

State Policy Pushes in the National Career Clusters[®] Framework

Advance CTE, as the steward of The National Career Clusters[®] Framework, recognizes the need for a limitless career preparation ecosystem, in which all learners, regardless of race, geography, learner level, or special population status, can access and succeed in programs of their choosing. The purpose statement of the Framework calls for a similar charge: *“The National Career Clusters Framework provides structural alignment and a common language to bridge education and work, empowering each learner to explore, decide on, and prepare for dynamic and evolving careers.”*

As the primary beneficiaries of the Framework, learners of all ages require a career preparation ecosystem that works for them, and industry requires learners equipped with the skills and competencies needed to succeed in ever-changing work environments. To meet these requirements secondary and postsecondary policies and programs at the state and local levels must be flexible and responsive to the needs of both learners and industry alike.

In 2002, the publication of the original Framework pushed for consistency and quality across programs and supported a transition from vocational education to Career Technical Education (CTE) through years of policy and programmatic changes. The modernized Framework provides a similar opportunity to further evolve CTE by better aligning with the changing economy and learners’ interests,

including through recognizing the importance of interdisciplinary and contextualized programs that reflect the realities of the world of work. This resource identifies key policy areas—program of study flexibility, teacher credentialing and licensure, and data reporting and analysis—that can and should be examined as components of the implementation of a modernized Framework. Combined, changes to each of these areas could be a powerful driver of a flexible and responsive career preparation system. While this resource seeks to push state and local CTE systems forward, it is not comprehensive; many states may have other policy areas that need to be considered.

Flexibility in Program of Study Design

To enable both secondary and postsecondary programs of study at the state and local levels to be aligned with the interdisciplinary nature of the world of work without duplication, states and local agencies should review their program approval processes and course coding systems to expand flexibility in program design and delivery. As a learner moves through a CTE pathway, they should be able to build a program of study that both identifies them as a CTE concentrator and aligns with their interests.

With the introduction of the Cross-Cutting Career Clusters, as well as natural intersections between and across many other Career Clusters, the current methods of course coding and program design are limiting and reinforcing silos rather than interdisciplinary and contextualized opportunities.



Federal Policy and the Career Clusters

Currently, only data required by the The Carl D. Perkins Career and Technical Education Act, as amended by the Strengthening Career and Technical Education for the 21st Century Act in 2018 (Perkins V), is reported to the U.S. Department of Education's Office of Career, Technical, and Adult Education by Career Cluster. However, states should leverage all available federal funding mechanisms to support policy changes corresponding to the implementation of a modernized Framework.

Education-focused laws, such as the Every Student Succeeds Act, the Higher Education Act, and the Individuals with Disabilities Education Act, and workforce-oriented laws and policies, such as the Workforce Innovation and Opportunity Act (WIOA) and federal Registered Apprenticeship programs, can be coordinated around the Career Clusters at the state level to organize programs and direct funding to those programs and learners that need it most.

Similarly, social service programs such as the U.S. Department of Health and Human Services' Temporary Assistance for Needy Families and the U.S. Department of Agriculture's Supplemental Nutrition Assistance Program (SNAP) can be used to support adult education and workforce training programs in connection with The National Career Clusters Framework. For example, SNAP has an embedded Employment and Training program that can be used to offset costs associated with enrollment in postsecondary CTE programs and to expand credential and degree attainment goals.

By using the Career Clusters as a common language bridging education and the world of work, states can organize these systems in a comprehensive way and create an aligned career preparation ecosystem between and across each of these federal initiatives. For more information about braiding funding to support career pathways, visit [this resource](#).

Alignment between specific courses and programs of study can often be limited due to restrictions in course coding; states should consider which courses (identified by course code) can be leveraged in interdisciplinary ways, providing options for how a learner can proceed through a program of study, or build their own, and still maintain concentrator status. Conversely, the same course could be coded in multiple ways depending on how districts or postsecondary institutions apply that course to a learner's program of study or record.

