



# New Skills for Youth 2017 Evaluation Annual Report

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## Introduction

New Skills for Youth (NSFY) is a 4-year initiative to support state-led teams of representatives from education, workforce development systems, and industry in developing demand-driven career preparation systems. Launched in 2016 with financial support from JPMorgan Chase & Co., NSFY is a partnership between the Council of Chief State School Officers (CCSSO), Advance CTE, and Education Strategy Group (the NSFY Project Team). The initiative's goals are to increase the number of students completing high-quality career pathways, catalyze transformational approaches to designing and delivering career readiness programming, and disseminate the lessons learned nationwide. While intended to benefit all high school students, NSFY emphasizes the development of career pathways that serve underserved populations and advance economic opportunity.

The initiative has proceeded in two phases. During Phase One (May to October 2016), 24 states and the District of Columbia used planning grants and technical assistance to (a) *conduct an intensive needs assessment* to identify strengths and gaps in their existing career preparation systems; (b) *collect data for five indicators*, to establish a career readiness profile; and (c) *develop a 3-year career readiness action plan*, to identify a strategy and set of activities to achieve their project goals and objectives (CCSSO, 2016). External subject matter experts used Phase One materials and input from the NSFY Project Team and state coaches to identify the states that were best positioned to make meaningful changes to their career preparation systems. In January 2017, the NSFY Project Team and JPMorgan Chase & Co. announced the award of grants to 10 states to help them implement their career readiness action plans, with continued technical assistance and peer-learning opportunities provided.

JPMorgan Chase & Co. engaged RTI International to conduct an independent third-party evaluation of the initiative's second phase. The evaluation will assess states' progress towards achieving the initiative's goals and document lessons learned and promising practices for enhancing career pathways development in other states. This baseline report addresses the first 6 months of Phase Two work, from January through June 2017. The analysis included NSFY project and state documentation as well as communication and interviews with NSFY initiative and state-level team members. (A description of the study methodology is included in Appendix A.)

## Emerging Themes

During the first 6 months of 2017, states began implementation of their career readiness action plans, building on the activities of Phase One. State team members also collaborated with the NSFY Project Team and coaches to refine their career readiness action plans, including identifying measurable outcomes for their plan strategies.

Consequently, evaluation work from January through June 2017 focused on the analysis of baseline data and information that will serve as a foundation for assessing states' progress in meeting the initiative's goals. In the sections that follow, this report reviews how states are defining high-quality career pathways, summarizes states' approaches to addressing the initiative's six key objectives, and describes states' capacity to report on the five NSFY career readiness data indicators.

A review of states' Phase One documentation and career readiness action plans, coupled with input from NSFY project staff, suggests several themes with possible implications for future work.

- *States use of career and technical education as a foundation for pathways expansion*—States are using their career and technical education (CTE) programs of study as a starting point for developing and expanding career pathways. CTE systems and student engagement in CTE programming feature prominently in states' career readiness action plans and baseline data submissions. In the coming year, RTI will

examine the extent to which states are using CTE to develop career pathways systems that might incorporate but also expand beyond traditional CTE programming.

- *The contribution of comprehensive technical assistance and targeted financial support to pathways development:* NSFY states receive individualized technical assistance, peer-learning resources, and grant funds to support career pathways system transformation. In coming months, RTI will examine the extent to which states can make effective use of initiative support and how these resources contribute to achieving the initiative's goals.
- *The alignment of state data systems and career pathways performance outcomes:* State data for the five NSFY career readiness data indicators will be crucial in evaluating the initiative's success. The baseline data collected by states during Phase One suggest that states' capacity to report on several of the indicators and subpopulations is limited. Apart from three states, states' submissions use CTE concentrator data as a proxy for career pathways participation, and data for most of the indicators are not comparable across states. RTI will work with states to develop consistent guidelines for data reporting and track states' progress towards expanding their capacity to track career pathways development and student participation.
- *State starting points and stages of career pathways development:* The review of states' career readiness action plans and Phase One artifacts shows states' different stages of pathways system development. In Phase One, some states already were enrolling students in career pathways that incorporated at least some of the pathway components included in the NSFY grant application guidelines: spanning secondary and postsecondary systems; blending rigorous core academic and career technical instruction; offering focused career guidance and advisement systems, including high-quality work-based learning experiences; and culminating in postsecondary or industry credentials of value (CCSSO, 2016). Other states were convening stakeholders to expand and initiate pathway development. As a result, state career readiness action plans vary from scaling up existing pathways and strengthening their components to defining and establishing new pathways. RTI will collect data to analyze how states' differing career pathways starting points have shaped their approaches to NSFY and their progress towards meeting the initiative's goals.

The remainder of this report presents the analysis findings underpinning these themes, organized into five sections, followed by a conclusion outlining the next evaluation steps. The background and career pathways definition sections describe the NSFY theory of change and the organization of the initiative and compare how the initiative and the states define high-quality career pathways. The next sections review state approaches to NSFY implementation by summarizing state career readiness action plans and the composition of state NSFY teams. The section on the NSFY data indicators summarizes the data submitted by states in their Phase One artifacts and provides draft guidelines for future data collection, which will be refined in collaboration with the NSFY Project Team and Phase Two states.

## Background

NSFY leverages tools and lessons learned from CCSSO's Career Readiness Initiative (CRI), which assisted 17 states in using labor market information and engaging employers to design rigorous career pathways. The 2014 report of the CRI task force preceding the initiative, *Opportunities and Options: Making Career Preparation Work for Students*, offered a vision of high-quality career pathways and proposed steps for their development that form the backbone of the NSFY model (CCSSO, 2014) (Exhibit 1). A total of 46 states and territories signed on to the original task force recommendations.

### Exhibit 1. Theory of change



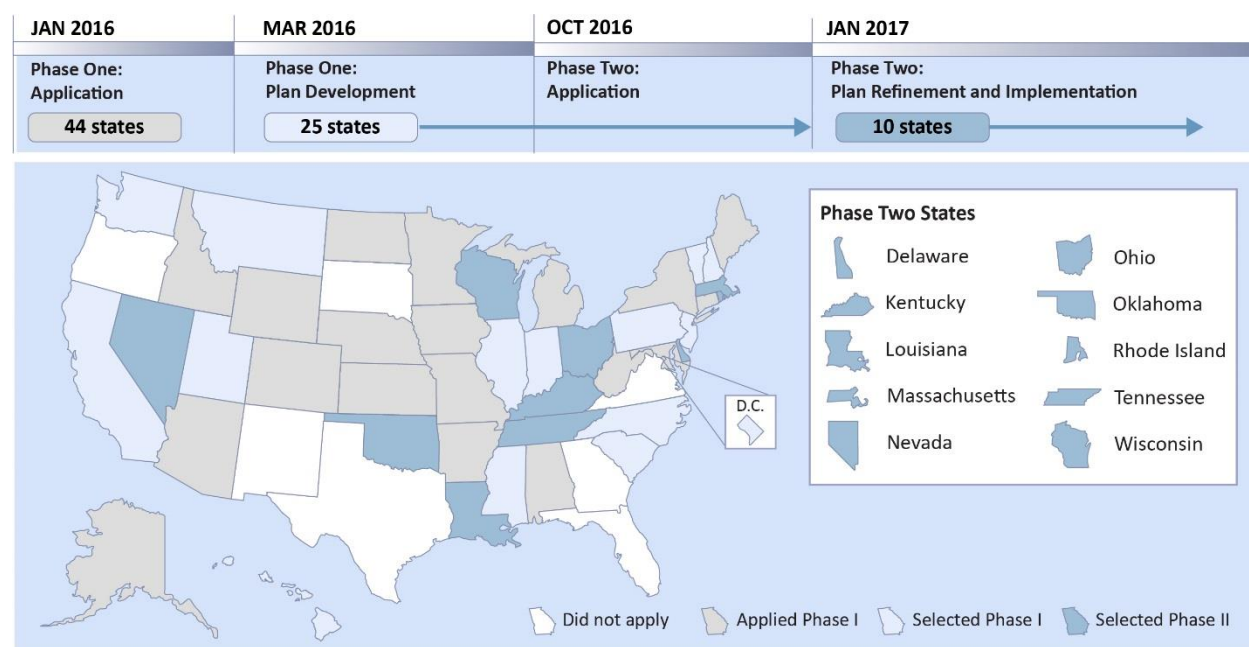
Consistent with steps for developing career pathways that emerged from CRI, state 3-year career readiness action plans are required to address six key objectives considered essential to system change. By implementing strategies in accordance with these objectives, states will make progress towards meeting the initiative's goals of (a) dramatically increasing the number of students in the United States successfully completing career pathways beginning in high school and culminating in postsecondary degrees and/or industry credentials with labor market value, and (b) catalyzing transformational approaches to the design and implementation of programs and policies to increase student career readiness in a cohort of leading states and disseminating lessons learned to the rest of the country.

## NSFY Phases One and Two

The NSFY Project Team released its *State Grant Competition Guidelines* in January 2016. Of the 44 states that applied for Phase One participation, independent reviewers selected 24 states and the District of Columbia to receive 6-month, \$100,000, planning and early implementation grants. With these funds, states conducted needs assessments of their career preparation systems informed by labor market information, collected data on five indicators, and developed 3-year career readiness action plans (Exhibit 2).<sup>1</sup> These materials formed the basis for the artifacts submitted in fall 2016 by the Phase One states. In addition to the materials developed in Phase One, states were required to submit theories of action summarizing their approaches to career pathways development and evidence of early implementation success (CCSSO, 2016). State teams presented their career readiness action plans and early implementation achievements to an independent review committee—composed of educators, foundation representatives, research organizations, and employers—at a meeting in October 2016. Finalist states were named based on these presentations and subsequent due-diligence follow-up; only states who had participated in Phase One were eligible for Phase Two grant funding.

<sup>1</sup> For a detailed description of state activities during Phase One of the NSFY initiative, see [https://cte.careertech.org/sites/default/files/files/resources/Phase\\_One\\_Achievements\\_and\\_Innovations\\_2017.pdf](https://cte.careertech.org/sites/default/files/files/resources/Phase_One_Achievements_and_Innovations_2017.pdf).



**Exhibit 2. NSFY timeline**

According to the CCSSO, the 10 states selected in January 2017 for 3-year implementation grants, of up to \$2 million each in Phase Two, “demonstrated the strongest plans to work across sectors to transform how they design and develop career preparedness education programs and provide young people with the skills they need to compete for high-skill, well-paying jobs. They also committed to bring together education leaders, business partners, and community partners to set ambitious benchmarks for achieving these goals” (CCSSO, 2017).

## State Support

To support states in designing and executing their career readiness action plans, the NSFY Project Team has created a range of technical assistance activities and materials, with each state assigned a coach with experience in CTE and state and local education policy. Coaches assist state teams in implementing their career readiness action plans through virtual and in-person consultations and meet regularly with the NSFY Project Team to provide updates on project work and discuss states’ challenges and solutions. Technical assistance resources are developed and maintained by each of the organizations administering the NSFY initiative. Each organization collaborating on the NSFY project provides a range of services and technical assistance (Exhibit 3).

