

Career Technical Education & Return on Investment

A Five-Year Progress Report on Reflect, Transform & Lead

In 2010, the National Association of State Directors of Career Technical Education Consortium (NASDCTEc) convened a seminal event that resulted in all 50 states and many partners committing to the principles and action steps defined in [*Reflect, Transform & Lead: A New Vision for Career Technical Education*](#), specifically that, for Career Technical Education (CTE) to reach its full promise, it must:

1. Ensure that the United States leads in global competitiveness;
2. Actively partner with employers to design and provide high-quality, dynamic programs;
3. Prepare students to succeed in further education and careers;
4. Be delivered through comprehensive programs of study aligned to The National Career Clusters® Framework; and
5. Be a results-driven system that demonstrates a positive return on investment.

This Vision has been impactful, resulting in tangible advances – some of which we will highlight below – as well as many intangible benefits. Most importantly, this Vision has provided a clear signal to the CTE community about the direction in which we are moving collectively and to the nation that we are committed to high-quality programs.

Now, five years later and with more interest and activity around CTE and career readiness than ever before, it is time to revisit this Vision. In anticipation of “The Future of CTE Summit,” we have written a series of short briefs to take stock of what has been accomplished and what still needs attention since the release of the original Vision.

This brief will explore the fifth principle:

CTE is a results-driven system that demonstrates a positive return on investment

CTE embraces the critical importance of accountability and data-driven decisions. CTE’s performance must be measured by appropriate indicators that accurately reflect programmatic outcomes. Data are used to drive decisions on program development and evaluation, so programs are aligned to the economy’s needs and resources are directed where they are most needed. Data demonstrate CTE’s positive return on investment measured by fiscal returns in the regional, state or national economy, realized savings for employers or governments, favorable societal impact, and career benefits for CTE students.

Necessary Actions:

- ✓ Use data to identify high-quality, successful, scalable CTE practices and programs, target efforts and funds to those found effective, and eliminate those that are ineffective
- ✓ Support federal policies that make the collection of nationally comparable, valid and reliable data possible and efficient
- ✓ Encourage longitudinal data systems to incorporate the data components necessary to support CTE accountability measures and promote the alignment of measures and other data requirements among federal education and workforce preparation programs
- ✓ Develop a return on investment model to demonstrate CTE’s positive fiscal, societal and economic impact

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PROGRESS TO DATE

Over the past half-decade, the data landscape has transformed significantly. Many states have developed innovative solutions to harness the potential of data for the purposes of program implementation, hired dedicated staff to administer and evaluate programs, and even developed tools to share this information with the public to be more transparent about program outcomes. At the federal level, similar efforts have focused on increasing the use and stewardship of data as the larger debate about the potential for its use in public policy decision-making has been ongoing.

“Understanding and innovating with data has the potential to change the way do almost anything we do for the better.”

– President Barack Obama

When the vision was released in 2010, CTE was often left out of many of these initial discussions at both the national and state levels regarding the important role data should play in the design and implementation of education and workforce development programs. However, increased attention to the need to align K-12, postsecondary and workforce systems and data has elevated CTE as a key issue in the broader discussion.

Federal Efforts to Strengthen CTE Data Collection and Use

Despite a rigorous national debate about the appropriate balance between the value of data and individual privacy, federal policymakers have made quite a bit of progress since 2010.

- The recent passage of the Workforce Innovation and Opportunity Act (WIOA) presents many opportunities – as well as some challenges – for aligning workforce and education data systems. WIOA’s introduction of common performance metrics for its core adult and youth programs sets a precedent for future federal legislation, such as the Carl D. Perkins Career and Technical Education Act (Perkins), as a way to strengthen existing accountability frameworks and build more consistency in measurement approaches and definitions. Moreover, the law’s expanded access to unemployment insurance wage records for secondary education agencies clears a major hurdle for CTE program evaluation.
- For the past two Congresses, [legislation](#) has been introduced that would repeal the Higher Education Act’s (HEA) ban on the creation of a postsecondary student unit record system, a barrier to calculating and evaluating postsecondary programs, a proposal that is gaining traction as lawmakers work towards the full reauthorization of HEA.
- Despite declining funding for the U.S. Department of Education’s State Longitudinal Data System (SLDS) grants, workforce components have been incorporated into the Department’s grant solicitation for the past several years and the Obama Administration has proposed significantly more funding to support these efforts.
- The Common Educational Data Standards (CEDS) [now incorporates career pathway participation](#), among other elements of relevance to the CTE community, in version 5.0 of the standards. Uniform data elements such as these are critical to the creation and expansion of state P-20 data systems.

