONTRADITIONAL COMPLETION

OVAE guidance	**Numerator:** Number of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE concentrators who completed a program that leads to employment in nontraditional fields during the reporting year.
State A	The completion rate is calculated in the same way as the completion rate of all students, but only using the students enrolled in nontraditional programs of study.
State B	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State C	**Numerator:** Sum of CTE concentrators from underrepresented gender groups who completed a program sequence that leads to employment in nontraditional fields during the reported year. **Denominator:** Sum of all CTE concentrators from underrepresented gender groups enrolled in a program sequence that leads to employment in nontraditional fields during the reporting year.
State D	**Numerator:** Number of senior CTE concentrators in programs identified as nontraditional for their gender who (1) attained a standard high school diploma, (2) GED credential or Adult High School diploma, or (3) a proficiency credential, certificate, or degree in conjunction with a secondary school diploma. **Denominator:** Number of senior CTE concentrators in programs identified as nontraditional for their gender that have left secondary education in the reporting year.
State E	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State F	**Numerator:** Number of CTE concentrators from underrepresented gender groups who participated in a course that leads to employment in nontraditional fields in the reporting year. **Denominator:** Number of CTE concentrators who participated in a course that leads to employment in nontraditional fields in the reporting year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

Postsecondary Performance Measures

TECHNICAL SKILL ATTAINMENT

OVAE guidance	**Numerator:** Number of CTE concentrators who passed technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year. **Denominator:** Number of CTE concentrators who took the assessments during the reporting year.
State A	The percentage of students earning a GPA of 2.0 or higher in CTE courses.
State B	Number of CTE concentrators, exiting during the reporting year, who have attained an award (a degree, certificate, apprenticeship, or an industry certification) or completed at least 45 vocational credits with a 2.0 or higher GPA.
State C	The State will use the existing approved *Perkins III* technical skill attainment measure as authorized by Sec. 113(b)(2)(D) of *Perkins IV* as the percentage of students earning a GPA of 2.0 or higher in CTE courses.
State D	**Numerator:** Number of CTE concentrators who (1) earned an industry certified credential through a third-party assessment or (2) earned 75 percent of the program hours required with a GPA of 2.5 or higher. **Denominator:** Number of CTE concentrators in the reporting year.
State E	**Numerator:** Number of CTE concentrators who passed state recognized technical skill assessments that are aligned with industry-recognized standards, if available and appropriate, during the reporting year. **Denominator:** Number of CTE concentrators who took state recognized technical skill assessments during the reporting year.
State F	**Numerator:** During the reporting year, the number of CTE completers who passed, on the first administration, major field assessments that are aligned with industry-recognized standards, if available and appropriate. **Denominator:** Number of CTE completers who took major field assessments for the first time during the reporting year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

CREDENTIAL, CERTIFICATE, OR DIPLOMA

OVAE guidance	**Numerator:** Number of CTE concentrators who received an industry-recognized credential, a certificate, or a degree during the reporting year. **Denominator:** Number of CTE concentrators who left postsecondary education during the reporting year.
State A	The percentage of concentrators who have successfully completed a minimum "threshold of 12 or more units of related coursework" in a CTE program area or received a vocational certificate of less than 12 units and who (1) receive a degree, certificate, or equivalent or (2) complete a transfer program and are classified as transfer ready.
State B	Number of CTE concentrators, exiting during the reporting year, who have attained an award (a degree, certificate, apprenticeship, or an industry certification).
State C	The percentage of "Leavers and Completers" who have successfully completed a minimum "threshold of 12 or more units of related coursework" in a CTE program area or received a vocational certificate of less than 12 units and who (1) receive a degree, certificate, or equivalent or (2) complete a transfer program and are classified as "transfer prepared."
State D	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State E	**Numerator:** Used OVAE guidance. **Denominator:** Number of CTE concentrators who graduated or withdrew from postsecondary education during the reporting year.
State F	**Numerator:** Number of CTE concentrators who received an industry-recognized degree or other award by the end of two years, subsequent to the fall of the sophomore cohort year. **Denominator:** Number of CTE concentrators in the fall of the sophomore cohort year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

STUDENT RETENTION OR TRANSFER

OVAE guidance	**Numerator:** Number of CTE concentrators who remained enrolled in their original postsecondary institution or transferred to another 2- or 4-year postsecondary institution during the reporting year and who were enrolled in postsecondary education in the fall of the previous reporting year. **Denominator:** Number of CTE concentrators who were enrolled in postsecondary education in the fall of the previous reporting year and who did not earn an industry-recognized credential, a certificate, or a degree in the previous reporting year.
State A	Percentage of CTE student concentrators who have successfully completed a minimum "threshold of 12 or more units of related coursework" in a CTE program area and who (1) persisted in education at the community college level or (2) transferred to a four-year institution. Work continues to define the parameters for determining the measure of persistence.
State B	**Numerator:** Number of CTE participants who are not yet concentrators at the beginning of the reporting year, who became CTE concentrators or enrolled in other higher education, including apprenticeship, during the reporting year. **Denominator:** Number of CTE participants during the reporting year who are not yet concentrators at the beginning of the reporting year.
State C	The percentage of CTE student concentrators who have successfully completed a minimum "threshold of 12 or more units of related coursework" in a CTE program area and who (1) persisted in education at the community college level or (2) transferred to a four-year institution.
State D	**Numerator:** Number of CTE concentrators who remained enrolled in their original postsecondary institution or transferred to another two- or four-year postsecondary institution during the reporting year and who were enrolled in postsecondary education in the previous reporting year. **Denominator:** Number of CTE concentrators from the prior year who did not earn an industry-recognized credential, a certificate, or a degree in the previous reporting year.
State E	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.
State F	**Numerator:** Number of CTE concentrators who remained enrolled in their original community college, completed a degree or award at their original community college, or transferred to another two- or four-year postsecondary institution at the time of the subsequent fall after the sophomore concentrator year. **Denominator:** Number of CTE concentrators in the fall of the sophomore cohort year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