Expansion of flexible options for learners should not come at the expense of other elements of a high-quality program of study. Comprehensive work-based learning opportunities; pre-, youth, and registered apprenticeships; early postsecondary opportunities such as dual and concurrent enrollment; and capstone experiences should all be considered as viable options for how a state or local agency could incorporate this flexibility into the program of study.

The following outlines policy implications and practical examples for providing more flexibility in program design and course coding:



Policy Implications

- Programs of study should have options for the range of courses a learner can take to complete a personalized, but industry-aligned, program of study. Instead of specifying a single course, state and local agencies can provide a catalog of opportunities that fulfill requirements and support learners in the decision-making process, recognizing that many courses may require prerequisites.

For example, depending on interest, a learner in an environmental science program of study could take a course in energy production, while their peer may take a course in water systems; each course could still fulfill the same requirement for their program.

- Programs can have distinct career pathway options that correspond to the Cross-Cutting Career Clusters to help a learner contextualize their sector-specific technical knowledge. For example, a learner in a program of study in the Construction Career Cluster could identify that they want to be in a more Management & Entrepreneurship-focused program, while another learner could identify they want to be in a Digital Technology-focused Construction program of study.

- An additional required fourth course (or more) can be applied to a program of study to help a learner expand their knowledge and skills in another related field in the same Career Cluster or in a relevant area in a separate Career Cluster. For states that already require four courses, a fifth course could be added to allow for additional stackable credentials, or one of those courses could be leveraged in a more interdisciplinary way.
- A contextualized capstone experience can support additional flexibility applying the capstone to a given program in one of the Cross-Cutting Career Clusters or another related Career Cluster.
- A course can be coded to multiple programs of study from different Career Clusters with the same code. An entrepreneurship course or a course on drone technology could be filled with learners from different Career Clusters and programs of study.