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The Workforce Data Quality Campaign

In 2012, the Workforce Data Quality Campaign (WDQC) was created following a convening of several education and workforce development stakeholder groups including NASDCTEc, who is a founding national partner of the campaign. The goal of this gathering was to articulate a unified strategic vision and [policy platform](#) advocating for *inclusive, aligned, and market-relevant data systems to support the nation's workforce and help the United States remain economically competitive* – a core tenet of this principle. Since that time, WDQC has:

- Adopted and promoted [a cohesive federal policy platform](#) focused on solutions-based policies aimed at strengthening major pieces of federal education and workforce development legislation;
- Completed an [overview of the data landscape](#) for all fifty states and territories on their progress to fully leverage workforce data and systems; and
- Become the go-to resource for state and federal policymakers on data-related issues via [issue briefings](#), [reports](#), and [formal responses](#) to policy proposals.

Since its inception, WDQC has been central to advocating for federal policies that make data collection efforts more reliable and efficient as well as highlighting the multifaceted uses of data at all levels of decision and policymaking. The group has been a driving force behind CTE's increasing incorporation into the development of state longitudinal data systems as well as the second incarnation of the U.S. Department of Labor's Wage Record Interchange System (WRIS), which has significantly bolstered states' ability to use employer provided wage records for the purposes of federal CTE accountability reporting. WDQC also has been a critically important convener of national and state data stakeholders and has facilitated the sharing of best practices around state data strategies and use.

Forecasting Labor Market Demand for Career Clusters®

In partnership with Georgetown University's Center on Education and the Workforce and The National Research Center for Career and Technical Education (NRCCTE), NASDCTEc published [a report forecasting the labor market demand for each of the 16 Career Clusters from 2008 through 2018](#), an important and timely resource for states as they made decisions related to program development with more immediate connections to the needs of the economy.

Specifically, the report provided state-by-state labor market data to demonstrate where and how CTE programs across the 16 Career Clusters are in-demand by employers. It helped changed the dialogue in states and to encourage all CTE programs – not just adult or postsecondary programs – to think about connections to the labor market. Georgetown continues to explore the relationship between education and labor market data, as well as companies like Burning Glass, who focus on providing real-time labor market information to inform program development and funding.

Determining CTE's Return on Investment

Increasingly, there is interest at the national and state levels to develop a rigorous and objective model for determining CTE's return on investment (ROI). One of the most effective methods for demonstrating CTE's ROI has been focused on CTE's impact on student graduation rates and the savings that states and local realize as a result of investments in CTE programs.

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- The W.E. Upjohn Institute's [Conducting Return on Investment Analyses for Secondary and Postsecondary CTE: A Framework](#) provides an ROI model for policymakers to use when evaluating the positive impacts of CTE. The report found both short-term and long-term yields for secondary and postsecondary CTE participants and substantial positive returns for society over the long-term.
- NRCCTE complimented much of that work a year later with [Using Return on Investment and Other Related Tools: Guidelines for Measuring Career and Technical Education Internal Efficiency and External Effectiveness](#), a study that identified a number of challenges that make assessing CTE's ROI extremely challenging while providing a methodology for researchers to determine the ROI of the federal investment in CTE in isolated cases studies.

While a truly national ROI model is still an unattainable goal given the lack of fully aligned data systems in every state, much work has been done in states driven by the necessity to have ROI data. Increasingly, policymakers at all levels of government require more than anecdotal evidence to determine funding priorities.

- Between [2013](#) and [2014](#), 24 states passed legislation related to CTE data and/or accountability, allowing some states to make data-driven decisions about CTE programs and practice. For instance, [recently passed legislation](#) in **Florida** now requires local districts to report on the ROI of the particular credentials conferred by a CTE program and to include this information in the state's annual education report. [Newly enacted legislation](#) in **Kentucky** directs the state's workforce system to coordinate data sharing with other state education agencies to determine the employment and earnings outcomes of postsecondary CTE students.
- A number of states are exploring performance-based funding (PBF) for CTE, which represents a marked shift in how states are using data to incentivize priorities. According to a study by [The National Center on Innovation in Career and Technical Education](#), seven states are currently using PBF for secondary CTE and four for postsecondary CTE. **Kansas** has led the way in applying principles of

NATIONAL ROI

The Alliance for Excellence in Education created an [ROI model](#) based on increases in state high school graduation rates. According to this analysis, if each state's high school dropout rate was cut in half, the U.S. economy would recoup over \$335 billion dollars including,

- \$7.6 billion increase in earnings,
- \$9.6 billion in economic growth from new jobs,
- \$5.6 billion increase in spending, and
- \$19 billion increase in home sales.