In some instances, these supports are solely intended for the 10 participating states. Examples include one-on-one expert coaching to states and twice-yearly check-in meetings with NSFY Project Team representatives, who monitor progress and provide technical assistance. Other project resources are available to all states, regardless of their participation in the initiative. An example is the Learning That Works Resource Center,<sup>2</sup> developed by Advance CTE with the support of NSFY initiative resources, which is intended to share research-based practices and knowledge with the field. See Exhibit 4 for a listing of technical assistance offerings as of June 2017. States not involved in NSFY are able to receive career readiness support from CCSSO, which includes tools and resources developed under NSFY.

<sup>2</sup> See <https://careertech.org/resource-center>.

**Exhibit 3: Services and technical assistance provided by NSFY collaborating organizations**

<b>Advance CTE</b> 	<ul style="list-style-type: none"> <li>• The Learning that Works Resource Center</li> <li>• NSFY State Snapshots</li> <li>• Technical Assistance</li> <li>• Resource and Tool Development</li> <li>• Research Reports and Briefs</li> </ul>
<b>Council of Chief State School Officers</b> 	<ul style="list-style-type: none"> <li>• Overall NSFY Grant Oversight: Implementation and Progress Monitoring, Budget</li> <li>• Technical Assistance: Webinar Series, State Research, Newsletter</li> <li>• NSFY State Budget Review and Approval</li> <li>• Stakeholder Engagement and Communications Research and Implementation Support</li> <li>• Convening Design and Logistics</li> <li>• Coaching Program</li> <li>• Partner Engagement</li> </ul>
<b>Education Strategy Group</b> 	<ul style="list-style-type: none"> <li>• Technical Assistance</li> <li>• Career Readiness Expert Workgroups</li> <li>• Affinity Groups</li> <li>• State One-on-One Coaching Strategy</li> <li>• Implementation and Progress Monitoring</li> <li>• Tool and Resource Development</li> </ul>
<b>RTI</b> 	<ul style="list-style-type: none"> <li>• Third-Party Evaluation</li> <li>• Technical Support for Data Collection</li> </ul>

**Exhibit 4. State technical assistance support****Career Readiness Expert Workgroups —**

Cross-state teams focusing on accountability, credentials of value, and additional topics. With the help of an outside facilitator and expert engagement, these groups will generate strategies of implementation.

**Affinity Groups —**

Cross-state teams that will meet regularly to discuss and generate solutions to common problems related to accountability and employer engagement.

**Career Readiness Convenings —**

Twice-yearly cross-state convenings that include presentations from career pathways experts, provide time for states to share lessons learned and strategies, and present networking opportunities.

**Technical Assistance —**

Customized state-level support from the NSFY Project Team, coaches, and national experts on career readiness plans implementation and pathway development, including twice-yearly “stock-take” implementation reviews.

**The Learning That Works Resource Center —**

An online repository of resources on career pathways development produced by the NSFY Project Team, as well as materials and studies produced by experts and organizations active in the field.

## NSFY and Career Pathways Definitions

NSFY’s emphasis on high-quality career pathways is consistent with broader educational program and policy trends calling for expanded educational options to improve the college and career readiness of youth and adults (Institute for a Competitive Workforce; National Career Pathways Network, 2009; Symonds, Schwartz, & Ferguson, 2011). Although the importance of aligning education and work is receiving increased attention, CTE instructors have long understood the benefits of using applied learning to connect education to work.











Since the passage of the *Carl D. Perkins Career and Technical Education Act of 2006*, all local recipients of Perkins funds have been required to develop at least one CTE program of study to qualify for funding. A CTE program of study is defined as rigorous academic and technical curriculum and instruction aligned across secondary and postsecondary education levels and culminating in the award of an industry-recognized credential or certificate or an associate’s or bachelor’s degree. In some instances, high school students may have opportunities to earn college credit.<sup>3</sup>

While CTE programs of study offer a model for connecting secondary and postsecondary students to career pathways, the NSFY career pathways initiative targets *all* students, not just those participating in CTE programming, with an explicit focus on improving equity (Advance CTE, 2017; CCSSO, 2016). In each Phase Two state, NSFY work builds on existing federal and state initiatives addressing the career preparation of high school-aged youth, which in a growing number of states include career pathways. While career pathways definitions vary by state and differ from the definition used for NSFY (Exhibit 5), they share components.

<sup>3</sup> See Sec. 135(b)(2) of the legislation.

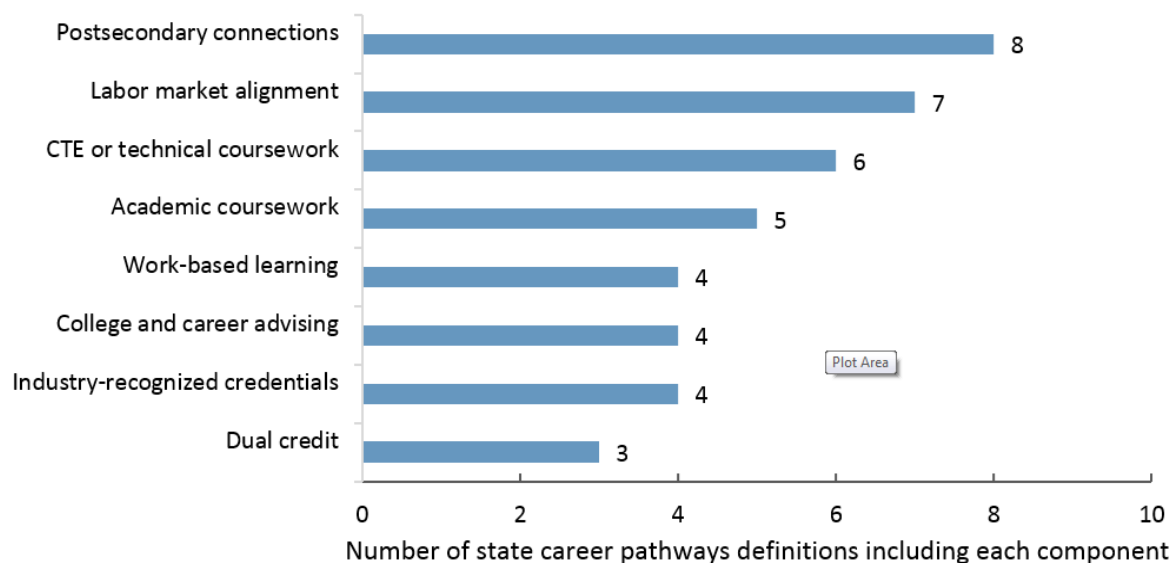


**Exhibit 5: NSFY and NSFY states' career pathways definitions, June 2017**

State	A career pathway...
NSFY	...spans secondary and postsecondary systems, blends rigorous core academic and career technical instruction, offers focused career guidance and advisement systems, includes high-quality work-based learning experiences, and culminates in postsecondary or industry credentials of value (CCSSO, 2016).
Delaware 	...represents the alignment of education and training programs for a specific occupation or occupational cluster and helps students advance through higher levels of education and employment. This includes opportunities for students to participate in career counseling and defined work-based learning experiences that engage employers (Delaware Department of Education, 2017).
Kentucky 	...is a sequence of CTE credits aligned with college-ready academic courses that offers students the opportunity to earn postsecondary credit in high school; leads to industry-recognized credentials and postsecondary credentials, certificates, and degrees; and features work-based learning experiences (Kentucky Department of Education, 2017).
Louisiana 	...represents the alignment of K–12 strategies with the state's economic development strategies (Louisiana Department of Education, 2017c). Building on the state's Jump Start initiative, Louisiana is creating statewide and regional graduation pathways with seven components: sample careers, pathway-specific courses, universal Jump Start courses, internships, culminating credentials, a sample schedule, and resources for educators (Louisiana Department of Education, 2017b).
Massachusetts 	...includes six core components: career advising; alignment to labor market information; instruction aligned to student college and career plans; work-based learning; opportunities to prepare for and earn industry recognized credentials and/or college credits; and postsecondary linkages (Massachusetts Department of Elementary and Secondary Education, 2017).
Nevada 	...[is] an aligned system of industry-recognized academic and technical courses, workplace training programs, support services, and workforce preparation activities that help an individual enter or advance within a given occupation or industry sector. Learners may enter at various points along a pathway [and] earn indicators of completion which hold labor market value, (e.g., diplomas, certificates, credentials, and degrees), with employment, job retention, and/or wage gains as a result. (Sandoval, 2017).
Ohio 	...is a collective look at education and training, wages, and outlook information for related occupations.... Whether a student is interested in going to college, getting a certificate or working right after high school, career pathways can be customized for any ambition or plan (Ohio Department of Education, 2017).
Oklahoma 	...is a multiyear program of academic and technical study that prepares students for a full range of options within each of 16 career clusters... These pathways provide a context for exploring career options at all levels of education and expose students to the full range of postsecondary options for future education and employment (C. Koss, Deputy Superintendent for Academic Affairs and Planning, Oklahoma State Department of Education, personal communication, June 27, 2017).
Rhode Island 	...is currently defined as a CTE program, though the state is working to broaden this definition beyond traditional CTE (S. Osborn, Chief of Accelerating School Performance/INNOVATION, Rhode Island Department of Education, personal communication, June 14, 2017).
Tennessee 	...begins with active industry involvement and strong academic foundations in early grades; includes strong integration of student supports, interventions, and advisement; allows for banking of postsecondary credits and industry certifications; provides for a seamless transition into postsecondary; and has multiple entry and exit points leading to a career with a living wage aligned to workforce needs (C. H. Wrenn, Assistant Commissioner, Division of College, Career, and Technical Education, Tennessee Department of Education, personal communication, September 27, 2017).
Wisconsin 	...leads to college and career readiness by providing a combination of education, training, and other services that meets the individual needs of a student. The education, training, and additional services provided must align with the needs of the local job market; provide a range of secondary and postsecondary options; include counseling, involve workforce preparation activities, and training; result in a secondary high school diploma and at least one recognized postsecondary credential; and help students enter or advance within an occupation (Wisconsin Department of Public Instruction, 2017).

The career pathways definitions shared by states and listed above included eight components that varied in frequency across states (Exhibit 6). The most common components, included in more than half of state career pathways definitions, are postsecondary connections, labor market alignment, and CTE or technical coursework (eight, seven, and six states included these components, respectively). The emphasis placed on these components does not mean that states do not tend to have career pathways that offer, for example, dual credit, but rather that states more commonly defined career pathways in terms of CTE and connections to further education and the workforce.

**Exhibit 6: Number of Phase Two states including various components in their career pathway definitions**






Most state definitions mention technical coursework, and five refer to CTE, reflecting the genesis of pathways development in CTE course sequences. When asked to describe the difference between career pathways and CTE programs of study, five states (Delaware, Ohio, Oklahoma, Nevada, Tennessee) described programs of study as components of career pathways, which are broader in scope and incorporate post-high school transitions and workforce experience. As one state leader noted, “A program of study... just shows a bunch of classes without context. Pathways show in-demand jobs, tuition [costs], and postsecondary programs.” Massachusetts and Kentucky’s definitions of programs of study incorporate career pathway components and include college and career planning, and state leaders in Rhode Island and Wisconsin are currently reviewing and updating their definitions.