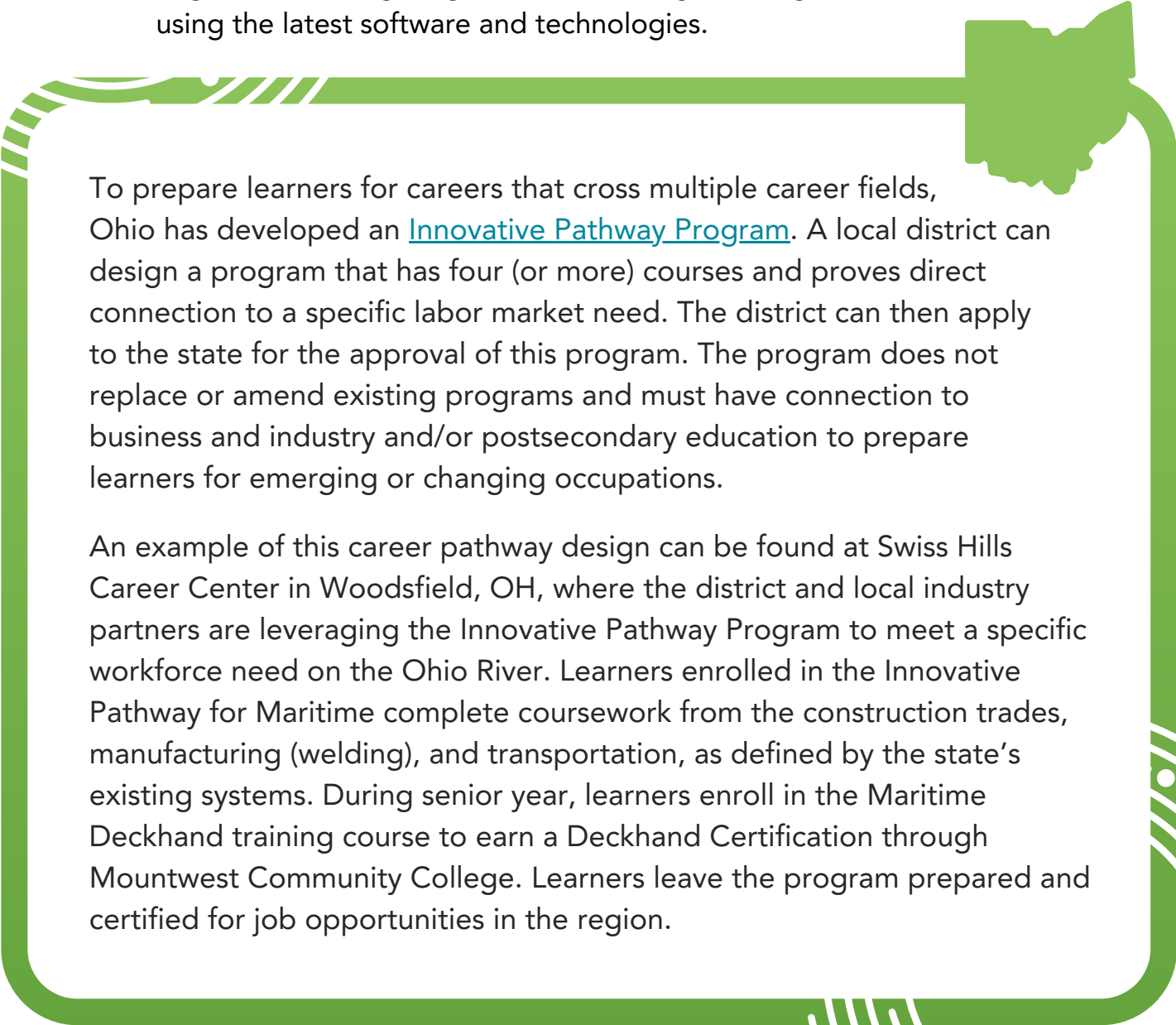


Policy in Practice

- A school district with a single Computer Assisted Design (CAD) lab is able to expand access to its CAD courses and instructors to learners in Agriculture; Advanced Manufacturing; Arts, Entertainment, & Design; Digital Technology; Supply Chain & Transportation; and other Career Clusters requiring this skill set. The CAD courses are coded to be applied to each learner's program of study, regardless of Career Cluster. Because a section is not restricted to a single Career Cluster, learners are able to learn from different instructors and take courses with learners from other programs. The district is able to limit duplication of courses and instruction, saving time and resources.

- A state designs a postsecondary program of study in Hospitality, Events, & Tourism focused on local economic need for large conferences. One learner takes a program that centers around the management and operations of events and adds a capstone experience in entrepreneurship to create their own events consulting business. Another learner adds a capstone experience that aligns with another program in culinary arts to understand how to become a caterer.

A third learner creates their own individualized program of study that combines coursework from Hospitality, Events, & Tourism; Arts, Entertainment, & Design; and Digital Technology to learn how to engineer visual, lighting, and sound design for large-scale events using the latest software and technologies.



To prepare learners for careers that cross multiple career fields, Ohio has developed an [Innovative Pathway Program](#). A local district can design a program that has four (or more) courses and proves direct connection to a specific labor market need. The district can then apply to the state for the approval of this program. The program does not replace or amend existing programs and must have connection to business and industry and/or postsecondary education to prepare learners for emerging or changing occupations.

An example of this career pathway design can be found at Swiss Hills Career Center in Woodsfield, OH, where the district and local industry partners are leveraging the Innovative Pathway Program to meet a specific workforce need on the Ohio River. Learners enrolled in the Innovative Pathway for Maritime complete coursework from the construction trades, manufacturing (welding), and transportation, as defined by the state's existing systems. During senior year, learners enroll in the Maritime Deckhand training course to earn a Deckhand Certification through Mountwest Community College. Learners leave the program prepared and certified for job opportunities in the region.