Based on this model, a [researcher](#) was able to quantify CTE's role in dropout reduction, estimating the ROI of CTE at \$186 billion in lifetime gain.

ROI IN THE STATES

Indiana recently completed a [CTE ROI study](#) showing that the state's CTE concentrators graduated at higher rates (95.5 percent versus 89.6 percent) and earned between \$800-1,500 more than non-CTE students. The study also identified the wage premium for starting, concentrating or completing certain pathways.

A [study](#) in **California** found the average return to postsecondary CTE certificates and degrees was between from 12 to 23 percent, with the largest returns for Health Sciences programs.

Arkansas [found](#) that an \$18 million investment had an ROI of 43 percent based on the average of \$8,860 more per year earned by high school graduates and GED recipients over dropouts.

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PBF to their CTE system with [recent legislation](#) incentivizing industry-recognized certifications that are in demand by the state's employers.

WHERE MORE WORK IS NEEDED

While much progress has been made, there is no question that more work needs to be done, particularly at the federal level before the full promise of this principle can be met.

Building and Using CTE Data and Indicators

Gaps in CTE data within longitudinal data systems are still very much a persistent challenge. This problem is compounded by continued systems misalignment and a lack of focus on collecting relevant CTE data. For example, [only three states](#) currently have consistent metrics across education and workforce programs to facilitate program alignment and integration into state data systems, although 27 other states are working on this.

Additionally, more attention still needs to be paid to the end customers of this data – students, their families, policymakers, and researchers all have a strong stake in the availability and use of this information. As major pieces of federal education and workforce development legislation continue to move, it will be important to take into consideration both the need for greater streamlining of data systems while answering key questions about the main purposes of data. Some of these challenges were identified in [a 2014 NASDCTEc and Achieve report](#), which found that only about half of states currently incorporate indicators of student career readiness in their public reporting or accountability systems.

Attending to Privacy Issues

Student privacy and related data issues have taken center stage in the nation's debate on education policy since the release of the CTE Vision. Current prohibitions on the creation of a postsecondary student unit record system contained within the HEA and the K-12 data access challenges created by the Family Educational Rights and Privacy Act (FERPA) are obstacles for states seeking to build fluid P-20 data systems. This is complicated by the fact that most federally-funded education and workforce development programs have created state and local performance accountability systems that require a seamless P-20 data system despite these statutory roadblocks.

Federal lawmakers have grappled with these challenges for many years, simultaneously creating new barriers for innovation in the data space while tearing down old ones. Until attitudes and dispositions changes towards the use of data, a truly national and comprehensive ROI model will still be out of reach for the CTE community. It is therefore critical that these efforts continue both at the state and federal levels to build upon the important work the community has done over the past half-decade.

CONCLUSION

As we approach the five-year anniversary of the CTE Vision and prepare for an even bolder and broader initiative to create a common vision for high-quality CTE later this year, it is critical to step back and recognize the advances CTE has made in recent years.

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Until CTE and the wider education and workforce development communities make an effective case that the collection of student data can coexist with strong privacy assurances, many of the challenges facing the innovative use of data will persist. Achieving national buy-in for the effective use of data, cultivating the trust of the public, and clearly demonstrating the value and importance of data will be crucial to winning this debate. To that end, a few key questions that still need to be considered:

- What are the most important elements in CTE that need to be measured?
- How can these elements be effectively measured with the least amount of burden on students, employers, and programs?
- How can CTE be more effectively integrated into state longitudinal data systems (SLDS)?
- Relatedly, how can SLDS link more closely with unemployment insurance data and other similar data sets to more effectively leverage longitudinal data?
- Who are the key audiences that need to use CTE data?
- Is there a difference between data that drives program improvement and data for program accountability?
- At what level do the data need to be collected and shared – student, program and/or program of study? Local, district, regional, state and/or national?
- What are the best methods for ensuring alignment between federal data collection efforts and related programs?