

# How States are Making **CAREER READINESS** Count: A 2016 Update



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## Introduction

In December 2015, the Elementary and Secondary Education Act (ESEA) was reauthorized and signed into law as the Every Student Succeeds Act (ESSA), requiring all states to redesign their accountability systems by the 2017–18 school year. ESSA includes a number of key provisions related to career readiness, most notably an updated definition of a “well-rounded education.” It also changes the accountability requirements to permit states to include measures of school and student success beyond core academic subjects. Specifically, ESSA requires states to use at least one “indicator of school quality or student success” in addition to the required academic indicators in their accountability systems. ESSA provides examples, some of which could be leveraged to capture career readiness outcomes, access to and completion of advanced coursework and postsecondary readiness.

As states begin the work of transitioning to new ESSA accountability systems, Achieve and Advance CTE have partnered again to release a status update on states’ use of career-ready indicators in their public reporting and accountability systems, including highlights from several states at the forefront of this work.<sup>1</sup> The brief includes considerations for using the indicators, appendices that provide details on how states define the indicators they use in their public reporting and/or accountability systems, and a glossary that defines key terms.

## States’ Current Use of Career-Focused Indicators

As states continue to evolve and implement their accountability and public reporting systems, they have an opportunity to select indicators that inform continuous improvement, guide decisions about resource allocation, inform policies, capture progress, and factor into accountability determinations. More specifically, through school-level **public reporting** on these indicators, states may make college- and career-ready (CCR) data more transparent, understandable, and useful to parents, educators, and policymakers. The indicators that states build into their **accountability formulas** may be used to differentiate and classify schools and districts for support and intervention and/or may be used as a way for schools and districts to earn **bonus points** or rewards for meeting specific benchmarks.

Currently, **34 states** publicly report and/or include career-focused indicators in their accountability systems, an increase from the 29 states reported in 2014. **Thirty-two states** publicly report anywhere from one to six career readiness measures at the school or district level. See Appendix A for specific details on what, how, and where states are reporting on the career readiness of their students. Far fewer, **20 states**, include some measure of career readiness in their accountability formulas or as bonus points. **Five of these states** factor a career readiness indicator into *both* their accountability formula and “bonus points process.”

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<sup>1</sup> In May 2014, Achieve and Advance CTE (as NASDCTEc) released *Making Career Readiness Count*, the first analysis of states’ use of career-focused indicators in their public reporting and accountability systems.

**Table 1: Use of Career-Focused Indicators in Public Reporting and Accountability Systems**

<b>Public Reporting</b>		<b>32 STATES</b> <i>AL, AR, CA, CO, CT, DE, FL, GA, HI, IL, IN, KY, LA, ME, MD, MA, MI, MO, NV, NJ, NM, NY, NC, OH, OK, PA, SC, TX, UT, VA, WA, WI</i>
<b>Accountability System</b>	<b>Formula</b>	<b>17 STATES</b> <i>AL, AK, CT, DE, FL, GA, HI, IN, KY, LA, MD, MO, NM, NC, PA, SD, TX</i>
	<b>Bonus Points</b>	<b>8 States</b> <i>GA, HI, KY, LA, NY, OK, PA, VA</i>
<b>TOTAL STATES</b>		<b>34 STATES</b>

The 18 *italicized states* both publicly report and include at least one career-ready measure in their accountability system in some way.

## Public Reporting of Career-Focused Indicators

School report cards are among the most powerful and transparent mechanisms to focus attention on student outcomes, particularly when they are parent and educator friendly and easy to find. Some states are now including dynamic reporting of school- and district-level outcomes through state-hosted interactive websites and data dashboards, an evolution from more traditional, standalone “report cards.” These public reporting levers, in addition to third-party reports with school-level data hosted on the state’s website, are included in the counts below.<sup>2</sup> States can strengthen reporting by disaggregating data further by student subgroups so as to shine a light on performance disparities that may be masked by “all students” reporting.

Where possible, we reviewed states’ 2014–15 school report cards; if these were not available, 2013–14 report cards were consulted. Our review found that a total of **32 states** publicly report on one or more indicator(s) of career readiness at the school or district level. **Twelve states** include three or more career-focused indicators, while **seven states** report only one indicator.

### Which Career-Ready Indicators Are Most Commonly Publicly Reported by States?

States most frequently publicly report on the dual enrollment<sup>3</sup> of their students, with **16 states** doing so in some way. However, states vary in how they both report and define dual enrollment. Some states limit their indicator to those students who have successfully completed a credit-bearing dual enrollment course; others limit the range of dual enrollment courses that qualify, such as those in core academic or technical subjects; and still other states require that students attain a certain number of credits to be counted (e.g., six or more credits or hours). **Four states** (Colorado, Hawaii, Oklahoma, and South Carolina) report both dual enrollment participation and success of their students. **Seven additional states** report the dual enrollment success of their students. And **five additional states** report the dual enrollment *participation* of their students. These discrepancies in how states define dual enrollment make comparisons of student outcomes across states challenging, if not impossible. It is also worth noting that states commonly report a measure of dual enrollment

<sup>2</sup> To be included in the analysis, the indicators need to be part of the comprehensive report card/accountability system, not a parallel set of report cards or system (e.g., report cards specifically about career and technical education). However, instances of the latter are acknowledged in Appendix A.

<sup>3</sup> Underlined terms are further defined in the glossary on page 23.

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aggregated with Advanced Placement (AP), International Baccalaureate (IB), or other advanced coursework, making it impossible to know how students perform on any one specific indicator.

A large number of states are also reporting on the **postsecondary enrollment** of their high school graduates in two-year and four-year institutions. **Sixteen states** include postsecondary enrollment data, disaggregated by two-year and four-year institutions, including **three states** that rely on students' self-reported postsecondary plans. It should be noted that 17 additional states report postsecondary enrollment data but are not included in these counts because their reported data are not disaggregated by two-year and four-year institutions, only by total enrollment in postsecondary institutions. Finally, though postsecondary enrollment reporting is fairly widespread, the transparency and ease in accessing the data varies: some states report data as part of their school report card or dashboard, while other states provide the data as a standalone linked report off their state education agency website.