Teacher Credentialing

The shortages affecting the teacher workforce are well documented, and CTE instructors at both the secondary and postsecondary levels are no exception. States such as [Arkansas](#), [New Jersey](#), [Ohio](#), [Texas](#), and others have already made strides to expand CTE teacher licensure to incorporate alternative licensure paths, including allowing in-field experience to substitute for education or a teaching credential. Other states are leveraging grow-your-own and teacher apprenticeship programs to bolster the teacher pipeline.



Yet, many CTE instructors are still pigeonholed into specific programs or Career Clusters based on their experiences and inflexible policies. However, CTE instructors at both the secondary and postsecondary levels should be able to teach the courses for which they have the skills and expertise. The following outlines policy implications and practical examples for providing more flexibility in how instructors are licensed:



Policy Implications

- Many states license their CTE educators to teach in specific Career Clusters. Because the Career Cluster titles have changed, or courses may be reorganized, instructors should be given exceptions to continue teaching the courses they have historically taught, even if these courses may exist in different programs than their license currently allows.
- Changes to individual Career Clusters and the incorporation of Cross-Cutting Career Clusters require licensure flexibility, as many courses can and should be taught in a variety of different Career Clusters and still count toward a learner's concentrator or completer status.

- A secondary license may be decoupled from a specific Career Cluster to allow instructors to teach courses that are historically included in a different Career Cluster.
- States may consider a general CTE instructor license with endorsements rather than a license for a specific Career Cluster or program. This endorsement model expands an instructor's license to incorporate other areas of expertise.
- States with statewide programs of study should provide crosswalks between an instructor's license and the courses they are licensed to teach. All states, including those with locally approved programs, should provide statewide guidance about the flexibility of a license to give consistent information to local administrators about the instructors employed at their institution.
- Policies surrounding dual and concurrent enrollment instructor licensure should be expanded to ensure that a postsecondary instructor can provide instruction for a variety of secondary programs.