## State Career Readiness Action Plans

The strategies included in state career readiness action plans are organized according to the six key NSFY objectives (Exhibit 7). The analysis is limited to states' NSFY plans and does not describe states' NSFY accomplishments or existing capacities. During the June 2017 state leader interviews, states reported that these plans had only minor adjustments since their development in Phase One and have guided the early implementation phases of states' NSFY work to date. According to the NSFY Project Team, states are expected to update their plans as needed in response to feedback shared through check-in meetings by state coaches and the NSFY Project Team. The following analysis summarizes the most common strategies across states for meeting each objective. Some strategies, such as expanding work-based learning or teacher professional development, appeared under multiple objectives in state plans. For simplicity, this report reviews these strategies under the objectives with which they were associated in most state plans. The state plans and this analysis will be a baseline for RTI's evaluation of the initiative's implementation during the coming year, and RTI will review the implementation status and progress towards the key objectives with each state during the 2017–18 site visits.

### Exhibit 7. The six key objectives of the New Skills for Youth initiative



 <p><b>Objective 1:</b> <b>Demand-Driven, Employer-Led Processes</b></p> <p>informed by labor market data to identify high-skill, high-demand industry sectors to which pathways are aligned</p>	 <p><b>Objective 2:</b> <b>Rigor and Quality in Pathways</b></p> <p>using policies and funding levers to improve programs and student access, especially for underserved populations</p>	 <p><b>Objective 3:</b> <b>Career-Focused Accountability Systems</b></p> <p>incorporating robust career-focused indicators to assess student attainment of key career pathways elements</p>
 <p><b>Objective 4:</b> <b>Scaled Pathways that Culminate in Credentials</b></p> <p>by spanning education levels and offering career guidance, rigorous instruction, and work-based learning</p>	 <p><b>Objective 5:</b> <b>Align State and Federal Funding Streams</b></p> <p>blending federal and state education, workforce, and economic development funding to deliver career-focused programs</p>	 <p><b>Objective 6:</b> <b>Ensure Cross-Institutional Alignment</b></p> <p>connecting K–12 and postsecondary institutions to smooth student transitions and limit institutional barriers</p>

## Key Objective 1: Demand-Driven and Employer-Led Processes



*NSFY definition: Establish employer-driven processes informed by real-time and other labor market data to determine high-skill, high-demand industry sectors with which career pathways and programs must be aligned.*

State strategies for employer involvement appear under this objective, with a cross-state focus on engaging employers in the review of labor market data to align career pathways with high-priority workforce needs (Exhibit 8). To meet this objective, all 10 states proposed the following plans:

- *Gathering and analyzing labor market data:* All states include strategies to review and communicate labor market information (LMI), ranging from identifying new sources of LMI to using these data to communicate with key stakeholders and align career pathways with workforce needs. Kentucky, for example, plans to establish new state legislation addressing LMI reviews and to publish annual reports, and Tennessee will institute new data reporting to facilitate LMI access and use.
- *Creating an infrastructure for employer engagement:* NSFY states plan to formalize employer involvement through the creation of statewide education and industry partnerships or task forces. All states specified the creation of a new (or use of an existing) cross-sector group at either the regional or state level to gather employer input to inform career pathways development and implementation.

In addition to the strategies summarized above, five states (Louisiana, Nevada, Ohio, Rhode Island, and Wisconsin) identified state workforce development systems as key partners for this objective and included plans for engaging various components of that system to strengthen or align state career pathways, access labor market data, and facilitate career pathways outreach.

**Exhibit 8. Summary of Phase Two proposed state strategies for Key Objective 1**

State	Labor market data analysis	Education and industry partnerships
Delaware	✓	✓
Kentucky	✓	✓
Louisiana	✓	✓
Massachusetts	✓	✓
Nevada	✓	✓
Ohio	✓	✓
Oklahoma	✓	✓
Rhode Island	✓	✓
Tennessee	✓	✓
Wisconsin	✓	✓

## Key Objective 2: Rigor and Quality in Career Pathways for All



*NSFY definition: Use policy and funding levers to improve the quality and rigor of career pathways—including phasing out those that don't lead to credentials of value—and make those pathways widely available to and accessed by all students in all secondary settings, especially in underserved populations.*

State plans for this objective overlapped with Objective 4, with a mix of policy and programmatic strategies included under both. This analysis distinguishes between policy and funding levers related to career pathways quality, expansion, and equity under Objective 2 and addresses career pathways components under Objective 4. State plans for this objective do not address specifically the use of policy and funding levers to phase out certain career pathways, although Oklahoma proposed phasing out career pathways not aligned with high-priority sectors under Objective 1. In general, Objective 2 strategies focus on providing access to career pathways for all students through various policy and funding mechanisms (Exhibit 9), including the following:

- *Increasing funding for CTE programs:* Five states plan to request additional funds or identify new funding sources to expand the capacity of local programs and provide access to CTE instruction for all



students. Nevada, for example, proposes leveraging private resources, and Massachusetts plans a competitive grant program to support district development of new career pathways.

- *Identifying funding and other resources for targeted programs and/or students:* To expand access to pathways, eight states plan to target resources to support the needs of specific student populations, such as youth with disabilities; those living in rural, at-risk, or underserved communities; and those in low-performing districts.
- *Providing support for improving teacher quality:* Seven states proposed strategies at the state policy level to improve teacher quality. As examples, Oklahoma and Louisiana plan to include summer externships for teachers in high-skill, high-demand industries, and Kentucky and Rhode Island proposed strategies for new CTE teacher recruitment and training.

**Exhibit 9. Summary of Phase Two proposed state strategies for Key Objective 2**

State	New funding approaches	Access for specific student populations	Teacher quality
Delaware		✓	
Kentucky	✓		✓
Louisiana	✓	✓	✓
Massachusetts	✓	✓	
Nevada	✓		✓
Ohio		✓	✓
Oklahoma		✓	✓
Rhode Island		✓	✓
Tennessee	✓	✓	
Wisconsin		✓	✓

## Key Objective 3: Career-Focused Accountability System



*NSFY definition: Incorporate robust career-focused indicators in state accountability systems that measure and value successful completion of meaningful pathways, work-based learning, enrollment in postsecondary education or apprenticeships, and credentials of value.*

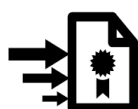
State plans to meet this objective were closely aligned to the NSFY definition, and state strategies for developing career-focused accountability systems can be grouped into three approaches:

- *Defining career readiness measures:* All states identified a need to define measures of career readiness and incorporate the measures into their K–12 accountability systems (Exhibit 10). Only Ohio specified possible measures related to work-based learning or CTE student organizations; other states highlighted the need without specifying proposed measures. Five states (Nevada, Ohio, Oklahoma, Rhode Island, and Tennessee) plan to recognize or reward career readiness by tying it to graduation requirements, differentially weighting it in accountability systems, or developing new diploma endorsements.
- *Aligning state data systems:* To track students' progress more effectively through career pathways, states plan to improve the alignment between secondary and postsecondary data systems and between education and workforce development systems. Specific state strategies include leveraging state longitudinal data systems to measure long-term student outcomes (e.g., Tennessee and Wisconsin) and tracking student transitions into the workforce (e.g., Massachusetts, Oklahoma, and Ohio).
- *Publicly reporting data:* All states reported plans to analyze career readiness data and share the results, either through annual reports or by integrating this information into state report cards or other public reporting platforms. For example, Ohio intends to develop a career readiness dashboard to share local and state outcomes related to positive postsecondary transitions and career pathways completion.



**Exhibit 10. Summary of Phase Two proposed state strategies for Key Objective 3**

State	Define measures	Align data systems	Report data
Delaware	✓	✓	✓
Kentucky	✓		✓
Louisiana	✓		✓
Massachusetts	✓	✓	✓
Nevada	✓		✓
Ohio	✓	✓	✓
Oklahoma	✓	✓	✓
Rhode Island	✓		✓
Tennessee	✓	✓	✓
Wisconsin	✓	✓	✓

**Key Objective 4: Scaled Pathways Culminating in Credentials of Value**

*NSFY definition: Working with local districts, scale career pathways that span secondary and postsecondary systems, offer focused career guidance and advisement, blend rigorous core academic and career technical instruction, include high-quality work-based learning experiences, and culminate in postsecondary or industry credentials of value.*

State strategies for this objective substantially overlap with those of other objectives. This baseline analysis follows most state approaches to this objective, which was to focus on career pathways components, and therefore references strategies addressing career pathways components included under other objectives (Exhibit 11). The strategies proposed by states to meet Objective 4 can be classified into the following categories:

- *Strengthening secondary-postsecondary connections:* All state plans include strategies to connect secondary and postsecondary programs for career pathways, such as expanding dual credit participation (Delaware, Louisiana, Ohio, Rhode Island, and Wisconsin) and developing and improving secondary-postsecondary program articulation agreements (Massachusetts, Nevada, and Tennessee).
- *Providing counseling and advising:* Each plan also has strategies aimed at improving career advising systems, often by promoting the use of individual education plans. Nevada, for example, plans to increase the emphasis on career guidance in the state's academic plan and identify measurable outcomes for assessing student progress along career pathways. Other states will offer professional development on career advising for teachers and counselors (Delaware, Louisiana, Massachusetts, and Wisconsin) and introduce career advising for middle schoolers (Delaware and Rhode Island).
- *Offering work-based learning:* State plans also consistently included strategies for work-based learning and other work experiences for students, including legislation to support incentives for business participation (e.g., Kentucky and Tennessee) and the expansion of work-based learning, internship, and apprenticeship programs (e.g., Delaware, Louisiana, and Nevada).
- *Ensuring that pathways lead to credentials of value:* Compared with the other components included under this objective, fewer state plans (eight of ten) included strategies for identifying and offering credentials of value. States proposing activities in this category planned to expand access to apprenticeships and establish processes for identifying credentials of value.

**Exhibit 11. Summary of Phase Two proposed state strategies for Key Objective 4**

State	Secondary-postsecondary connections	Counseling and advising	Work-based learning	Credentials of value
Delaware	Objective 1	Objective 1	Objective 1	Objective 1
Kentucky	✓	✓	✓	
Louisiana	✓	Objective 2	Objective 1	Objective 1, 2, 4
Massachusetts	✓	✓	✓	✓
Nevada	✓	✓	✓	
Ohio	Objective 3	Objective 2	Objective 2	Objective 3
Oklahoma	Objective 2	✓	Objective 2	✓
Rhode Island	✓	✓	Objective 2	✓
Tennessee	✓	✓	Objective 1	Objective 1
Wisconsin	Objective 2	Objective 2	✓	✓

Note: If states addressed a component under Objective 4 in their state plans, they received a check mark for that component. States that addressed the component in other sections of their plans received a reference to the relevant objective.