Additional indicator-specific reporting frequencies:

- **Eleven states** report participation in **career technical education (CTE) courses**, while **eight states** report **CTE program concentration/completion**. **Three states** (California, Kentucky, and Nevada) report both **CTE coursetaking and program completion data** for students.
- In regard to career-ready assessments, our review found that **four states** (Georgia, Kentucky, Ohio, and Virginia) report the number/percentage of students **earning industry-recognized credentials/certificates**; **five states** (Illinois, Kentucky, North Carolina, South Carolina, and Virginia) report **WorkKeys/Armed Services Vocational Aptitude Battery (ASVAB) results**; and **two states** (Kentucky and Pennsylvania) report **technical skills assessment outcomes**.
- **Four states** (Kentucky, Maryland, New York, and Wisconsin) report a measure of students' **placement** into vocational/technical training programs, employment, and/or military enlistment upon graduation in addition to publicly reporting how many students enroll in two-year and four-year institutions.
- **Three states** (Alabama, Delaware, and Michigan) report on the **postsecondary remediation** of their high school graduates, disaggregated by two-year and four-year institutions. It should be noted that an additional 14 states report postsecondary remediation data but are not included in these counts because their reported data are not disaggregated by two-year and four-year institutions and/or the data are too old, reflecting outcomes for the class of 2013 or earlier.
- **Two states** (Alabama and Kentucky) include all required **Perkins indicators** on their comprehensive school or district report cards.
- Student involvement in **experiential learning**, including enrollment in **work-based learning**, participation in career technical student/co-curricular organizations, and completion of a capstone project, was rarely reported by states. Just **two states** (Georgia and South Carolina) report some version of this indicator for students.
- Finally, **no states** publicly report state-defined **CTE diploma/endorsement data** for all students on their school-level report cards. Indiana is the only state to report these data at the district level, and Louisiana issues a report with school-level data on the number of graduates who are TOPS Tech eligible, which requires completing a core curriculum and meeting certain career-ready benchmarks to qualify for a state scholarship.

## SOUTH CAROLINA

**South Carolina** has long included a number of career-ready indicators on its school-level report cards. In 2015, the state went a step further when the State Board of Education adopted a new “Profile of the South Carolina Graduate.” This profile was created by TransformSC, a coalition of education and business leaders. South Carolina’s report card is approved/endorsed by a cross-section of stakeholders, including the South Carolina Chamber of Commerce and South Carolina Association of School Administrators. The profile focuses on three major areas: World Class Knowledge (achievement in math; English language arts; science, technology, engineering, and math; arts; and social sciences); World Class Skill (creativity and innovation, critical thinking and problem solving, collaboration and teamwork, communication, and media and technology); and Life and Career Characteristics (integrity, self-direction, global perspective, perseverance, work ethic, and interpersonal skills).

South Carolina reports a wide array of career-focused indicators and presents data for each indicator discretely, including:

- Percentage of students meeting the Platinum, Gold, or Silver thresholds on three WorkKeys subtests;
- Enrollment in career/technology courses;
- Number of students in dual enrollment courses;
- Success rate of students in dual enrollment courses;
- Percentage of students participating in work-based experiences; and
- Percentage of career/tech students in co-curricular organizations.

The report card also includes a range of school-level indicators, such as whether online or blended courses are offered, the percentage of classrooms with wireless access, and the number of dual enrollment courses offered.



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## Use of Career-Focused Indicators Is on the Rise Since 2014

Overall, the number of states that are publicly reporting at least one career-focused indicator, on their school- or district-level report cards or through other means, has increased from 22 states in 2014 to 32 states. Changes include both which states are reporting on career readiness and which indicators are reported. The most significant changes are in the number of states reporting dual enrollment participation and success and industry credentials as they have updated their accountability systems and revised their report cards.

### OHIO

**Ohio** has been expanding its use of career-focused indicators over the last few years. In 2013, the state released the first Career-Technical Education Report Cards. These report cards were unique in that they included indicators beyond those required by Perkins, such as dual enrollment and the percentage of students earning an honors diploma.

Since then, Ohio has been in the process of revamping its accountability system, starting with the school-level indicators that are publicly reported. The new system is focused around a number of questions, including *“Are students who graduate from your school ready for college or a career?”* Within this Prepared for Success category, Ohio reports school-level data on dual enrollment credit and industry-recognized credentials, as well as SAT, ACT, AP, and IB participation and success. This category will become part of the school-level grade starting in 2016.

Starting in 2018, schools will receive overall grades as well as individual grades for the six component areas (achievement, progress, gap closing, K-3 literacy, graduation rate, and preparation for success). Critically, the reported data are discrete and disaggregated from one another, setting Ohio apart from most states.

## Inclusion of Career-Focused Indicators in State Accountability Systems

Where possible, we reviewed states' 2015–16 accountability manuals and/or technical documentation.<sup>4</sup> A total of **20 states** include at least one career-ready indicator in their accountability systems in some way. Of the states that include a career-ready indicator, **nine states** include at least one standalone career-ready component. **Eleven states** use a **meta-indicator** or composite measure of college and career readiness or career readiness that may include components such as AP, IB, or dual enrollment. **Five states** (Alaska, Connecticut, Georgia, Hawaii, and Pennsylvania) include both a standalone measure of career readiness and a meta-indicator of college and career readiness in their accountability system.

<sup>4</sup> If 2015–16 documentation was not available, we reviewed the most recent documentation, provided it was no older than 2013–14.

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Of the states that include a career-ready indicator, **eight states** include two or more career-ready indicators in their accountability systems. Of the states including one indicator, the vast majority, **eleven states**, are combining multiple indicators into their meta-indicator. States may use diverse permutations of these indicators, define these indicators differently, and use different denominators. It goes without saying that the number of indicators is only as important as how those indicators are being used and defined.

## Which Career-Ready Indicators Are Found in State Accountability Systems?

States include a variety of indicators related to career readiness in their accountability systems.

- Most often, states include a measure of **dual enrollment**. **Fourteen states** include dual enrollment participation and/or success.
- **Eleven states** include **industry certification** (e.g., the percentage of students earning an industry credential/certificate).
- **Seven states** (Connecticut, Delaware, Georgia, Maryland, New Mexico, Oklahoma, and Texas) include **course pathways** (e.g., the percentage of students completing a **secondary CTE pathway** or completing a CTE **program of study**).
- **Five states** (Alabama, Alaska, Kentucky, North Carolina, and South Dakota) include the percentage of students earning an **employability or work readiness certificate**.
- **Four states** (Kentucky, Missouri, Pennsylvania, and Virginia) include **achievement on an assessment** (e.g., the percentage of students who complete a CTE pathway AND meet standards on a technical skills assessment).
- **Four states** (Connecticut, Hawaii, Maryland, and Missouri) include their graduates' **postsecondary enrollment** after graduation. Of these, Missouri alone also includes other **post-high school placement measures**, namely placement in the military or in the workforce.
- **Two states** (Connecticut and Georgia) include **experiential learning** in their accountability systems.