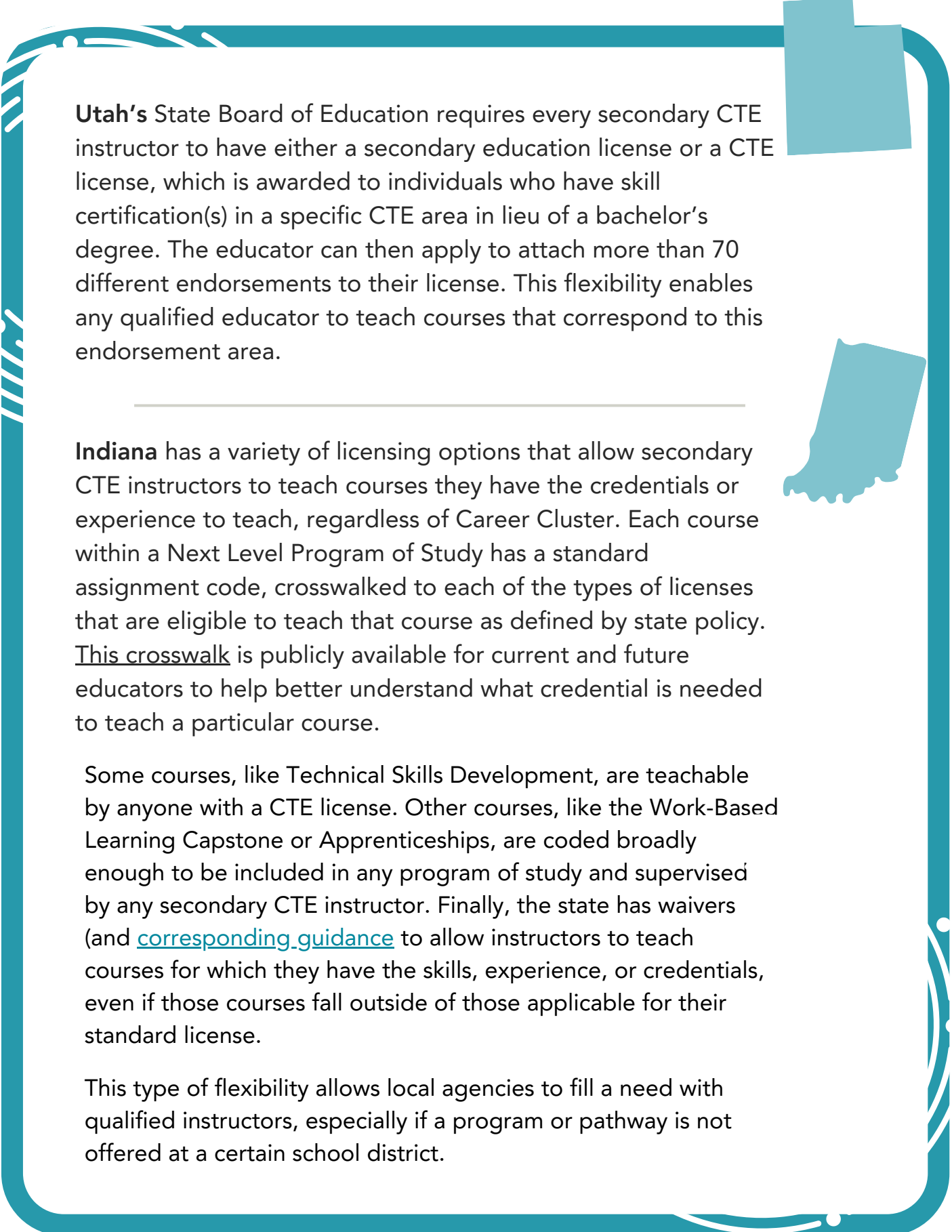


Policy in Practice


- A local farm owner is looking to become a CTE instructor. Because of the farm owner's expertise, a school district determines the instructor is qualified to teach courses in Agriculture, Advanced Manufacturing, Energy & Natural Resources, and Management & Entrepreneurship.

The state provides guidance around the specific courses (for example, food production, water systems, small engine repair, welding, entrepreneurship) that the educator can teach based on their credentials. Because of the flexibility in their license, this instructor can teach learners in other programs how to be an entrepreneur or the basics of engine repair, which would still count for those learners' programs of study.

- Similarly, an instructor in the Healthcare & Human Services Career Cluster has experience in emergency medicine. This instructor can apply a statewide endorsement to their license to also be able to teach learners from a firefighting and EMT program (within the Public Service & Safety Career Cluster) the same skills and competencies taught in a nursing class.



Utah's State Board of Education requires every secondary CTE instructor to have either a secondary education license or a CTE license, which is awarded to individuals who have skill certification(s) in a specific CTE area in lieu of a bachelor's degree. The educator can then apply to attach more than 70 different endorsements to their license. This flexibility enables any qualified educator to teach courses that correspond to this endorsement area.



Indiana has a variety of licensing options that allow secondary CTE instructors to teach courses they have the credentials or experience to teach, regardless of Career Cluster. Each course within a Next Level Program of Study has a standard assignment code, crosswalked to each of the types of licenses that are eligible to teach that course as defined by state policy. This crosswalk is publicly available for current and future educators to help better understand what credential is needed to teach a particular course.

Some courses, like Technical Skills Development, are teachable by anyone with a CTE license. Other courses, like the Work-Based Learning Capstone or Apprenticeships, are coded broadly enough to be included in any program of study and supervised by any secondary CTE instructor. Finally, the state has waivers (and [corresponding guidance](#) to allow instructors to teach courses for which they have the skills, experience, or credentials, even if those courses fall outside of those applicable for their standard license.

This type of flexibility allows local agencies to fill a need with qualified instructors, especially if a program or pathway is not offered at a certain school district.

Data and Reporting

Currently, states must report accountability data to the federal government by Career Cluster, as per reporting requirements outlined in Perkins V. To demonstrate outcomes in CTE programs, states should report secondary and postsecondary data to learners, policymakers, and other key constituents in a publicly accessible and understandable way. While consistency must remain to track trends and ensure that longitudinal comparisons can be made, data reporting and analysis should not be a barrier to increasing programmatic flexibility.