**Key Objective 5: Aligned State and Federal Funding Streams**

*NSFY definition: Reorganize and intentionally align state and federal funding streams from education, workforce development, and economic development sources to effectively deliver career-focused programs to all students.*

Relative to the specific program and policy steps outlined for other objectives, state strategies for Objective 5 placed a greater emphasis on exploration and planning (Exhibit 12). State strategies to meet this objective fell into three categories:

- *Identifying and cataloguing funding opportunities:* Nearly every state plan for Objective 5 included the gathering and analysis of information on funding sources. Delaware, for example, plans to scan local and regional funding sources, including foundations, to identify potential support for the Delaware Pathways initiative, and Kentucky will create inventory and asset maps of all state workforce funding streams.
- *Developing a strategy or planning process:* Five states (Delaware, Massachusetts, Rhode Island, Tennessee, and Wisconsin) plan to convene key actors and/or develop strategic plans to coordinate career pathways funding. Wisconsin, for example, will engage multiple state agencies in reviewing potential funding sources for career pathways.
- *Establishing or enhancing partnerships:* Four state plans (Delaware, Nevada, Oklahoma, and Wisconsin) recognize a need to build partnerships as a step towards aligning funding related to career pathways development and implementation. Nevada shared plans to explore partnerships for career pathways development with partners listed in Workforce Innovation Opportunity Act (WIOA) legislation, such as Indian and Native American programs, Job Corps, and Temporary Assistance to Needy Families employment and training programs. Delaware has also recognized implementation of WIOA as “an important window for rethinking funding streams (Delaware Department of Education, 2016, p.12)” to support its efforts under WIOA, including the Delaware Pathways program.

**Exhibit 12. Summary of Phase Two proposed state strategies for Key Objective 5**

State	Identify and map opportunities to braid funding	Develop a strategy or planning process	Establish or enhance partnerships
Delaware	✓	✓	✓
Kentucky	✓		
Louisiana	✓		
Massachusetts	✓	✓	
Nevada	✓		✓
Ohio			
Oklahoma	✓		✓
Rhode Island	✓	✓	
Tennessee	✓	✓	
Wisconsin	✓	✓	✓

## Key Objective 6: Ensuring Cross-Institutional Alignment



*NSFY definition: Foster greater collaboration between K–12 and postsecondary institutions to adopt policies and processes in schools, technology centers, academies, and institutions of higher education to ensure cross-institutional alignment of programs and pathways that smooth transitions for students and minimize institutional barriers.*

Objective 6 strategies seek to establish secondary and postsecondary partnerships in support of career pathways and to build awareness of career pathway opportunities among stakeholders, including parents and students (Exhibit 13). In some states, these strategies are shared with Objective 4, which addresses career pathways components. These strategies include the following:

- *Establishing or formalizing partnerships:* Eight states proposed activities related to establishing or formalizing partnerships, including secondary-postsecondary partnerships. Wisconsin, for example, plans to establish a career pathways memorandum of understanding between the University of Wisconsin System, Wisconsin Technical College System, and Wisconsin Department of Public Instruction.
- *Support pathways marketing and communications:* Nine state plans include strategies to enhance public awareness of opportunities for secondary students to earn postsecondary credits. Massachusetts intends to increase communications to parents and students about early college programs, and Delaware proposes developing a brand for the state's career pathways initiative.

**Exhibit 13. Summary of Phase Two proposed state strategies for Key Objective 6**

State	Establish or formalize partnerships	Marketing and communications
Delaware	✓	✓
Kentucky		✓
Louisiana		Objective 4
Massachusetts	✓	✓
Nevada	Objective 4	
Ohio	Objectives 1 and 3	Objective 3
Oklahoma	✓	✓
Rhode Island	✓	✓
Tennessee	✓	✓
Wisconsin	✓	✓

## Cross-Sector Teams

To lead NSFY implementation, Phase Two states are required to have cross-sector state teams. These must include the secondary education agency chief and deputy, state CTE director, leaders of business and industry organizations, higher education agency or system leaders, and leaders of state agencies for youth workforce development and career pathways (CCSSO, 2016). The teams are intended to engage key state and local career pathways stakeholders in initiative work. During the state lead interviews, nine shared rosters for their cross-sector teams. All nine include representatives from each required area, including state departments of education (or similar agency) and from workforce or economic development agencies and organizations (see Appendix B). Postsecondary representation varied in accordance with state higher education governance structures and included technical college systems, boards of regents, and state higher education agencies and offices. Five teams also had representatives from individual higher education institutions. All nine teams engaged employers through industry groups representing multiple employers (e.g., Delaware’s Workforce Development Board and Rhode Island Governor’s Workforce Board), and five also included individual employers.






The frequency of cross-sector team meetings during the first months of Phase Two varied by state, with six teams meeting monthly or quarterly as well as communicating by phone and e-mail. Subgroups of the cross-sector teams in Delaware, Massachusetts, and Rhode Island also hold weekly or biweekly meetings. Louisiana has twice-yearly meetings for the Jump Start program, which is a focus of the state NSFY work, and the team also collaborates regularly through e-mail and conference calls. As feasible, the fall 2017 site visits will coincide with states’ annual forums, which include the cross-sector teams and other NSFY stakeholders, or with cross-sector team meetings. The visits will allow RTI to explore further the roles and function of state teams, including how team members leverage their agencies, organizations, and expertise for NSFY activities.

## NSFY Data Indicators

The NSFY initiative seeks to increase the number of students in the United States completing high-quality career pathways (CCSSO, 2016). To track progress towards this goal, the grant competition guidelines required states to develop career readiness profiles using five data indicators (Exhibit 14). States submitted baseline data for each indicator with their Phase One artifacts, which included the number and percentage of all students in the state meeting the indicator criteria, disaggregated by gender, race/ethnicity, and economic disadvantage (see data tables in Appendix C).<sup>4</sup>

Although states provided data for all or most of the indicators, the data generally did not fully conform to the NSFY definitions. For example, most states did not report student participation in career pathways as defined in Indicator 1; instead, states reported students' access to and completion of CTE programs. Given states' ability to report on the indicators as defined, RTI assessed the data using a less restrictive set of criteria to quantify states' baseline performance and highlight differences across states. RTI developed the criteria, shown in the third column of Exhibit 14, by comparing state data with the NSFY indicator definitions.

**Exhibit 14. Criteria used to assess data availability for each state by NSFY indicator**

Indicator	Description	RTI criteria for assessing data availability
1  Pathway access	Access to high-quality career pathways in high-skill, high-demand sectors that span secondary and postsecondary levels, offer focused career guidance and advisement systems, blend rigorous core academic and career technical instruction, include high-quality work-based learning experiences, and culminate in postsecondary or industry credentials with labor market value.	<ul style="list-style-type: none"> <li>• Access to state-defined pathways, CTE programs, or programs of study<sup>1</sup></li> <li>• Access to these programs in high-skill, high-demand sectors.</li> </ul>
2  Pathway completion	Completion of career pathways meeting the criteria above.	<ul style="list-style-type: none"> <li>• Completion of state-defined pathways, CTE programs, or programs of study.</li> <li>• Completion of these programs in high-skill, high-demand sectors.</li> </ul>
3  Dual enrollment	Completion of dual enrollment course in high school and earning college credit in academic and/or CTE subject areas.	<ul style="list-style-type: none"> <li>• Reported student participation in dual enrollment culminating in college credit.</li> <li>• Reported dual enrollment completion, not simply enrollment.</li> </ul>
4  Industry-recognized credentials	Earn industry-recognized credentials in high-skill, high-demand sectors, as defined by the state.	<ul style="list-style-type: none"> <li>• States' characterization of credentials as industry-recognized.</li> <li>• Reporting limited to high-skill, high-demand sectors.</li> </ul>
5  College and employment	Enrollment in college or employment in high-skill, high demand sectors within 12 months of high school graduation.	<ul style="list-style-type: none"> <li>• State data on both enrollment in college and employment.</li> <li>• Reporting limited to high-skill, high-demand sectors.</li> </ul>

<sup>1</sup> States did not differentiate between CTE *programs* and *programs of study* in their data submissions, and many are unable to do so because federal reporting requirements do not ask states to report separate measures. For the purposes of this report, therefore, RTI did not attempt to differentiate between CTE programs and CTE programs of study.

<sup>4</sup> RTI analyzed the data for each state (Appendix C), but because of concerns about data comparability across states and comprehensiveness these data are not reported in this section.



Because of differences in state data systems and in their interpretations of the NSFY reporting guidelines, the baseline data are not comparable across states.<sup>5</sup> For example, the grant guidelines asked states to report the most recent data available for each indicator. The years of data available varied by state and, in some cases, within states by indicator. As a result, state submissions included data for the 2013–14, 2014–15, or 2015–16 academic years, or a combination of these years. States also defined subgroups differently, so subgroup data often are not comparable.

Only two states, Kentucky and Louisiana, provided data for all indicators and all student subgroups, suggesting that most state data systems are not currently configured to report on one or more of the indicators as defined (Exhibit 15). Ohio provided data for all indicators but did not disaggregate enrollment and employment data by economic status. Delaware provided disaggregated enrollment data for its CTE and Delaware Pathways programs, but not for all students. The remaining six states provided data for only some of the indicators or provided data only partially meeting the indicator definitions.

At the time of this report, the comprehensiveness of state data, as well as state capacity to report more detailed information, is not known. Phase One states received relatively modest resources and had limited time to carry out a substantial number of activities. Consequently, it may be that the data tables submitted by states do not fully represent the type and amount of data that states are capable of reporting. To meet the project timeline, RTI will interview state data analysts to gain a more detailed portrait of their reporting capacities prior to the 2nd-year report.

**Exhibit 15. Availability of NSFY indicator data by indicator and required student characteristics, by state**

State	All indicators, all student subgroups	All indicators, missing subgroup data	Missing indicators
Delaware		✓	
Kentucky	✓		
Louisiana	✓		
Massachusetts			✓
Nevada			✓
Ohio		✓	
Oklahoma			✓
Rhode Island			✓
Tennessee			✓
Wisconsin			✓
<b>Total</b>	<b>2</b>	<b>2</b>	<b>6</b>

Tracking states' progress in enhancing and expanding career pathways during and after the NSFY initiative will require clear and consistent data reporting. The following subsections describe the data reported for each indicator, compare data availability across states, and propose guidelines for increasing data comparability. The evaluation team developed the guidelines based on the data submitted as part of its Phase Two applications; these guidelines should be regarded as preliminary. In the coming year, RTI will work with the NSFY Project Team and the states to define standard numerators, denominators, and reporting periods for each NSFY indicator and provide more detailed guidance for states. Interviews with state data liaisons to understand states' reporting capacity will be the first step in improving outcome data.

<sup>5</sup> RTI will be working with the NSFY Project Team and the Phase Two states to collect information on states' data systems and reporting capacity to develop data reporting guidance in the coming year. As part of this work, RTI will assess which indicators, if any, might be standardized across all or most Phase Two states.