## How Are Career-Ready Indicators Valued in State Accountability Systems?

States have included career readiness in their accountability systems by building it into their school accountability formulas (**17 states**) or awarding bonus points or reward status to schools that meet a career readiness target (**eight states**).<sup>5</sup>

Among the states that include a measure of career readiness in their accountability systems, the weight they assign to those indicators varies. For example, **Connecticut's** accountability formula is calculated on a scale of 1,250 total points, 150 of which (12 percent) are related to career readiness. **New Mexico's** system draws a distinction between participation and success when assigning weights in its accountability formula, an

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<sup>5</sup> Five states include some measure of career readiness, both as part of their school accountability formula and for bonus points or reward status. These states are counted in both the formula and bonus point category state totals.

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approach that incentivizes schools' participation in career-ready metrics and places a premium on making sure students succeed in their career-ready endeavors. The formula allows for a suite of CCR indicators including concurrent enrollment/dual credit in an accredited New Mexico postsecondary institution and a Career Program of Studies, which is a sequence of high school courses that lead to industry-recognized certification. Participation in one of the CCR indicators is valued at five points and success at 10 points, yielding a total 15 points in the high school's overall grade out of 100 points (15 percent). In **Louisiana**, the graduation index assigns more points for students graduating with an Advanced industry credential (150 points) than for those who graduate with a Basic credential (110 points) — and the most points for students who earn both an Advanced credential and a qualifying score on AP, IB, or College Level Examination Program (CLEP) (160 points). The graduation index accounts for 25 percent of a high school's accountability score.

## CONNECTICUT

In March 2016, the **Connecticut** State Board of Education adopted a new accountability framework, expanding the range of indicators and how achievement and success are measured across the state. Within this new system, two meta-indicators focus on college and career readiness.

Under Preparation for Postsecondary and Career Readiness — Coursework, schools can earn up to 50 points based on the percentage of students in grades 11 and 12 who participate in two AP, IB, or dual enrollment courses; two courses in one of seven CTE categories (the state's threshold for a "concentrator"); or two workplace experience "courses." This category accounts for 4 percent of high schools' total accountability score. Under Preparation for Postsecondary and Career Readiness — Exams, schools can earn up to another 50 points based solely on academic assessments, including CCR scores on Smarter Balanced, ACT, SAT, and AP and IB exams. One area noted for enhancements in the future is the inclusion of industry-recognized credentials.

Finally, high schools can also earn up to 100 points based on the percentage of their graduating class who enroll in two- and four-year postsecondary institutions within a year of graduation.

For all three of these indicators, Connecticut set a target of 75 percent, and schools will earn points based on the percentage of the ultimate target achieved. The three indicators account for 16 percent of the total accountability index for high schools. Importantly, Connecticut's school report cards will include the full range of indicators moving forward.

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## Career Readiness Meta-Indicators in State Accountability Systems

More than half of the states that include career readiness in their accountability systems do so through the use of a meta-indicator — a composite measure that can include a variety of indicators counting toward the college and career readiness score of a school. Accountability systems designed in this way reward attainment of *any* of the indicators within a meta-indicator. In **Missouri**, a meta-indicator in the accountability system includes students receiving college credit through dual enrollment and students passing the TSA, along with AP and IB exams. The state also has an independent measure for students completing career education programs and receiving job placement. In **Maryland**, a school's College and Career Preparation score is composed of three elements: students scoring 3 or more on an AP exam or 4 or better on an IB exam, CTE concentrators (students enrolled in their third CTE course), and college enrollment. Having any one of the three elements is considered a student success factor.

In states where career-ready metrics have been embedded in a meta-indicator, teasing out how career readiness is weighted in the accountability systems and how it affects schools' accountability scores is difficult. As such, when developing meta-indicators, states should include only similar components or experiences within the meta-indicator (e.g., AP, IB, dual enrollment) to ensure parity. Another key challenge of meta-indicators is that they may mask career readiness indicators and impede understanding of how students are performing on key indicators of college and career readiness by blending them into one indicator (e.g., scoring 3+ on an AP exam, 4+ on an IB exam, or earning an industry certification). States should also take steps to report data for each of the components of the meta-indicator.

Accountability systems in **nine states** (Alaska, Connecticut, Georgia, Hawaii, Kentucky, North Carolina, Oklahoma, Pennsylvania, and Virginia) include a standalone measure of students' career readiness. For example, in **Hawaii**, postsecondary enrollment accounts for 10 points (4 percent) of the 400-point scale. Hawaii also awards five bonus points to schools for students passing AP, CTE, IB, or dual credit classes, a meta-indicator.

## Denominator Choices Matter

Beyond the substance of the indicators included, states are using a variety of denominators to calculate the career readiness of their students, including using a four-year adjusted 9th grade cohort, graduates, juniors and seniors, seniors, or CTE concentrators who are seniors. The denominator a state uses can significantly affect the story and outcomes. To be sure, it makes sense for some indicators (e.g., technical skills assessment) to use a denominator of all CTE students, but our review sometimes found a range of denominators across states for the same indicator.

## Changes Since 2014

Since 2014, **five states** (Connecticut, Delaware, Hawaii, South Dakota, and Texas) have added a career-ready indicator into their accountability systems. **One state**, Indiana, has instituted a new accountability formula that includes a meta-indicator with a revised weighting of the career-ready component. And while states are holding steady on which indicators are being reported, there is a slight increase in the states' use of meta-indicators.

## LOUISIANA

In 2014, **Louisiana** adopted Jump Start as a statewide program to improve career-focused education and better align it with regional economic demand. Students can earn a Jump Start Diploma by completing course pathways designed by regional teams of K-12 and postsecondary educators, employers, and economic and workforce development leaders and approved by a statewide cross-agency commission. Each pathway includes regionally-identified and state-approved industry credentials, which the state has broken up into two categories: Advanced and Basic. Most credentials are Basic, and the Advanced credentials typically are attainable only after earning a Basic credential.

The approved list of Jump Start credentials is highly valued in the state accountability system. The graduation index, worth 25 percent of a high school's accountability score, attributes:

- 160 points for graduates who earn an AP score of 3 or higher, IB score of 4 or higher, or CLEP score of 50 or higher *AND* an Advanced state-approved industry credential.
- 150 points for graduates who earn an AP score of 3 or higher, IB score of 4 or higher, or CLEP score of 50 or higher *OR* an Advanced state-approved industry credential.
- 115 points for graduates who earn college credit through AP, IB, or dual enrollment *AND* earn a Basic industry credential.
- 110 points for graduates who earn college credit through AP, IB, or dual enrollment *OR* earn a Basic industry credential.
- 100 points for graduates with a regular diploma.
- 0 points for nongraduates.