STUDENT PLACEMENT

OVAE guidance	**Numerator:** Number of CTE concentrators who were placed or retained in employment, or placed in military service or apprenticeship programs in the 2nd quarter following the program year in which they left postsecondary education (i.e., unduplicated placement status for CTE concentrators who graduated by June 30, 2007 would be assessed between October 1, 2007 and December 31, 2007). **Denominator:** Number of CTE concentrators who left postsecondary education during the reporting year.
State A	The final agreed upon 2008–09 performance level for this core indicator will be determined after April 1, 2008 through a process of negotiations with the U.S. Department of Education.
State B	**Numerator:** Number of CTE concentrators, who were either employed according to UI wage records or in the military, and not enrolled in higher education during the third quarter after they exit. **Denominator:** Number of CTE concentrators exiting during the reporting period and not enrolled in higher education during the 3rd quarter after exit.
State C	The percentage of CTE program leavers and completers who did not transfer to a two- or four-year institution and were found during one of the four quarters following the cohort year in an apprenticeship program, UI-covered employment, the federal government, or the military.
State D	**Numerator:** Number of CTE concentrators from the prior year who received a credential, degree, or certificate who were placed in postsecondary education, employment, and/or military service in the second quarter (October–December) after leaving postsecondary education. **Denominator:** Number of CTE concentrators from the prior year who received a credential, degree, or certificate.
State E	**Numerator:** Number of CTE concentrators who were placed or retained in employment or placed in military service or apprenticeship programs in the second quarter following the program year in which they left your postsecondary institution. **Denominator:** Number of CTE concentrators who graduated or withdrew from postsecondary education during the reporting year.
State F	**Numerator:** Number of CTE concentrators who received an industry recognized degree or award and were placed in employment, enrolled in postsecondary education, or served in the military. **Denominator:** Number of CTE concentrators who graduated from the community colleges at the end of the reporting year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

NONTRADITIONAL PARTICIPATION

OVAE guidance	**Numerator:** Number of CTE participants from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE participants who participated in a program that leads to employment in nontraditional fields during the reporting year.
State A	Not available.
State B	**Numerator:** Number of CTE participants from underrepresented gender groups who enrolled in a nontraditional program during the reporting period. **Denominator:** Number of CTE participants in nontraditional programs during the reporting period.
State C	The percentage of female concentrators participating in CTE program coursework leading to employment in occupations nontraditional for females and male concentrators participating in CTE program coursework leading to employment in occupations nontraditional for males.
State D	**Numerator:** Number of CTE participants from underrepresented gender groups in college credit programs that lead to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE participants in college credit programs that lead to employment in nontraditional fields during the reporting year.
State E	**Numerator:** Number of CTE participants from underrepresented gender groups who participated in a program that, as specified by NAPE, leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE participants who participated in a program that, as specified by NAPE, leads to employment in nontraditional fields during the reporting year.
State F	**Numerator:** Used OVAE guidance. **Denominator:** Used OVAE guidance.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.

NONTRADITIONAL COMPLETION

OVAE guidance	**Numerator:** Number of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE concentrators who completed a program that leads to employment in nontraditional fields during the reporting year.
State A	Not available.
State B	**Numerator:** Number of CTE completers from underrepresented gender groups who enrolled in a nontraditional program during the reporting period. **Denominator:** Number of CTE completers in nontraditional programs during the reporting period.
State C	Percentage of completers in programs leading to employment in nontraditional occupations that are of the underrepresented gender (i.e., female students completing programs leading to employment in occupations nontraditional for females and male students completing programs leading to employment in occupations nontraditional for males). Completion is defined as (1) receiving a degree, certificate, or equivalent; (2) completing a transfer program and being designated as "transfer-prepared"; (3) transferring to a two- or four-year institution; or (4) enlisting in the military.
State D	**Numerator:** Number of CTE concentrators who received an industry-recognized credential, certificate, or degree in college credit programs identified as nontraditional for their gender. **Denominator:** Number of CTE concentrators in college credit programs identified as nontraditional for their gender.
State E	**Numerator:** Number of CTE concentrators from underrepresented gender groups who graduated/completed a program that, as specified by NAPE, leads to employment in nontraditional fields during the reporting year. **Denominator:** Number of CTE concentrators who completed a program that, as specified by NAPE, leads to employment in nontraditional fields during the reporting year.
State F	**Numerator:** Number of CTE concentrators from underrepresented gender groups who completed a program that leads to employment in nontraditional fields by the end of two years subsequent to the fall of the sophomore cohort year. **Denominator:** Number of CTE concentrators from underrepresented gender groups who participated in a program that leads to employment in nontraditional fields in the fall of the sophomore cohort year.

SOURCE: Justesen (2007a) and *Perkins* Five-Year State Plans.