**Indicator 1: Access to high-quality career pathways in high-skill, high-demand sectors that span secondary and postsecondary levels, offer focused career guidance and advisement systems, blend rigorous core academic and career technical instruction, include high-quality work-based learning experiences, and culminate in postsecondary or industry credentials with labor market value.**

The indicator assesses student access to high-quality career pathways, for which nearly all states reported data on CTE program access as a proxy. Six states submitted data on the number and percentage of students participating in or with access to CTE programs (i.e., students statewide attending a high school offering CTE programs), and Delaware and Kentucky provided the percentage of students participating in or with access to CTE programs in high-skill, high-demand fields (Exhibit 16). Delaware, Louisiana, and Tennessee reported data on state-defined pathways programs with definitions including at least some NSFY criteria.

**Exhibit 16. Career pathways access data reported in NSFY Phase One artifacts, by state**

State	Access to CTE	Access to CTE in high-skill, high-demand fields	Access to high-skill, high-demand career pathways	Notes
Delaware	✓	✓	✓	Provided data on CTE and Delaware Pathways participants.
Kentucky		✓		
Louisiana			✓	
Massachusetts	✓			Provided data on CTE participants
Nevada	✓			
Ohio	✓			Provided the percentage of students with access to CTE programs in at least eight fields.
Oklahoma				Provided data on CTE completers.
Rhode Island	✓			
Tennessee			✓	Provided data on access to education-to-career pathways.
Wisconsin	✓			
<b>Total</b>	<b>6</b>	<b>2</b>	<b>3</b>	


Obtaining valid and reliable career pathways data will require clear guidance on how states should define “career pathways” for the purposes of measurement. Although some states can report on career preparation programs offered to all students in the state (e.g., Tennessee’s Education-to-Career Learning Pathways and Delaware’s Pathways), others limit their reporting to CTE programs or programs of study. States are unlikely to be able to report data matching the Indicator 1 definition without augmenting their state education data systems, a process that can take a year or more before valid and reliable data are available.

In coming months, RTI will explore states’ capacity to report on two pathways access indicators. The first is student access to career pathways, expressed in terms of the number of grades 9–12 students attending schools offering these programs during the preceding academic year (beginning with the 2016–17 school year) (Exhibit 17). For reporting purposes, states will need to define the pathways in accordance with their stage of pathways development and data system capacity. RTI will track the extent to which these definitions include NSFY pathway elements.

The second indicator addresses findings from the Ohio and Massachusetts needs assessments suggesting that measures of access may underestimate barriers to CTE program participation, which would likely apply to pathways programs as well. In Ohio, state law requires that students have CTE courses available to them in at least eight different fields but not that CTE courses be offered within a student’s home school. Consequently, students and parents reported that the need to travel to another facility (e.g., a CTE area school) deters participation (Ohio Department of Education, 2016). In Massachusetts, student demand for CTE programs often exceeds capacity, so that even students attending schools offering career pathways may not be able to participate (Massachusetts Department of Elementary and Secondary Education, 2016). To address this issue,

RTI recommends collecting data on participation rates as well as access and, defining participants as students completing one or more credits in a program or, for a more robust measure of participation, one or more gateway courses.

### Exhibit 17: Preliminary indicator guidelines for tracking career pathway access

Indicator	Proposed indicator description	Numerator	Denominators	Potential state-level limitations
1  Pathways access	Students attending schools or districts offering access to state-defined career pathways in high-skill, high-demand sectors during the 2016–17 academic year. <sup>1</sup>	Number of grades 9–12 students attending high schools or districts offering state-defined career pathways in high-skill, high-demand sectors, both academic and career focused.	Total number of grades 9–12 high school students.	<ul style="list-style-type: none"> <li>• Inability to report on both academic and technical pathways.</li> <li>• Inability to report access restricted to high-skill, high-demand sectors.</li> <li>• Difficulty in assessing student access to career guidance or advisement.</li> <li>• Inability to track work-based learning participation.</li> <li>• Inability to distinguish credentials valued by industry.</li> </ul>
	Students participating in state-defined career pathways in high-skill, high-demand sectors during the 2016–17 academic year.	Number of grades 9–12 students completing one or more credits (or gateway courses) in high-skill, high-demand sectors.	Total number of grades 9–12 high school students.	As above, plus inability to determine a robust threshold for career pathway enrollment, such as gateway course completion.

<sup>1</sup> Data from the 2016–17 academic year will serve as baseline information for states' NSFY performance. As the project continues, the data time frame will be adjusted accordingly in indicator definitions.



**Indicator 2: Completion of high-quality career pathways in high-skill, high-demand sectors that span secondary and postsecondary levels, offer focused career guidance and advisement systems, blend rigorous core academic and career technical instruction, include high-quality work-based learning experiences, and culminate in postsecondary or industry credentials with labor market value.**

As with Indicator 1, pathways completion data submitted by states focused on CTE students. Eight of the ten NSFY Phase Two states measured career pathways completion in terms of the number and percentage of students completing CTE programs, regardless of whether the programs were in high-skill, high-demand sectors (Exhibit 18). Three states reported on CTE completion among students in state-defined pathways programs that prepare students for high-skill, high-demand fields.

**Exhibit 18. Career pathways completion data reported in NSFY Phase One artifacts, by state**

State	Completion of CTE	Completion of career pathways in high-skill, high-demand sectors
Delaware	✓	✓
Kentucky	✓	
Louisiana		✓
Massachusetts	✓	
Nevada	✓	
Ohio	✓	
Oklahoma	✓	
Rhode Island	✓	
Tennessee		✓
Wisconsin	✓	
<b>Total</b>	<b>8</b>	<b>3</b>

Based on the state data reported in Phase One, RTI will explore states' capacity to report on completion of state-defined career pathways for the 2016–17 academic year (Exhibit 19). As with pathways access, states will need to define completion in accordance with their stage of pathways development and data system capacity, and RTI will track the extent to which these definitions include NSFY pathway elements.

**Exhibit 19. Preliminary indicator guidelines for career pathway completion**

Indicator	Proposed indicator description	Numerator	Denominators	Potential state-level limitations
2  Secondary pathways completion	Students completing state-defined career pathways in high-skill, high-demand sectors.	Number of graduating grade 12 students completing state-defined career pathways in high-skill, high-demand sectors.	<ul style="list-style-type: none"> <li>• Total number of grade 12 students.</li> <li>• Total number of grade 12 students who entered a career pathway (see previous indicator) during grades 9–12.</li> </ul>	<ul style="list-style-type: none"> <li>• Inability to report on both academic- and career-focused pathways.</li> <li>• Inability to report access restricted to high-skill, high-demand sectors.</li> <li>• Difficulty in assessing student access to career guidance or advisement.</li> <li>• Inability to track work-based learning participation.</li> <li>• Inability to distinguish credentials valued by industry.</li> </ul>



### Indicator 3: Completion of a dual enrollment course in high school and earning college credit in academic and/or CTE subject areas.

All but three states reported data corresponding to the NSFY definition (Exhibit 20). Massachusetts and Oklahoma reported data on student enrollment in dual enrollment courses, but not whether students completed the courses or earned college credit. Nevada's data were limited to CTE concentrators.


**Exhibit 20. Dual enrollment data reported in NSFY Phase One artifacts, by state**

State	Dual credit course enrollment only	Earned college credit in dual enrollment course(s)	Grades
Delaware		✓	9–12
Kentucky		✓	12
Louisiana		✓	9–12
Massachusetts	✓		12
Nevada <sup>1</sup>		✓	Grade 12 CTE concentrators
Ohio		✓	9–12
Oklahoma	✓		12
Rhode Island		✓	11–12
Tennessee		✓	9–12
Wisconsin		✓	11–12
<b>Total</b>	<b>2</b>	<b>8</b>	

<sup>1</sup> Nevada's data are limited to CTE concentrators.

Since most states can report data for this indicator, RTI proposes additions to the metric data to increase the similarity of data reported across states (Exhibit 21). Delaware's data, for example, included dual credit earned by students in grades 9–12, whereas Kentucky's data was limited to grade 12 students. RTI also recommends calculating this indicator using the number of grade 12 pathways completers from Indicator 2 to assess the extent to which pathways students are pursuing dual credit opportunities.

**Exhibit 21. Preliminary indicator guidelines for dual enrollment indicator**

Indicator	Proposed indicator description	Numerator	Denominators	Potential state-level limitations
3  Dual enrollment	Students earning high school and college credit after completing dual enrollment courses.	<ul style="list-style-type: none"> <li>Number of 2016–17 grade 12 students who earned both high school and college credit after completing at least one dual enrollment course in grades 9–12.</li> </ul>	<ul style="list-style-type: none"> <li>Total number of 2016–17 grade 12 high school students.</li> <li>Total number of 2016–17 grade 12 pathways completers.</li> </ul>	<ul style="list-style-type: none"> <li>Inability to determine whether students earned postsecondary credit rather than just qualified for postsecondary credit.</li> </ul>





#### Indicator 4: Earn industry-recognized credentials in high-skill, high-demand sectors.

Six states provided data that nearly paralleled the NSFY definition (Exhibit 22), though states' submissions differed considerably in terms of the types of credential included.

- Massachusetts and Nevada reported the number of CTE students earning a credential of any type.
- Tennessee reported the number of students earning industry-recognized credentials, though not necessarily credentials relevant in high-skill, high-demand sectors.
- Wisconsin reported the number of students participating in a “certified learning methodology” (e.g., youth apprenticeship programs, cooperative education skill standards programs, employability skills certificate programs, business or industry-sponsored certificate programs).

Among the states reporting industry-recognized credentials in high-skill, high-demand sectors

- Kentucky, Louisiana, and Oklahoma included only industry-recognized credentials;
- Delaware included credentials, certificates, or licenses with professional or postsecondary value earned by CTE students;
- Rhode Island included industry certifications and postsecondary credentials and degrees; and
- Ohio reported students earning credentials with labor market value but did not provide information on the types of credentials included.

Most states reported these data for grade 12 CTE students or all students, except for Delaware and Wisconsin, which reported on grade 12 exiters and grades 11–12 students, respectively.

#### Exhibit 22. Industry-recognized credential data reported in NSFY Phase One artifacts, by state

State	Earned credential	Earned industry-recognized credential	Earned industry-recognized credential in high-skill, high-demand sectors
Delaware <sup>1</sup>			✓
Kentucky			✓
Louisiana			✓
Massachusetts <sup>1</sup>	✓		
Nevada <sup>2</sup>	✓		
Ohio			✓
Oklahoma			✓
Rhode Island			✓
Tennessee <sup>3</sup>		✓	
Wisconsin	✓		
<b>Total</b>	<b>3</b>	<b>1</b>	<b>6</b>


<sup>1</sup> Reporting limited to CTE pathway participants.

<sup>2</sup> Data on CTE students who earn credentials, certificates, or degrees from state postsecondary institutions.

<sup>3</sup> Incomplete reporting due to pending data-sharing agreements.

To increase data comparability across states, RTI recommends focusing this indicator on grade 12 students and limiting the types of credentials to industry-recognized credentials with labor market or postsecondary value (Exhibit 23). As with Indicator 3, RTI also recommends calculating this indicator using the number of grade 12 pathways completers from Indicator 2 to assess the extent to which pathways students are earning industry-recognized credentials.