The index also values five- and six-year graduation rates.

## Intersection between State Accountability Systems and Public Reporting

Not all indicators that states publicly report are appropriate to include in an accountability system. However, any indicator a state includes in an accountability formula *should* be publicly reported by school and district. Discretely reporting on the indicators included in an accountability formula allows stakeholders to better understand both the indicators being collected and students' performance on them.

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In reviewing the public reporting for the 20 states that include a career-ready indicator in their accountability systems, our analysis found that **18 of these states** publicly report some of the indicators in their accountability formulas. However, in nearly all cases, the states report indicators as part of a broader meta-indicator rather than in a discrete way; report only some of the indicators included in the accountability formulas; and/or states report all of the indicators, but not through the school report cards.

## Considerations for Using Indicators

Regardless of the indicators states use, a number of factors are worth considering, including setting priorities around what to include and how to collect, validate, and compare data.

### Setting Priorities

Accountability systems with too many indicators can overwhelm schools and be confusing to stakeholders. States first need to prioritize the indicators used to measure and value students' career readiness by determining which credentials and experiences they most want to encourage and affect through their accountability systems.

One question states need to answer early on is whether the indicators they choose focus on **all students or exclusively CTE students**. Does the state want to strengthen the experiences for students in CTE programs, incentivize more participation in CTE programs, and/or determine some level of career preparation or readiness for all students? While each of these goals has merit — and they are not necessarily in conflict with one another — focusing on all of them simultaneously may be difficult. Each outcome will require different indicators and even different denominators. For example, if a state is focused on improving participation by all students in career-focused experiences, the accountability system might prioritize CTE course participation and work-based learning opportunities. Conversely, if a state wants to strengthen its CTE programs, the accountability system may put the greatest weight on students completing a state-approved CTE program of study and earning an industry-recognized credential.

Once the outcomes and related indicators are identified, states will need to address how much **weight** such indicators will have within their formula. As noted, career-focused indicators currently range from being insignificant to very significant within a state's accountability formula. And given that the majority of states are using meta-indicators, a school may be able to gain full points in the accountability formula without having any student demonstrate career readiness, thereby making the weight of career-ready indicators zero. This question will be central to the broader discussion under way around the balance between "academic" and "student success" measures under ESSA.

Relatedly, states will need to consider the benefits and limitations of using **meta-indicators** of career readiness, or college and career readiness, to ensure that the right signals are being sent and that the information is transparent. If a state considers the subindicators to truly be equivalent and interchangeable, a meta-indicator may make sense in an accountability formula. However, if states want to incent career-ready outcomes for all students, meta-indicators will likely be insufficient. In any case, even if states choose to use meta-indicators, they should publicly report the subindicators at the school level to provide the most useful data to practitioners.

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## Collecting, Validating, and Comparing Data

One of the biggest challenges in using career-focused indicators is around data collection and validation. While this challenge is common for any indicators that do not depend on large-scale assessments, many of the career-focused indicators present specific challenges based on the types of experiences being measured and where the data are coming from.

Simply put, there are limits to what is currently collected around career readiness, and expanding the use of career readiness indicators will likely require better coordination across data systems (and state offices), as well as state-level processes for validating self-reported and third-party data.

States already are collecting CTE participation, completion, and other indicators focused on students enrolled in federally supported programs as a requirement for Perkins funding. However, how states collect — and verify — such data differs. Some states have centralized data systems, while others rely primarily on **self-reported data**.

There is growing interest in incorporating experiential learning — and work-based learning in particular — into accountability systems, but there are very few proven strategies for collecting and measuring participation or completion beyond surveys or other self-reported means, requiring a robust **data validation process** and protocol from the state level.

Another related data collection challenge is that many of the indicators are based on assessments given by **third-party entities**, which only provide scores directly to students rather than the schools, let alone a state data system. Reporting industry-recognized credential and academic career-ready assessment results to anyone other than students can often trigger privacy and legal challenges. Additionally, most of these assessments and credentials are scored based on a pass/fail basis, limiting states' ability to measure students' growth and progress along a continuum of readiness.

Finally, given the increased focus on supporting regionally developed and validated programs and pathways, programs are more diverse, further complicating **comparable student-level data**. For example, a state may have six different precision manufacturing pathways in six regions. While they are each called a "Precision Manufacturing Pathway" (and need to be coded as such), it is possible that only two of each pathway's four courses are the same, and the pathways culminate in three different industry-recognized credentials based on the regional employers' preferences. State data and accountability systems are not currently built for this level of differentiation at the local level. Strategies like common course coding can help mitigate the challenge, but as more regional pathways are built — and potentially linked to postsecondary and workforce development pathways — making sense of these data will become even more difficult. This can all be further exacerbated by the range of disciplines and credentials offered under the CTE umbrella.

## Conclusion

In recent years, states have increasingly built indicators of college and career readiness into their public reporting and accountability systems. And in just the last two years, since the release of Advance CTE and Achieve's report, *Making Career Readiness Count*, states have moved the needle further. Career readiness remains undervalued in many states' accountability and public reporting systems, partly due to measurement and data collection challenges and a continued focus on college *or* career readiness rather than college *and* career readiness. The implementation of ESSA, coupled with the commitment of many state leaders to strengthen career readiness as an outcome for all students, offers an opportunity for career readiness to truly matter for all students in a meaningful way.