Data analysis of state, regional, and local labor market information (LMI) should also be incorporated into the development of new and emerging programs of study at both the state and local levels. To help learners understand the breadth of immediate and long-term career opportunities available to them (and their outcomes), states should provide definitions of “high-wage,” “high-skill,” and “in-demand” career opportunities and link them to programs of study and corresponding Career Clusters



Cross-agency and cross-sector collaboration should be included in the development of these definitions, which should be regularly updated, to provide consistency in LMI usage and reporting. LMI, along with employer input, can help states make informed decisions about which programs are most important and appropriate for the success of all learners.

The following outlines policy implications and practical examples for providing more flexibility in how data are collected and reported:



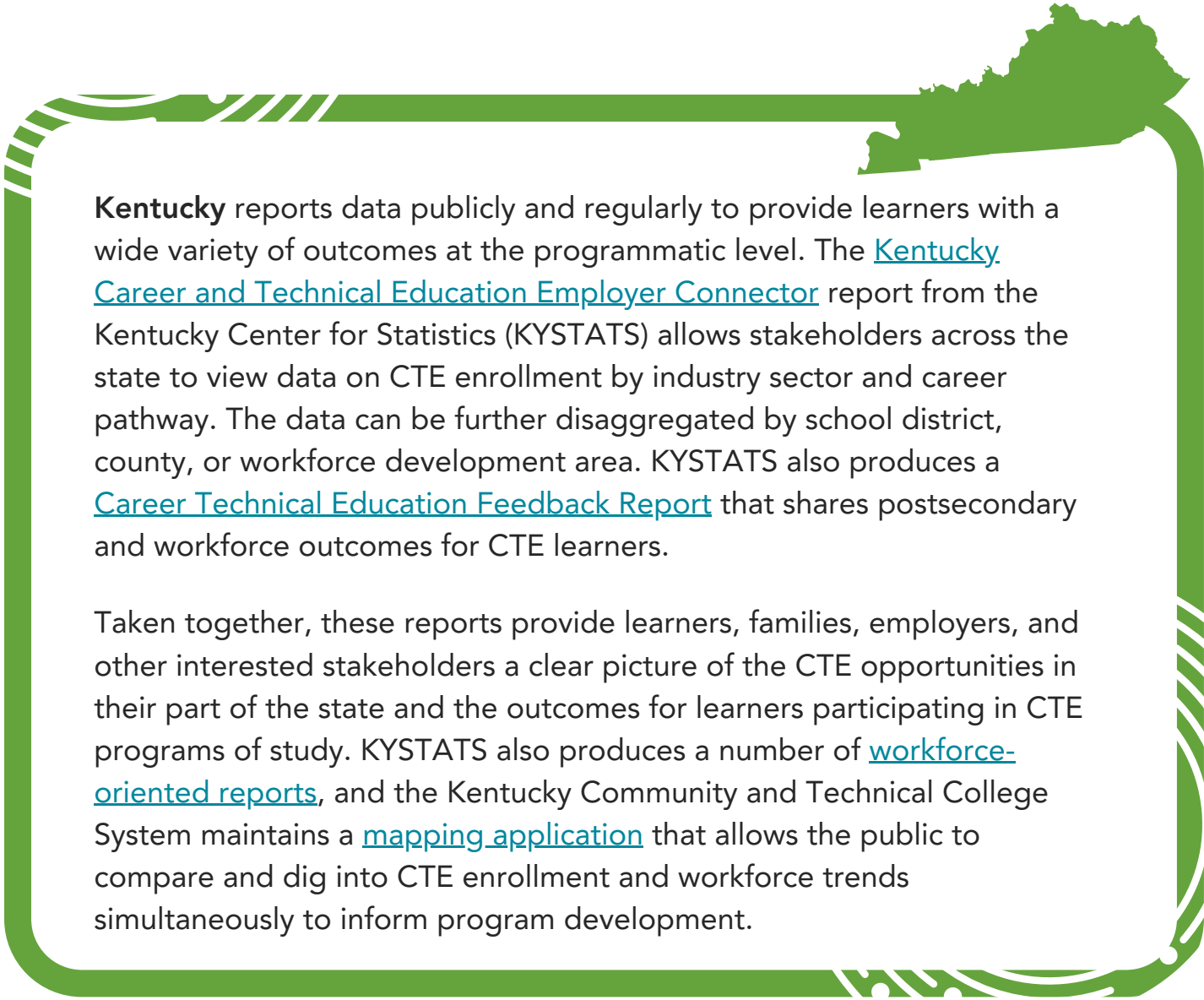
Policy Implications

- Data to track participation and outcomes can and should be collected at the program and program of study levels, and every program can be assigned a Career Cluster.
- As course coding changes, or career pathways become more flexible, states, districts, and institutions should be judicious about what data a specific course is assigned to ensure accurate counts for numbers of CTE participators and/or concentrators
- Data should be tied to the learner record to allow for accurate data collection looking at the full program, not at a specific course.
- Regular LMI analysis should factor into the development and refinement of high-quality CTE programs of study to determine which programs are offered where.
- Employment, postsecondary success, and other outcomes should be publicly reported at both the program and Career Cluster levels to help learners make more informed decisions about their futures.



Policy in Practice

- Two learners, one in a Financial Services program of study and one in a Marketing & Sales program of study, take the same course in payment management and point of sale systems. Because the course is required in each of their programs, the course counts toward their concentrator status for their specific program. Because the school district and state collect data at the program level, these learners are reported as concentrators in different Career Clusters to the state and the U.S. Department of Education.
- A two-year institution publicly reports the employment data of occupations connected to each of its degree programs and connects the program data to the appropriate Career Cluster. A learner looking to reengage with a postsecondary program can make a decision about their career future, including which programs are available for which Career Cluster, using the outcome data as a key factor.