**Exhibit 23: Preliminary indicator guidelines for industry-recognized credential indicator**

Indicator	Proposed indicator description	Numerator	Denominators	Potential limitations
<p>4</p>  <p>Industry-recognized credentials</p>	Students earning credentials valued by employers in high-skill, high-demand sectors.	Number of 2016–17 grade 12 students who earned at least one industry-recognized credential with labor market or postsecondary value in a high-skill, high-demand sector during high school.	<ul style="list-style-type: none"> <li>• Total number of 2016–17 grade 12 high school students.</li> <li>• Total number of 2016–17 grade 12 pathways completers.</li> </ul>	<ul style="list-style-type: none"> <li>• Duplicates in data (i.e., students who earn multiple credentials).</li> <li>• Inability to identify credentials valued by employers or credentials for high-skill, high-demand sectors.</li> </ul>



### Indicator 5: Enrollment in college or employment in high-skill, high-demand sectors within 12 months of high school graduation.


Most states reported multiple measures relating to the final NSFY indicator, enrollment in college or employment in high-skill, high-demand sectors within 12 months of high school graduation (Exhibit 24). All states reported data for students enrolling in college, and all but three states (Oklahoma, Rhode Island, and Wisconsin) provided data on employment following secondary schooling. Although the indicator definition specifies that outcomes be reported within 12 months of graduation, many states reported data for shorter or longer periods. Nevada, for example, reported 6-month employment for CTE graduates based on a post-graduation survey conducted by local education agencies.

**Exhibit 24. College enrollment and employment data reported in NSFY Phase One artifacts, by state**

State	Enrolled in college	Employed	Employed in high-skill, high-demand sector	Notes
Delaware	✓	✓		Data reported for 6 months after graduation.
Kentucky	✓	✓	✓	No time frame indicated.
Louisiana	✓		✓	
Massachusetts	✓	✓		Data reported for 16 months after graduation. Employment data for CTE students only.
Nevada	✓	✓		Data reported for 6 months after graduation.
Ohio	✓	✓		Within one year of high school graduation.
Oklahoma	✓			No time frame indicated.
Rhode Island	✓			
Tennessee	✓		✓	Data reported for 9 months after graduation.
Wisconsin	✓			Data reported for fall following graduation.
<b>Total</b>	<b>10</b>	<b>5</b>	<b>3</b>	

The populations included for Indicator 5 varied by state. Massachusetts' employment data and Nevada's employment and postsecondary enrollment data were limited to CTE students only. Based on the state narratives and data sources states used to measure college enrollment and employment outcomes, not all states were able to access databases, such as the National Student Clearinghouse, for data on out-of-state enrollees. Other limitations include the inability to report on post-graduation student outcomes within the 12-month time-frame, link education and labor databases, or track employment outcomes outside of the state (Exhibit 25).

**Exhibit 25: Preliminary indicator guidelines for college enrollment and employment indicators**

Indicator	Proposed indicator description	Numerator	Denominators	Potential state-level limitations
5  College or employment	Students starting college within 12 months of high school graduation.	Number of 2016–17 high school graduates enrolling in postsecondary education within 12 months of graduation.	<ul style="list-style-type: none"> <li>• Total number of 2016–17 grade 12 high school students.</li> <li>• Total number of 2016–17 grade 12 pathway completers.</li> </ul>	Inability to report enrollment within the 12-month window or report on out-of-state enrollments.
	Students securing employment in a high-skill, high-demand sector within 12 months of high school graduation.	Number of 2016–17 high school graduates securing employment in a high-skill, high-demand sector within 12 months of graduation.	<ul style="list-style-type: none"> <li>• Total number of 2016–17 grade 12 high school students.</li> <li>• Total number of 2016–17 grade 12 pathway completers.</li> </ul>	Inability to <ul style="list-style-type: none"> <li>• report employment within the 12-month window;</li> <li>• link education and labor databases;</li> <li>• report on employment outside the state;</li> <li>• restrict employment to high-skill, high-demand sectors; and</li> <li>• report on federal employment, including military.</li> </ul>

## Conclusion and Next Steps

Since the January 2017 launch of Phase Two, the NSFY states have been working to implement their career readiness action plans. Interviews with NSFY state team leaders indicate that states have been formalizing the roles and responsibilities of their leadership teams and updating the contents of their career readiness action plans in consultation with the NSFY Project Team.

Due to the timing of grant activities, as well as concerns about burdening states with information requests, the RTI evaluation team limited contact with grantees during the first 6 months of project activities. Initial contacts, made through phone interviews with state leaders, an introductory webinar, and a presentation at an NSFY convening in Louisville in spring 2017, sought general information on state implementation activities and described the purpose of the evaluation. Through these contacts, the evaluation team has begun to build relationships with state team leaders and plan for on-site visits in fall 2017. To prepare for 2017–18 data collection, the evaluation team conducted an exhaustive review of state Phase One artifacts, aimed at clarifying state career pathways definitions, understanding the objectives and strategies proposed in their career readiness action plans, and assessing their capacity to collect data on the five NSFY career readiness data indicators.

The analysis of state plans and artifacts will serve as a baseline for future evaluation work. RTI will assess state progress towards the outcomes specified in their action plans and the goals of the initiative. RTI also will use the themes described in the introduction of this report and others emerging in future data collection to analyze how state starting points, CTE systems, and other factors influence their NSFY work.

The review of state Phase One data suggests that states currently do not have the capacity to report data for all five data indicators as defined. While RTI has conducted an extensive review of these data (see Appendix C), it is not clear whether these data are representative of states' reporting capacity. Follow-up discussions with state data analysts will provide insight into the utility of these data for baseline purposes and the potential for establishing a set of valid and consistent indicators that can be used to track states' progress over the 3-year grant time frame. RTI will continue discussions with the NSFY Project Team to determine strategies for structuring and aligning data requests to minimize the burden on states and the potential for duplicative requests.

Year Two evaluation activities will be directed at collecting detailed data and information on states' implementation status and progress. Data collection strategies will include conducting in-person site visits to meet with cross-sector state teams, attending the fall state meeting, observing state forums where possible, and establishing protocols for collecting accurate and consistent data.



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## Appendix A: Methodology

This baseline report summarizes the initial plans and status of the 10 states engaged in Phase Two of the NSFY initiative. RTI's analysis of Phase Two state planning and early implementation work included reviews of NSFY project documentation, including their career readiness action plans and Phase One artifacts, and communications and interviews with the NSFY Project Team, the NSFY state coaches, and the Phase Two state leaders. Except for updates provided by state reviewers, this report is limited to the data and information available to the team as of June 30, 2017; analysis of data and materials collected after that date will be part of the Year Two report. The data sources and analysis are described below.

**NSFY documentation:** The analysis relies on two types of project documentation: NSFY initiative documentation, including the *State Grant Competition Guidelines* (CCSSO, 2016) and the states' Phase One artifacts. The review identified cross-state patterns and emerging themes in states' proposals for meeting grant expectations. This review did not include the outcome measures developed by states from April–June 2017, since states submitted the final version of the measures after June 30.

**NSFY data indicators baseline data:** As required by the grant guidelines, states' Phase Two artifacts included data for each of the five data indicators. RTI's review of these data focused on understanding how the states interpreted the data-reporting guidelines, assessing the data for inconsistencies and gaps, and preparing questions for further follow-up. The results of this review will be the basis for collecting information from each state on their data-reporting capacity, as well as developing guidelines for more consistent data reporting in the future.

**Interviews with state leaders:** In June 2017, RTI conducted interviews with the NSFY leader in each Phase Two state. The interviews were guided by a semistructured protocol with questions on the composition of state cross-sector teams, state approaches to organizing and administering their NSFY work, and state career pathways definitions (see below). Two RTI team members (an interviewer and note-taker) participated in each 45- to 60-minute phone interview, and all interviews were audio recorded.

### NSFY June 2017 State Leader Interview Protocol

#### Introductory Talking Points

RTI International (RTI) is conducting an external evaluation of the New Skills for Youth (NSFY) initiative, for which 10 states were selected to participate in Phase Two. While the NSFY Leadership Team will be reporting on activities in individual states, the purpose of RTI's evaluation is to:

- Take a broader look at NSFY activities across states and evaluate the initiative as a whole;
- Identify promising practices and lessons learned; and
- Gain an understanding of how to apply those lessons to all states and stakeholders with an interest in developing career pathways.

The purposes of today's interview are to:

- Introduce the evaluation team.
- Provide an overview of upcoming evaluation activities.
- Collect initial information on your state's NSFY team and activities.

Answers are voluntary, and if you do not know the answer to a question, you can just let me know. We will also answer your questions about the evaluation.

Overall, the NSFY national evaluation, which ends in September 2020, will include:

- Quantitative and qualitative data collection.
- Annual site visits.
- Surveys of key project stakeholders in the initiative’s final year.

Because the project is still evolving and we are just learning about state activities, we have only developed a detailed schedule for the current year, but we will share our plans for the remaining years with you in the coming months.

The evaluation team’s 2017-18 activities include:

- Interviews with state leaders.
- Work with you and data specialists in your state to collect baseline information on your state’s NSFY performance data in July and August.
- The July webinar to introduce the site visit plans and coordinate directly with the state NSFY teams to schedule the visits.
- A one- to one-and-a-half-day site visit beginning in fall 2017—the exact dates will depend on information gathered during the state leader interviews.

If you don’t mind, we would like to record today’s interview to assist in note-taking. Would that be alright? If, at any point, you want me to turn off the recorder, please let me know.

Do you have any initial questions for us (e.g., on the evaluation activities, today’s interview, etc.)?

## Questions for States

### Program Administration

1. [Share draft list of NSFY team members drawn from Phase One artifacts] Does this list reflect the current makeup of your state’s cross-sector team?
2. Meetings and communications:
  - a. When is your state planning to hold cross-sector team meetings in 2017-18?
  - b. Which of these meetings will be in person?
  - c. Who typically attends these meetings?
  - d. When will the state hold its annual forum?
  - e. Would it be possible for one of our team members to attend this forum as an observer?
  - f. How do team members communicate with each other (aside from cross-sector meetings and forums)?
  - g. How are team members keeping up-to-date with NSFY implementation and progress toward state goals? (Prompt: Meetings? Memoranda? Quarterly reports?)
  - h. How is your state using social media/state websites to share information about NSFY activities? Other media?

### Program Activities

3. Have there been any major updates to the strategies outlined in your state’s career readiness action plan (included in Phase One Artifacts)? If so, what prompted these changes?

4. Are you planning local pilot sites for your NSFY project?
  - a. What specific activities will the sites pilot?
  - b. How many districts or schools will participate?
  - c. What is the local pilot implementation schedule?

### Career Pathways

5. How does your state define career pathways at the state level?
  - a. How does this differ from a program of study?
    - i. [Prompts: Does your state have a career pathways template or model? How many courses are included in a pathway? What are the requirements for pathways completion?]
  - b. What guidance does your state provide for the development of career pathways at the district level?
    - i. What are the criteria for pathways approval?
6. How do your NSFY efforts relate to existing career preparation programs in your state? Do they build on or enhance those programs? Represent a significant shift in/departure from those programs?