## Appendix A: States that Publicly Report Career-Focused Indicator(s)

STATE	SCHOOL-LEVEL REPORTING (e.g., report cards, data dashboards, accountability reports, P-20 reports)	OTHER (e.g., CTE report cards, third-party reports with school-level data hosted on state education agency website)	WHAT CAREER INDICATOR(S) DOES THE STATE REPORT?
AL	Y	Y	Perkins indicators are reported at the county level on the state report card. Postsecondary enrollment and remediation of graduates are reported through Post-Graduation Reports linked from the Alabama Department of Education site to the state higher education site.
AR	Y		Arkansas school report cards include the number of students participating in the state's College and Career Readiness Planning Program. The percentage of students who enrolled in a postsecondary institution after high school graduation and who require remediation is also included, though not disaggregated by two- and four-year institutions.
CA	Y		School accountability report cards include the number of pupils participating in CTE, the percentage of pupils completing a CTE program and earning a high school diploma, and the percentage of CTE courses sequenced or articulated between the school and institutions of postsecondary education.
CO		Y	The Colorado Annual Report on Concurrent Enrollment includes measures of participation and success, CTE concurrent enrollment participation, and the numbers of concurrent enrollment and ASCENT students seeking postsecondary credentials and completing credentials. Postsecondary enrollment is reported through a linked report off the Colorado Department of Education site.
CT	Y	Y	Connecticut's Next Generation Accountability Reports include the percentage of students in grades 11 and 12 participating in at least one of the following during high school: two courses in AP/IB/dual enrollment, two courses in one of seven CTE categories, or two workplace experience "courses" in any area. The percentage of the graduating class who enrolled in a two- or four-year postsecondary institution any time during the first year after high school graduation is also included, though not disaggregated by two- and four-year institutions; these data are available in disaggregated format through the National Student Clearinghouse reports hosted on the Connecticut Department of Education site.
DE	Y	Y	The Delaware School Success Framework school-level reports include the percentage of students who have demonstrated preparation for education and career training after high school through 3+ in both content areas on Smarter Balanced, 1550+ on SAT, 3+ on AP, 4+ on IB, B or higher in a dual enrollment course, technical skills attainment with a combined 6+ on Smarter Balanced, and/or technical skills attainment with completion of a co-op job training opportunity. In addition, the Delaware 2016 College Success Reports include postsecondary enrollment and remediation data disaggregated by two- and four-year institutions.
FL	Y		The Florida School Accountability Reports include Acceleration Performance, a component based on the percentage of graduates who earned a passing score on an acceleration examination (AP, IB, or Advanced International Certificate of Education (AICE)), a C- or better in an approved dual enrollment course, or a Career and Professional Education Act (CAPE) industry certification/acceleration industry certification.



STATE	SCHOOL-LEVEL REPORTING (e.g., report cards, data dashboards, accountability reports, P-20 reports)	OTHER (e.g., CTE report cards, third-party reports with school-level data hosted on state education agency website)	WHAT CAREER INDICATOR(S) DOES THE STATE REPORT?
GA	Y	Y	Georgia's College and Career Ready Performance Index (CCRPI) includes the percentage of Career, Technical and Adult Education (CTAE) pathway completers earning a national industry-recognized credential, an IB career-related certificate, or a passing score on a Georgia Department of Education-recognized end-of-pathway assessment and the percentage of graduates earning high school credit(s) for accelerated enrollment via ACCEL, Dual HOPE Grant, Move On When Ready, Early College, Gateway to College, AP courses, or IB courses. The state also reports the percentage of graduates completing a career-related work-based learning program or a career-related capstone project. The CCRPI includes a meta-indicator that includes the percentage of graduates entering Technical College System of Georgia (TCSG)/University System of Georgia (USG) not requiring remediation or learning support courses, but the data are not reported by subindicator and not included in this report. The Governor's Office of Student Achievement HS Graduate Outcomes Report includes postsecondary enrollment and progress after high school. The reports also include the percentage of the graduates who required remediation at Georgia public colleges and universities, but the data is not disaggregated by two- and four-year institutions.
HI	Y		Postsecondary enrollment and dual credit participants are reported as part of the College and Career Readiness Indicators reports, an annual collaboration between the Hawaii State Department of Education and the University of Hawai'i System, coordinated by Hawai'i P-20 Partnerships for Education. The percentage of students who require remediation is reported, though not disaggregated by two- and four-year institutions.
IL	Y		Report cards include the percentage of students achieving the four levels of performance for the National Career Readiness Certificate. Report cards also list the dual credit courses, CTE courses, and work study programs that each school offers.
IN	Y		Annual Performance Reports for schools include the number and percentage of students in a career and technical program. The reports also include district- and state-level data on the percentage of students earning a career and technical diploma.
KY	Y		Kentucky's school report cards include the number of graduates who met benchmarks for Career Ready Academic (ASVAB or WorkKeys) or Career Ready Technical (Kentucky Occupational Skills Standards Assessment (KOSSA) or an industry-recognized career certificate). The report cards also include disaggregated data on students' postsecondary enrollment, vocational/technical training, and military enlistment. The report cards include all Perkins indicators, as well as enrollment and industry certifications earned by career pathway area.
LA	Y	Y	Louisiana's school report cards include the percentage of graduates earning dual enrollment credit; the data do not include students already represented as earning AP credit. The percentage of students who enrolled in a two- or four-year postsecondary institution within the second fall semester after high school graduation is also included, though not disaggregated by two- and four-year institutions. The state also issues school-level data on the number of students who are eligible for and receive TOPS Tech awards, which pay for tuition for skill or occupational training at any schools within the Louisiana Community and Technical College System, Louisiana-approved Proprietary and Cosmetology Schools, or Louisiana Public Colleges and Universities that do not offer a baccalaureate degree.

STATE	SCHOOL-LEVEL REPORTING (e.g., report cards, data dashboards, accountability reports, P-20 reports)	OTHER (e.g., CTE report cards, third-party reports with school-level data hosted on state education agency website)	WHAT CAREER INDICATOR(S) DOES THE STATE REPORT?
ME		Y	Maine's Department of Education Data Warehouse includes National Student Clearinghouse reports, which include the percentage of the graduating class who enrolled by the fall in a two- or four-year postsecondary institution. Remediation rates and enrollment data are also included on school report cards, though not disaggregated by two- and four-year institutions.
MD	Y		Maryland's school report card includes the number of diploma earners who meet career and technology education program requirements as well as those who meet both university and career/technology requirements. Report cards also include grade 12 students' documented decisions within 30 days of anticipated graduation, including attending a two- or four-year college, attending a specialized school or specialized training, entering employment (related to high school program), entering employment (unrelated to high school program), entering the military, entering full-time employment and school, or entering part-time employment and/or school.
MA	Y		Massachusetts' school profiles include the percentage of graduates attending two- and four-year colleges and universities. The state's District Analysis Review Tools (DARTs) include the number of students enrolled in each Career/Vocational Technical Education (CVTE) program; data are available at the district, Workforce Investment Board (WIB) region, and state levels. Postsecondary remediation data are also available through DART but are not disaggregated by two- and four-year systems.
MI	Y		Michigan's School Data Dashboard includes postsecondary outcomes by high school, including postsecondary enrollment and remediation at two- and four-year institutions.
MO	Y		Missouri's report cards include the percentage of graduates entering a two-year, four-year, or postsecondary (technical) institution and the percentage of graduates who complete a CTE program and are placed in a related occupation or training program within 180 days of graduation. The percentage of students who require remediation is reported, though not disaggregated by two- and four-year institutions.
NV	Y		Nevada's school report cards include the number of CTE students who earn an Advanced diploma and a series of completion indicators, including CTE enrollment (concentrators), course completers, and program completers. The Nevada School Performance framework includes the percentage of students who earn a passing score on an AP exam or have earned one college credit.
NJ	Y		New Jersey School Performance reports include both the percentage of students who participated in an approved career and technical education program and two-year or four-year postsecondary institution enrollment rates of the school's graduates, 16 months after high school graduation.
NM	Y		New Mexico's report cards include the percentage of the cohort who participate and succeed in CCR opportunities, including college entrance assessments; pass a college-level course (AP, dual credit, or IB); and are eligible for an industry-recognized certification (CTE, Supplemental Accountability Model (SAM) School Supplemental). Participation is reported by indicator; success is reported as a meta-indicator across all measures.
NY	Y		New York's report cards include the percentage of students with Regents or local diplomas who reported their plans to attend two- or four-year colleges, attend other postsecondary institutions, enter the military, or enter employment.