Kentucky reports data publicly and regularly to provide learners with a wide variety of outcomes at the programmatic level. The [Kentucky Career and Technical Education Employer Connector](#) report from the Kentucky Center for Statistics (KYSTATS) allows stakeholders across the state to view data on CTE enrollment by industry sector and career pathway. The data can be further disaggregated by school district, county, or workforce development area. KYSTATS also produces a [Career Technical Education Feedback Report](#) that shares postsecondary and workforce outcomes for CTE learners.

Taken together, these reports provide learners, families, employers, and other interested stakeholders a clear picture of the CTE opportunities in their part of the state and the outcomes for learners participating in CTE programs of study. KYSTATS also produces a number of [workforce-oriented reports](#), and the Kentucky Community and Technical College System maintains a [mapping application](#) that allows the public to compare and dig into CTE enrollment and workforce trends simultaneously to inform program development.

Conclusion

The National Career Clusters Framework was modernized due, in part, to state and local secondary and postsecondary agencies championing the need for a more modern approach to CTE program organization and delivery. However, implementation of the Framework has the potential to transcend simple reorganization. It provides a valuable opportunity for states to embrace this modernization and commensurately update their policies and systems to meet the current and future needs of learners, instructors, and employers.

While this resource provides an initial survey of some of the policy potential for administrators to change the future landscape for CTE in a given state, states should use this as a jumping off point for policy innovation in these areas and others. Some states have other areas they may need to consider when reviewing their systems to determine the implementation of the Framework, including the following:

- career advising and development systems such as Individualized Career and Academic Plans (ICAPs)
- alignment across secondary and postsecondary systems including, but not limited to, the design and delivery of early postsecondary opportunities
- alignment with local industry, including through advisory boards and work-based learning efforts

In the future, more tools and guides will be available to guide states in their decisionmaking surrounding the policy implications of a modernized Framework. Please continue to visit careerclusters.org for all available resources regarding the implementation of the Framework.

Visit the **Resources** [webpage](#) for additional publications connecting key sectors and educational disciplines to the Career Clusters Framework. .