### Quantitative data

7. Who are the data specialists in charge of reporting on the five required NSFY indicators?
8. The evaluation team has some data questions based on our review of the Phase One data submissions. Answers to these questions will inform the evaluation team's work with the NSFY leadership team to develop some data-reporting guidance and ensure that we are reporting and interpreting your data correctly. A state coach suggested sending these questions to you in writing. You could then either work with your data specialists to provide written responses, or provide contact information for the data specialists who could answer our questions, and the evaluation team could do a phone interview. Would this approach work for you?

## Appendix B: State Cross-Sector Team Members by Education or Workforce Development Area

	State <sup>1</sup>	Entity
<b>K–12 education</b>	<b>Delaware</b>	Delaware Department of Education
	<b>Kentucky</b>	Kentucky Center for Education and Workforce Statistics; Kentucky Education and Workforce Development Cabinet and Workforce Innovation Board
	<b>Louisiana</b>	Louisiana Department of Education; Orleans Parish School Board
	<b>Massachusetts</b>	Massachusetts Department of Elementary and Secondary Education; Massachusetts Executive Office of Education; Fitchburg Public Schools; Chicopee Public Schools; Upper Cape Cod Regional Technical School
	<b>Nevada</b>	Nevada Department of Education; Clark County School District; Humboldt County School District; Washoe County Schools Career and Technical Education
	<b>Ohio</b>	Office of Career and Technical Education, Ohio Department of Education; State Board of Education; Cincinnati Public Schools; Tiffin City Schools
	<b>Rhode Island</b>	Rhode Island Department of Education
	<b>Tennessee</b>	Tennessee Council on Career and Technical Education; Tennessee State Board of Education
	<b>Wisconsin</b>	Wisconsin Department of Public Instruction; Madison Metropolitan School District; Milwaukee Public Schools; School District of New Berlin; Cooperative Educational Service Agency 11
<b>Postsecondary education</b>	<b>Delaware</b>	Delaware Technical Community College
	<b>Kentucky</b>	Kentucky Community and Technical College System
	<b>Louisiana</b>	Bossier Parish Community College; Louisiana Board of Regents
	<b>Massachusetts</b>	Massachusetts Department of Higher Education; Framingham State University; Bunker Hill Community College
	<b>Nevada</b>	College of Southern Nevada; Nevada State College; Truckee Meadows Community College; Nevada System of Higher Education, Office of Career Readiness, Adult Learning, and Education Options
	<b>Ohio</b>	Auburn Career Center; Franklin University; Stark State Community College; Ohio Department of Higher Education
	<b>Rhode Island</b>	Office of the Postsecondary Commissioner
	<b>Tennessee</b>	Tennessee Colleges of Applied Technology; Tennessee Board of Regents; Tennessee Higher Education Commission; Tennessee Independent Colleges and Universities Association
	<b>Wisconsin</b>	University of Wisconsin–Madison; Wisconsin Association of Independent Colleges and Universities, Wisconsin Technical College System
<b>Employers and industry</b>	<b>Delaware</b>	Delaware Workforce Development Board
	<b>Kentucky</b>	Kentucky Chamber of Commerce
	<b>Louisiana</b>	Baton Rouge Area Chamber of Commerce; Jason Mercer Associates; Opus Capital Strategies
	<b>Massachusetts</b>	MassMutual Insurance Company; Coghlin Electric Company; University of Massachusetts Medical School
	<b>Nevada</b>	Faraday Future; Tesla Motors; Las Vegas Global Economic Alliance; Nevada Hospital Association University Medical Center; Click Bond, Inc.; Guinn Center
	<b>Ohio</b>	America's Solid Edge Academic Program; Siemens PLM Software Global Philanthropy; JPMorgan Chase; Honda; Ohio Business Roundtable; Wisconsin Economic Development Corporation
	<b>Rhode Island</b>	Governor's Workforce Board
	<b>Tennessee</b>	Tennessee Business Roundtable
	<b>Wisconsin</b>	Apache Stainless Equipment Corporation; Nexen Group; OEM Manufacturing; Milwaukee 7; MRA-The Management Association; Wisconsin Manufacturers & Commerce
<b>Labor and workforce development</b>	<b>Delaware</b>	Delaware Workforce Development Board; Delaware Department of Labor
	<b>Kentucky</b>	Kentucky Cabinet for Economic Development; Kentucky Labor Cabinet
	<b>Louisiana</b>	Louisiana Economic Development; Louisiana Council for Economic Education



	State <sup>1</sup>	Entity
	<b>Massachusetts</b>	Massachusetts Executive Office of Labor and Workforce Development; Hampden County Regional Employment Board; Boston Private Industry Council; Commonwealth Corporation; United Brotherhood of Carpenters
	<b>Nevada</b>	Governor's Offices of Economic Development and Workforce Innovation; Department of Employment, Training, and Rehabilitation; Jobs for Nevada's Graduates, Inc.; Workforce Connections
	<b>Ohio</b>	Governor's Office of Workforce Transformation; Ohio Department of Job and Family Services; Center for Workforce Development; Wright State Research Institute; JobsOhio; Governor's Workforce Transformation Board
	<b>Rhode Island</b>	Governor's Workforce Board
	<b>Tennessee</b>	Tennessee Department of Labor & Workforce Development
	<b>Wisconsin</b>	Wisconsin Department of Workforce Development
<b>Other members, including nonprofit and advocacy organizations</b>	<b>Delaware</b>	Rodel Foundation of Delaware; United Way of Delaware
	<b>Louisiana</b>	Career Compass; Educate Now!/YouthForce Nola; The Orchard Foundation
	<b>Massachusetts</b>	Executive Office of Housing and Economic Development; Minuteman Technical High School, School Committee
	<b>Nevada</b>	United Way of Southern Nevada; Nevada State Assembly; Nevada State Senate
	<b>Ohio</b>	Village of Somerset; Hocking College; International Brotherhood of Electrical Workers; Ohio Federation of Teachers
	<b>Tennessee</b>	Complete Tennessee; Office of the Governor of the State of Tennessee; State Collaborative on Reforming Education
	<b>Wisconsin</b>	Wisconsin Center for Education Research, School of Education, University of Wisconsin–Madison; Milwaukee Mayor's Office; Boys & Girls Club of Greater Milwaukee

<sup>1</sup> Oklahoma did not provide information on state team membership by the June 30, 2017, deadline for this report, but RTI will collect information on the Oklahoma team during planning for the fall site visits.

## Appendix C: NSFY Performance Indicator Baseline Data

### Indicator 1: Access to career pathways

State	State definition ( <i>denominators in parentheses</i> )	Data source	School year	Students	%
Delaware	CTE participants ( <i>% of all students in grades 9–12</i> )	Delaware Department of Education	2015–16	30,143	75.5
Delaware	Student enrollment in Delaware Pathways programs, which include secondary pathway courses articulated with a postsecondary program, early college credit, and work-based learning ( <i>% of all students in grades 9–12</i> )	Delaware Department of Education	2015–16	1,850	4.6
Kentucky	High school seniors enrolled in schools offering at least one high-skill, high-demand pathway ( <i>% of 2015–16 senior cohort</i> )	Kentucky Center for Education and Workforce Statistics (KCEWS) and Kentucky Department of Education (KDE)	2015–16	55,382	99.7
Kentucky	High school seniors concentrating in high-skill, high-demand pathways ( <i>% of 2016 senior cohort</i> )	KCEWS and KDE	2015–16	20,766	37.4
Louisiana	Students enrolled in grades 9–12 in districts offering high-quality career pathways in high-skill industry sectors ( <i>% of all high school students</i> )	Louisiana Department of Education	2015–16	157,170	81.9
Massachusetts	Students enrolled in grades 9–12 in career pathways through state or federally funded program, including exploratory ( <i>% of all students in grades 9–12</i> )	Massachusetts Department of Elementary and Secondary Education (ESE)	2015–16	59,293	20.5
Massachusetts	Students enrolled in grades 9–12 in career pathways through state or federally funded program, excluding exploratory ( <i>% of all students in grades 9–12</i> )	Massachusetts ESE	2015–16	45,165	15.6
Nevada	CTE access ( <i>% of total enrollment</i> )	Nevada Department of Education	2014–15	458,694	>99.9
Nevada	CTE enrollment ( <i>% of total enrollment</i> )	Nevada Department of Education	2014–15	56,544	12.3
Ohio	Students with access to CTE programs in at least eight fields ( <i>% of all high school students</i> )	Ohio Department of Education	2014–15	136,469	100
Rhode Island	High school seniors with access to career pathways experiences ( <i>% of all high school seniors</i> )	Rhode Island Department of Education	2015–16	10,752	100
Tennessee	Students enrolled in schools with education-to-career learning pathways ( <i>% of all high school students</i> ) defined as (a) CTE programs of study consisting of at least three sequential courses, (b) capstone work-based learning experience aligned to a CTE program of study, (c) industry certification aligned to a CTE program of study, and (d) CTE program of study aligned with postsecondary instructional programs	Tennessee Department of Education	2015–16	214,056	83.5
Wisconsin	High school juniors and seniors enrolled in districts offering Perkins-funded CTE courses ( <i>% of all high school juniors and seniors</i> )	Wisconsin Department of Public Instruction and National Student Clearinghouse	2014–15	130,147	98.1

## Indicator 2: Completion of career pathways

State	State definition ( <i>denominators in parentheses</i> )	Data source	School year	Students	%
Delaware	Students who completed three credits (academic or technical in a designated area beyond courses required for high school graduation) and exited high school ( <i>% of graduating students</i> )	Delaware Department of Education	2015–16	4,542	50
Delaware	Delaware Pathways completers grade 12 ( <i>% of CTE completers</i> )	Delaware Department of Education	2015–16	147	1.0
Kentucky	High school seniors who completed (received four credits in) at least one high-skill, high-demand pathway ( <i>% of 2015–16 high school seniors</i> )	Kentucky Center for Education and Workforce Statistics and Kentucky Department of Education	2015–16	12,327	22.2
Louisiana	Students completing pathways ( <i>% of grade 10 students</i> )	Louisiana Department of Education	2015–16	3,128	4.7
Massachusetts	Career, vocational, and technical education (CVTE) program concentrators who completed a career pathway ( <i>% of all CVTE concentrators</i> )	Massachusetts Department of Elementary and Secondary Education	2014–15	11,214	97.7
Nevada	CTE concentrators who passed the end-of-program assessment ( <i>% of CTE concentrators who take the end-of-program assessment</i> )	Nevada Department of Education	2014–15	2,921	55.8
Ohio	Students in the class of 2015 who completed a state-approved CTE pathway ( <i>% of class of 2015</i> )	Ohio Department of Education	2014–15	27,401	20.1
Oklahoma	High school seniors who completed a CTE program of study ( <i>% of all high school seniors</i> )	Oklahoma Department of Career and Technology Education and Oklahoma State Department of Education	2013–14	14,475	36.0
Rhode Island	CTE completers ( <i>% of high school seniors</i> )	Rhode Island Department of Education	2015–16	2,890	26.9
Tennessee	Students completing high-quality, education-to-career learning pathways ( <i>% of all high school students</i> ), for example, a student earning three or more credits and completing a work-based learning capstone in a program of study within a priority career cluster	Tennessee Department of Education	2015–16	791	0.3
Wisconsin	Students who graduated as CTE concentrators from school districts offering Perkins-funded CTE courses ( <i>% of all juniors and seniors</i> )	Wisconsin Department of Public Instruction and National Student Clearinghouse	2014–15	17,672	13.3