STATE	SCHOOL-LEVEL REPORTING (e.g., report cards, data dashboards, accountability reports, P-20 reports)	OTHER (e.g., CTE report cards, third-party reports with school-level data hosted on state education agency website)	WHAT CAREER INDICATOR(S) DOES THE STATE REPORT?
NC	Y		North Carolina's report cards include the percentage of CTE concentrators who graduate having earned a Silver or better on ACT WorkKeys. Report cards also include a Specialized Course Enrollment indicator that includes CTE courses at high schools and community colleges and regular academic courses at community colleges and universities. The percentage of the graduating class who enrolled in a two- or four-year postsecondary institutions is also included, though not disaggregated by two- and four-year institutions.
OH	Y	Y	Ohio's report cards include a Prepared for Success category, in which the state reports dual enrollment credit and industry-recognized credentials. The state's CTE Planning District Report Cards also include career-ready measures for technical skill attainment, postprogram placement, and industry-recognized credentials.
OK	Y		Oklahoma's A-F report cards include an Advanced Coursework component, which includes AP courses, IB programs, concurrent enrollment in college or university courses, AICE courses, and career/technology courses that lead to industry certification. Both a participation index and performance index are calculated for high schools.
PA	Y		Pennsylvania's school performance profiles include the percentage of students scoring Competent or Advanced on industry standards-based assessments that include the National Occupational Competency Testing Institute (NOCTI) and National Institute for Metalworking Skills (NIMS) exams. The state separately reports the percentage of students scoring Advanced on these assessments.
SC	Y		South Carolina's report cards include the percentage of students meeting the Platinum, Gold, or Silver thresholds on WorkKeys; the percentage of students participating in work-based learning experiences; enrollment in career/technology courses; and the number of students enrolled and successful in dual enrollment courses. The percentage of graduates enrolled in a two- or four-year college or technical college pursuing an associate degree, certificate, or diploma is also included on school report cards, though the data is not disaggregated by two- and four-year institutions.
TN		Y	Tennessee's CTE report cards, which are available for all high schools, include data on the number of secondary students enrolled in a CTE course, the percentage of CTE concentrators, the number and percentage of CTE students in dual credit courses, the percentage of CTE students meeting all dual credit requirements, the number and percentage of CTE students in dual enrollment courses, the percentage of CTE students enrolled and earning credit through dual enrollment courses, and the percentage of CTE concentrators in post-high school placement (a self-reported number). Tennessee was not included in the final count, however, as the CTE report cards run parallel to the state's school-level report cards.
TX	Y		The Texas Academic Performance Reports (TAPR) include the percentage of graduates who were enrolled in a CTE-coherent sequence of courses. Advanced course/dual enrollment completion for grades 11-12 and grades 9-12 is disaggregated for core subject areas and "any subject." The TAPR also include the percentage of the graduating class who enrolled in a Texas institution of higher education and completed one year without remediation, but this information is not disaggregated by two- and four-year institutions. The percentage of students who require remediation is reported, though not disaggregated by two- and four-year institutions.

STATE	SCHOOL-LEVEL REPORTING (e.g., report cards, data dashboards, accountability reports, P–20 reports)	OTHER (e.g., CTE report cards, third-party reports with school-level data hosted on state education agency website)	WHAT CAREER INDICATOR(S) DOES THE STATE REPORT?
UT	Y		Utah's Education PACE Report Cards include the percentage of students enrolled in a minimum of 1.0 credits for grades 11 or 12, which is broken out into four discrete categories: concurrent enrollment, AP, CTE courses, and IB. The reports also include an aggregate measure for the percentage of 11th and 12th grade students who earned at least three credits in the college- and career-ready courses.
VA	Y	Y	Virginia's school report cards include the percentage of students participating in dual enrollment coursework, credentials earned for passing occupational competency assessments recognized by NOCTI, state licensure examinations, industry certification examinations, workplace readiness skills assessments, total credentials earned, students earning one or more credentials, and CTE completers. Virginia also issues postsecondary enrollment reports through State Fiscal Stabilization Fund Indicator (C)(11) Report on the number and percentage of high school graduates who enrolled in a two- or four-year postsecondary institution within 16 months of their high school graduation.
WA	Y		Washington's report cards include the total number of students in dual credit courses, Tech Prep, and Running Start. The state also reports enrollment of CTE participants and concentrators and Perkins indicators, but these data were last reported in 2012–13 and fall outside the scope of this report.
WI	Y		Wisconsin's School Performance Reports include the postgraduation plans of graduates, including enrollment in a four-year college or university, enrollment in a vocational or technical college, employment, enlistment in the military, and participation in a job training program.

## Appendix B: States that Include Career-Focused Indicator(s) in Accountability Systems

STATE	FORMULA OR BONUS POINTS	WHAT CAREER INDICATOR(S) DOES THE STATE INCLUDE IN THE ACCOUNTABILITY SYSTEM?
AL	Formula	Alabama's accountability system includes an indicator that, by 2016, the state will increase number of students who are college- and career-ready as measured by receiving: (1) a benchmark score on any section of the ACT test, (2) a qualifying score on an AP or IB exam, (3) approved college or postsecondary credit while in high school, (4) a benchmark level on the ACT WorkKeys, (5) an approved industry credential OR (6) documented acceptance for enlistment into the military.
AK	Formula	Two career-ready indicators account for 10 percent of a high school accountability score: 8 percent from college- and career-ready performance on WorkKeys, ACT, or SAT and 2 percent from WorkKeys participation.
CT	Formula	Two career-ready indicators account for 12 percent (150 points) of the high school accountability score: (1) 50 points for the percentage of students in grades 11 and 12 participating in at least one of the following: two courses in AP/IB/dual enrollment, two courses in one of seven CTE categories, or two workplace experience "courses" in any area; and (2) 100 points for the percentage of graduating class who enrolled in a two- or four-year postsecondary institution any time during the first year after high school graduation.
DE	Formula	College and Career Preparation (CCP) counts for 10 percent of the high school accountability score. CCP measures the percentage of graduating seniors who met at least one of the following demonstrations of preparation at any point in their high school career: 3+ in both content areas on Smarter Balanced, 1550+ on SAT, 3+ on AP, 4+ on IB, B or higher in a dual enrollment course, technical skills attainment with a combined 6+ on Smarter Balanced, and/or technical skills attainment with completion of a co-op job training opportunity.
FL	Formula	The High School Acceleration component was one of seven components included in schools' informational baseline in 2014–15. Each component is worth 100 points or 16.7 percent of the total grade. High School Acceleration is based on the percentage of the graduation rate cohort who earned a score on an acceleration examination (AP, IB, or AICE) or a grade in a dual enrollment course that qualified students for college credit or earned an industry certification.
GA	Formula and Bonus Points	Within the CCRPI, the post-high school readiness component accounts for 30 percent of the Achievement score and includes three career-ready indicators: (1) percentage of graduates completing a CTAE pathway, an advanced academic pathway, an IB career-related program, a fine arts pathway, or a world language pathway within their program of study; (2) percentage of graduates completing a CTAE pathway and earning a national industry-recognized credential; and (3) percentage of graduates earning high school credit(s) for accelerated enrollment via ACCEL, Dual HOPE Grant, Move On When Ready, Early College, Gateway to College, AP courses, or IB courses. High schools may earn additional points for Exceeding the Bar indicators, including the percentage of graduates completing a career-related work-based learning program or a career-related capstone project.
HI	Formula and Bonus Points	The college-going rate accounts for 10 points (4 percent) of the 400-point Strive HI Index for high schools. Additionally, schools can earn five bonus points for the percentage of students passing AP, CTE, IB, or dual credit classes.
IN	Formula	The CCR indicator score is one of two metrics in the multiple measures domain of the accountability system. Schools can earn a maximum of 100 points for the CCR indicator score, which is calculated as follows: (number passed AP exams + number passed IB exams + number dual college credits + number industry certifications) / total number of cohort graduates. There are three domains: performance, growth, and multiple measures. Each domain is issued a score between 0.00 and 100.0 points, and the scores for each domain are weighted to determine a school's total score. The total score is the sum of the three scores after they have been weighted.

STATE	FORMULA OR BONUS POINTS	WHAT CAREER INDICATOR(S) DOES THE STATE INCLUDE IN THE ACCOUNTABILITY SYSTEM?
KY	Formula and Bonus Points	The CCR indicator accounts for 20 percent of a high school's total accountability score. Readiness is calculated by dividing the number of high school graduates who have successfully met an indicator of readiness for college OR career by the total number of graduates. Half a bonus point is awarded for students who meet both college AND career readiness. The Career Ready indicator includes graduates who met benchmarks for Career Ready Academic (ASVAB or ACT WorkKeys) and Career Ready Technical (KOSSA or an industry-recognized career certificate).
LA	Formula and Bonus Points	The graduation index accounts for 25 percent of a high school's accountability score and represents attainment of college-credit earning scores. The index allows for two accountability tiers for students who earn a diploma: (1) 150 points for students earning (a) a 3+ on an AP exam, 4+ on an IB exam, or 50+ on CLEP (b) Advanced statewide Jump Start credentials (160 points for both); and (2) 110 points for students (a) scoring below 3 on an AP test or 4 on an IB test or earning credit through TOPS-aligned dual enrollment or (b) earning a Basic statewide Jump Start credential (115 points for both).
MD	Formula	The College and Career Preparation component accounts for 8 percent of the overall high school score. It includes three elements: AP (3+) or IB (4+), CTE concentrators, and college enrollment. Having any one of the three elements is considered a student success factor. A student is counted only once in the numerator even if he or she meets two or more of the criteria. CTE concentrators are defined as students attaining advanced standing (enrolled in the third course of the program) in a state-approved CTE program of study.
MO	Formula	The career-ready components of the CCR indicator account for 14.3 percent of a high school's accountability score. The CCR indicator includes six parts, three of which are specific to career readiness: (1) the percentage of graduates who earned a qualifying score on an AP, IB, or technical skills assessments and/or receive college credit through early college, dual enrollment, or approved dual credit courses meets or exceeds the state standard or demonstrates required improvement; (2) the percentage of graduates who attend postsecondary education/training or are in the military within six months of graduating meets the state standard or demonstrates required improvement; and (3) the percentage of graduates who complete approved career education programs and are placed in occupations directly related to their training, continue their education, or are in the military within six months of graduating meets the state standard or demonstrates required improvement.
NM	Formula	CCR is composed of participation (five points) and success (10 points) yielding a total 15 points or 15 percent of the high school's overall grade. The formula allows for a suite of CCR indicators, including concurrent enrollment/dual credit in an accredited New Mexico postsecondary institution. The Career Program of Studies is a sequence of high school courses that lead to industry-recognized certification. To be considered successful, the student must complete all coursework with a C or better and graduate from high school with a regular diploma.
NY	Reward School Identification	Reward School Identification requires a secondary school to have a four-year cohort graduation rate that exceeds 80 percent, and the school must also exceed the state average for students graduating with either a Regents diploma with Advanced designation or a CTE endorsement. High Progress School Identification requires a school to have a four-year cohort graduation rate that exceeds 60 percent, and the school must also exceed the state average for students graduating with either a Regents diploma with Advanced designation or a CTE endorsement.
NC	Formula	Schools are graded using a 15-point grading scale, and grades are based on the school's achievement score (80 percent) and students' academic growth (20 percent). ACT WorkKeys is included in a high school's achievement score and reflects the percentage of concentrator graduates (students who have earned four CTE credits in a career cluster) who were awarded at least a Silver Level National Career Readiness Certificate based on ACT WorkKeys.
OK	Bonus Points	Schools can earn up to 10 bonus points through several indicators, one of which is advanced coursework. Advanced coursework for high schools includes AP courses, IB programs, concurrent enrollment in college or university courses, or AICE and career/technology courses that lead to industry certification. Both a participation index and performance index are calculated for high schools. A high school is able to earn one bonus point if it satisfies the requirement for either participation or performance.