### Indicator 3: Completion of dual enrollment courses

State	State definition ( <i>denominators in parentheses</i> )	Data source	School year	Students	%
Delaware	Students in grades 9–12 participating in dual enrollment AND earning a “B” or higher in the coursework in academic dual enrollment areas ( <i>% of all students in grades 9–12</i> )	Delaware Department of Education	2015–16	2,392	6.0
Delaware	Students in grades 9–12 participating in dual enrollment AND earning a “B” or higher in the coursework in CTE dual enrollment areas ( <i>% of all students in grades 9–12</i> )	Delaware Department of Education	2015–16	455	1.1
Kentucky	High school seniors who enrolled, passed, and received credit in at least one dual credit course ( <i>% of all high school seniors</i> )	Kentucky Center for Education and Workforce Statistics and Kentucky Department of Education	2015–16	12,954	23.3
Louisiana	Grade 12 students completing dual enrollment ( <i>% of all grade 12 students</i> )	Louisiana Department of Education	2015–16	6,494	15.8
Massachusetts	Students enrolled in college courses while in high school ( <i>% of students in 2015 graduation cohort</i> )	Massachusetts Department of Elementary and Secondary Education, National Student Clearinghouse, and Massachusetts Department of Higher Education	2014–15	5,485	7.4
Nevada	CTE concentrators who earn diploma with CTE endorsement and earn college credit ( <i>% of CTE concentrators who take an end-of-program assessment</i> )	Nevada Department of Education	2014–15	2,375	45.4
Ohio	Students earning three or more transcribed college credits ( <i>% of the class of 2015</i> )	Ohio Department of Education	2014–15	18,918	13.9
Oklahoma	Grade 12 dual enrollment or CTE credit enrollees ( <i>% of high school seniors</i> )	Oklahoma Regents for Higher Education and Oklahoma State Department of Education	2015–16	12,124	28.8
Rhode Island	Grades 11 and 12 students earning dual credit ( <i>% of all students in grades 11 and 12</i> )	Rhode Island Department of Education (RIDE)	Not Provided	428	2.1
Rhode Island	Grade 11 and 12 concurrent enrollment earners ( <i>% of all students in grades 11 and 12</i> )	RIDE	Not Provided	3,392	16.5
Rhode Island	Grades 11 and 12 Advanced Placement earners ( <i>% of all students in grades 11 and 12</i> )	RIDE	Not Provided	4,795	23.3
Tennessee	Students earning early postsecondary credits or hours ( <i>% of all high school students</i> )	Tennessee Department of Education	2014–15	17,225	6.7
Wisconsin	Students in grades 11 and 12 who completed dual enrollment courses and earned college credit ( <i>% of all juniors and seniors</i> )	Wisconsin Department of Public Instruction and National Student Clearinghouse	2014–15	21,389	16.1

## Indicator 4: Earn industry-recognized credentials in high-skill, high-demand sectors

State	State definition ( <i>denominators in parentheses</i> )	Data source	School year	Students	%
Delaware	High school exiters who met one or more of the Delaware School Success Framework career readiness indicators ( <i>% of all high school exiters</i> )	Delaware Department of Education	2015–16	2,170	24.0
Delaware	High school exiters who completed a Delaware Pathways program and earned an industry credential ( <i>% of all high school exiters</i> )	Delaware Department of Education	2015–16	>15	>1.0
Kentucky	High school seniors who earned a valid industry certification in at least one high-skill, high-demand pathway ( <i>% of high school seniors</i> )	Kentucky Center for Education and Workforce Statistics (KCEWS) and Kentucky Department of Education (KDE)	2015–16	5,996	10.8
Kentucky	High school seniors who earned a valid industry certification or Kentucky Occupational Skills Standards Assessment certificate in at least one high-skill, high-demand pathway ( <i>% of high school seniors</i> )	KCEWS and KDE	2015–16	13,783	24.8
Louisiana	High school seniors who earned high-demand, industry-based credentials ( <i>% of all high school seniors</i> )	Louisiana Department of Education	2015–16	1,910	4.7
Massachusetts	Career, vocational, and technical education (CVTE) students who earned a credential ( <i>% of all CVTE students</i> )	Massachusetts Elementary and Secondary Education CVTE	2014–15	14,499	27.4
Ohio	Class of 2015 students earning any industry credential ( <i>% of all students in the class of 2015</i> )	Ohio Department of Education	2014–15	10,360	7.6
Ohio	Class of 2015 students earning an industry credential that also meets graduation requirements ( <i>% of all students in the class of 2015</i> )	Ohio Department of Education	2014–15	4,710	3.5
Oklahoma	Industry-certified and industry-endorsed certifications ( <i>% of grade 12 students</i> )	Oklahoma Department of Career and Technology Education	2014–15	14,401	35.4
Oklahoma	Industry-certified and industry-endorsed certifications in high-skill, high-demand sectors ( <i>% of grade 12 students</i> )	Oklahoma Department of Career and Technology Education	2014–15	12,804	31.4
Rhode Island	Juniors and seniors earning high-skill, high-demand industry certificates ( <i>% of all juniors and seniors</i> )	Rhode Island Department of Education	-	529	2.6
Tennessee	Students awarded industry certifications ( <i>% based on a sample of students who attempted to obtain those certifications</i> )	Data-sharing agreements with certifying vendors	2015–16	2,153	62.5
Wisconsin	Students who participated in a certified learning methodology* ( <i>% of all juniors and seniors</i> )	Wisconsin Department of Public Instruction and National Student Clearinghouse	2014–15	3,833	2.9
*For example, youth apprenticeship programs, state-certified cooperative skill standards programs, employability skills certificate programs, and business or industry-sponsored certificate programs.					

## Indicator 5: College enrollment or employment in high-skill, high-demand sectors

State	State definition ( <i>denominators in parentheses</i> )	Data source	School year	Students	%
Delaware	High school exiters entering postsecondary education 6 months after graduation ( <i>% of all high school exiters</i> )	National Student Clearinghouse and self-report from school districts	2014–15	4,909	54.2
Delaware	High school exiters entering employment 6 months after graduation ( <i>% of all high school exiters</i> )	Delaware Department of Labor	2014–15	166	1.8
Kentucky	2015 high school graduates enrolled in college ( <i>% of all 2015 high school graduates</i> )	Kentucky Center for Education and Workforce Statistics (KCEWS) and Kentucky Department of Education (KDE)	2014–15	26,446	60.4
Kentucky	Employed 2015 high school graduates ( <i>% of all 2015 high school graduates</i> )	KCEWS and KDE	2014–15	15,186	34.7
Kentucky	2015 high school graduates enrolled in college and/or employed ( <i>% of all 2015 high school graduates</i> )	KCEWS and KDE	2014–15	32,663	74.6
Kentucky	Graduates employed in high-skill, high-demand sector ( <i>% of all 2015 high school graduates</i> )	KCEWS and KDE	2014–15	5,714	13.1
Kentucky	2015 high school graduates enrolled in college and/or employed in high-skill, high-demand sector ( <i>% of all 2015 high school graduates</i> )	KCEWS and KDE	2014–15	29,189	66.7
Louisiana	2015 high school graduates employed in a high-demand job within 12 months of high school graduation ( <i>% of all 2015 high school graduates</i> )	Louisiana Department of Education	2014–15	6,822	17.8
Louisiana	2015 high school graduates enrolled in college within 12 months of graduation ( <i>% of all 2015 high school graduates</i> )	Louisiana Department of Education	2014–15	13,697	35.8
Louisiana	2015 high school graduates employed AND enrolled in college within 12 months of graduation ( <i>% of all 2015 high school graduates</i> )	Louisiana Department of Education	2014–15	8,491	22.2
Massachusetts	Career, vocational, and technical education (CVTE) graduates employed within 16 months of graduation ( <i>% of all CVTE graduates</i> )	Student survey data (self-reported) collected by the Massachusetts Department of Elementary and Secondary Education (ESE)	2013–14	5,645	43.5
Massachusetts	CVTE graduates employed within 16 months of graduation in a related field ( <i>% of all CVTE graduates</i> )	District surveys administered locally and reported to ESE	2013–14	2,986	23.0
Massachusetts	2014 high school graduates attending institutions of higher education ( <i>% of all high school graduates</i> )	National Student Clearinghouse	2013–14	49,924	76.2
Nevada	CTE postsecondary enrollment ( <i>% of total enrollment</i> )	Nevada Department of Education	2014–15	26,357	5.7
Nevada	CTE graduates placed in postsecondary education, military service, or employment 6 months after graduation ( <i>based on sample of CTE concentrators who responded to local education agency surveys</i> )	Nevada Department of Education	2014–15	Not provided	95*
Ohio	Graduates of the class of 2014 enrolled in postsecondary ( <i>denominator not reported</i> )	Ohio Education Research Center (OERC)	2013–14	62,109	N/A



State	State definition ( <i>denominators in parentheses</i> )	Data source	School year	Students	%
Ohio	Employed graduates of the class of 2014 ( <i>% of all 2014 graduates ever enrolled in postsecondary education; Note: Due to data limitations, Ohio was able to track employment outcomes only for students who appear in postsecondary data systems</i> )	OERC	2013–14	51,514	82.9
Oklahoma	2014 public high school graduates enrolled in Oklahoma college or university ( <i>% of public high school graduates</i> )	Oklahoma State Department of Education and Oklahoma State Regents for Higher Education	2013–14	18,401	49.2
Rhode Island	2014 graduates enrolled at University of Rhode Island, Rhode Island College, and Community College of Rhode Island within 12 months of graduation ( <i>% of high school graduates</i> )	Rhode Island Department of Education	2013–14	4,325	45.3
Tennessee	Students enrolling in postsecondary education within 12 months of high school graduation ( <i>% of the 2011 high school freshman cohort</i> )	Tennessee (TN) Department of Education, TN Higher Education Commission, TN Department of Labor and Workforce Development	2011 (high school freshman cohort)	38,944	55.7
Tennessee	Student employment in priority industries within 12 months of high school graduation ( <i>% of the 2011 high school freshman cohort</i> )	TN Department of Education, TN Higher Education Commission, TN Department of Labor and Workforce Development	2011 (high school freshman cohort)	5,667	8.1
Wisconsin	High school completers enrolled in postsecondary in the first fall after high school completion ( <i>% of all high school completers</i> )	Wisconsin Department of Public Instruction and National Student Clearinghouse	2014–15	35,118	58.2
*For Nevada's reported measure of placement in postsecondary education, military, or employment, it was not possible to calculate the percentage to the first decimal place.					