STATE	FORMULA OR BONUS POINTS	WHAT CAREER INDICATOR(S) DOES THE STATE INCLUDE IN THE ACCOUNTABILITY SYSTEM?
PA	Formula and Bonus Points	Two career-ready indicators account for 7.5 percent of the high school accountability score: (1) 5 percent from indicators of academic achievement, including the percentage of students scoring Competent or Advanced on industry standards-based assessments that include the NOCTI/NIMS assessment; (2) 2.5 percent from AP, IB, or college credit in each of the four core academic areas. A one point (1 percent) bonus could be awarded for percentage of students scoring Advanced on industry standards-based assessments.
SD	Formula <sup>#</sup>	This accountability system is a 100-point school performance index. For schools administering the WorkKeys, 30 points (30 percent of high school weighting) come from WorkKeys/ACT/Accuplacer. One-third of the points (10) come from the results of assessments measuring college readiness in English, one-third from math (10 points), and one-third from the National Career Readiness Certificate, or NCRC (10 points). For schools opting not to administer this assessment, all points come from the college-ready measures in English and math.
TX	Formula	The CCR indicator score accounts for 25 percent of the Postsecondary component, or 6.25 percent of the overall index score. The score is calculated as the percentage of annual graduates who (1) met or exceeded the Texas Success Initiative criteria in both English language arts and mathematics on the Texas Assessment of Knowledge and Skills (exit-level test, SAT, or ACT); (2) completed and earned credit on at least two advanced/dual credit enrollment courses; or (3) enrolled in a CTE-coherent sequence of courses (including the Tech Prep program).
VA	Graduation Requirement	Effective with the entering 9th grade class of 2013–14, students who earn a Standard diploma must earn a Board-approved industry credential.

# In 2015–16, schools have the option to administer the WorkKeys. For schools that do, 30 points (30 percent of high school weighting) come from WorkKeys/ACT/Accuplacer attainment. One-third of the points come from the results of assessments measuring college readiness in English, one-third from math, and one-third from WorkKeys. For schools opting not to administer this assessment, all points come from the college-ready measures in English and math.

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## Methodology

The authors identified career-focused indicators in state accountability and public reporting systems by examining states' most recent accountability documentation and technical manuals, school report cards and data dashboards hosted or commissioned by a state education agency, high school feedback reports, CTE-specific report cards, and accountability reports that differed from the state report cards.

Additional criteria/business rules for what was included:

- Wherever possible, documentation was located for the 2015–16 school year to ascertain whether and how career readiness indicators were included in school accountability systems. However, given ESEA waiver renewals and accountability systems in transition, states' accountability documentation was not always updated to reflect the current 2015–16 school year. In these cases, we used the most recent manual, as long as it was confirmed that the requirements reflected 2013–14 or 2014–15 (no older).
- Publicly reported data must reflect outcomes of the class of (or school year) 2014 or 2015. In some cases, states' most recent reporting reflected outcomes for the class of 2012 or 2013; these were not included in the state counts.
- Data included in the counts must be reported at the school or district level. In nearly all cases, the data are reported at the school level. The preferred unit of analysis was school-level reports.
- Postsecondary enrollment and remediation data were included in the counts only when the data were disaggregated by both two- and four-year institutions.
- A number of states issue CTE-specific reports; these are not included in the state counts. For indicators to be included, they must be a part of the comprehensive report card/accountability system, not parallel.



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## Glossary

**Armed Services Vocational Aptitude Battery (ASVAB):** A test that determines a recruit's eligibility to enlist in the military. The results of this test also are used to assign recruits to appropriate jobs within the military.

**Career technical student organization (CTSO):** A co-curricular organization that provides experiential learning for CTE students (often with chapters at both the secondary and postsecondary levels) through competitions and business partnerships. More than 2 million students are involved in CTSOs across the nation.

**CTE concentrator (secondary level):** A secondary student who has earned three or more credits in a single CTE program area (e.g., health care or business services) or two credits in a single CTE program area (but only in those program areas in which two-credit sequences at the secondary level are recognized by the state and/or its local eligible recipients). Many states use the term "completer" in their state reporting and accountability systems.

**CTE pathway:** A sequence of academic, career, and technical courses and training that begins as early as 9th grade and leads to progressively higher levels of education and higher-skilled positions in specific industries or occupational sectors.

**Credential:** An umbrella term used to capture the vast ecosystem of credentialing from industry recognized to postsecondary.

**Dual Enrollment:** When a student takes a course from a college and, upon successful completion, receives credit on a college transcript. Often, students can earn dual credit from both their high school and the college for the same course, as long as the content aligns with curricular requirements of the respective institutions.

**Industry-based/industry-recognized certification:** A credential awarded by a certification body, such as an industry association or company, based on an individual demonstrating through an examination process that he or she has acquired the designated knowledge, skills, and abilities to perform a specific occupation or skill. The examination can be written, oral, and/or performance based. Certification is a time-limited credential that is renewed through a recertification process.

**Meta-indicator:** A composite measure of college and career readiness or career readiness that may include components such as AP, IB, or dual enrollment.

**Perkins indicators:** The indicators that all states are required to report on for students enrolled in programs supported by Carl D. Perkins Career and Technical Education Act (Perkins) funds. At the secondary level there are eight required indicators, including technical skill attainment, graduation rate, and placement, among others.

**Program of study:** A coordinated, nonduplicative sequence of academic and technical courses from secondary to postsecondary that may include an opportunity for students to earn industry-based credentials, participate in dual enrollment courses, and/or acquire postsecondary credits while in high school.

**Stacked/stackable industry credential:** Part of a sequence of credentials that can be accumulated over time to build an individual's qualifications and help him or her to move along a career pathway or up a career ladder to different and potentially higher-paying jobs.

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**Technical skills assessment:** A test used to evaluate CTE students' attainment of technical skills that is aligned to industry standards where available and appropriate. Technical skills assessments are typically given at the end of a CTE course or pathway.

**Work readiness certificate:** A verification, typically awarded by an educational institution, that a person has achieved and demonstrated a certain level of workplace employability skills that is applicable across industries and occupations.

**Work-based learning:** A type of learning experience, such as job shadowing, internship, apprenticeship, or a service-learning project, that allows students to apply academic and technical knowledge and skills through real-world experience and engagement with adults outside of high school and gain experience working in an environment related to their CTE pathway.

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