

A Look Inside: A Synopsis of CTE Trends

A Four-Part Series Analyzing State CTE Data and Initiatives Focus: Career Clusters™ and Programs of Study

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Brought to you by the National Association of State Directors of Career Technical Education (NASDCTEc)

Overview

Every other year, the National Association of State Directors of Career Technical Education Consortium (NASDCTEc) conducts a survey of the CTE State Directors to gauge trends in Career Technical Education (CTE) across the country.ⁱ Based on analyses of this year's survey results from 50 states and territories, and comparisons to prior surveys administered in 2005, 2008, and 2010, NASDCTEc has authored a series of synopsis papers that describe trends in four key areas: Career Clusters™ and Programs of Study (POS); CTE Teacher and Faculty Shortages; Governance; and CTE Funding. This paper, the first in the 2012 series, highlights the adoption and implementation of Career Clusters™ and POS across the country.ⁱⁱ

Background

In 2000, NASDCTEc adopted the National Career Clusters™ Framework, a structure for the content and delivery of rigorous CTE programs that reflects the demands of the global economy. The Framework supports the integrated delivery of academic and technical knowledge and skills through a deliberate sequence of courses, or POS, that helps bridge secondary and postsecondary curricula. By aligning secondary education to the full spectrum of postsecondary and workplace options, Career Clusters™ offer students a path to college and career readiness and success.

Key Findings from the 2012 Survey of CTE State Directors

• Program of Study Development

- Survey results show a shift in POS development toward local development with state approval.

• Most Implemented Career Clusters™ – All Learner Levels

- Health Science (Implemented by 94% of states and territories)
- Business Management & Administration (Implemented by 94% of states and territories)
- Hospitality & Tourism (Implemented by 94% of states and territories)
- Architecture & Construction (Implemented by 94% of states and territories)
- Agriculture, Food & Natural Resources (Implemented by 90% of states and territories)
- Information Technology (Implemented by 90% of states and territories)

“...fewer respondents developed POS with mandatory local use, resulting in a shift toward local development of POS with state approval.”

“...states continue to embrace Career Clusters™ and POS at the secondary level as an effective method of CTE delivery.”

• Status of Career Cluster™ Adoption:

- As of 2012, 94 percent of states and territories have either adopted or modified the Framework, and six percent have created their own structure of CTE but use Career Clusters™ for federal reporting.

State and Local Development and Approval of Programs of Study

Most often, states develop and approve POS in three ways:

- 1) At the state level with voluntary local use;
- 2) At the state level with mandatory local use; or
- 3) At the local level and submitted for state approval.

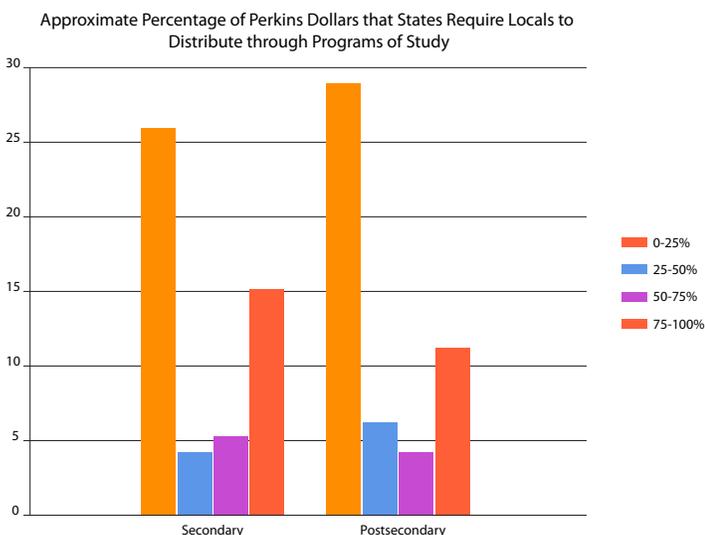
Since some states use multiple approaches, State Directors had the opportunity to select multiple answers. The 2010 survey shows that about 25 percent of respondents develop POS for voluntary use, 25 percent of respondents develop POS with mandatory local use, and about half of states approve locally-developed POS.

In 2012, the same number of respondents report developing POS with voluntary local use as in 2010. However, fewer respondents developed POS with mandatory local use, resulting in a shift toward local development of POS with state approval.

Secondary Program of Study Requirements

According to the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV), states must implement at least one POS as a requirement for federal funding. In 2010, 47 percent of survey respondents reported that their state was implementing more than the minimum of one POS at the secondary level. Of those, nine states said they were mandating the implementation of all POS at the secondary level.

Two years later, 55 percent of states currently implement more than the minimum one POS at the secondary level, with 12 states mandating all POS. This increase shows that states continue to embrace Career Clusters™ and POS at the secondary level as an effective method of CTE delivery.

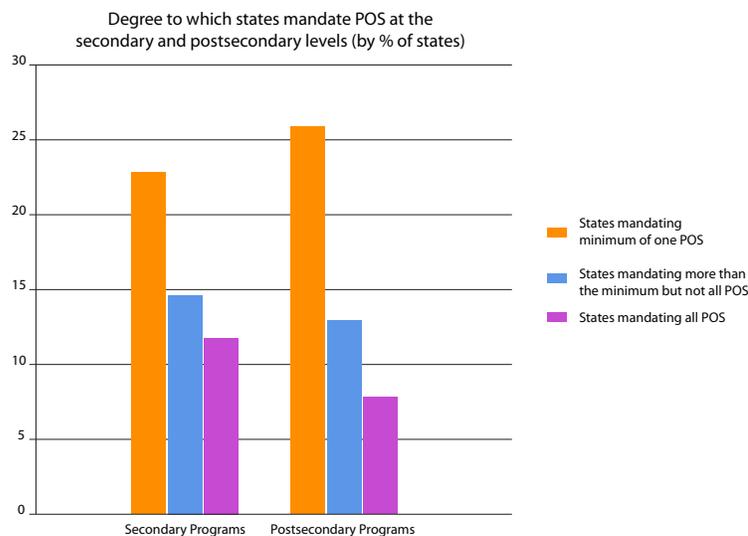


“As the workforce increasingly requires employees to have at least some postsecondary education or training, states and postsecondary institutions are recognizing that Career Clusters™ and POS are valuable tools for facilitating student transitions from secondary to postsecondary education and the workforce.”

“Today, nearly one-third of State Directors surveyed describe their level of POS implementation as expert or advanced.”

Postsecondary Program of Study Requirements

Over the last two years, states have shown marked advancement by mandating the availability of more POS to postsecondary students in their states. In 2010, at the postsecondary level, only about one-quarter of the states mandated more than one POS and only three states mandated all POS.



In 2012, nearly half of the states are mandating more than the minimum number of POS at the postsecondary level, and eight states are mandating implementation of all POS. This notable increase indicates that states are embracing Career Clusters™ and POS at the postsecondary level. As the workforce increasingly requires employees to have at least some postsecondary education or training, states and postsecondary institutions are recognizing that Career Clusters™ and POS are valuable tools for facilitating student transitions from secondary to postsecondary education and the workforce. Still, states and postsecondary institutions can provide even greater opportunities for students by mandating that all POS are implemented at the postsecondary level.

State-Reported Levels of Program of Study Implementation

As Career Clusters™ and POS implementation expands, State Directors have reported higher-than-ever levels of competency in implementing POS. Today, nearly one-third of State Directors surveyed describe their level of POS implementation as expert or advanced in that they have a high level of competency in implementing POS and could be a state leader for others. Thirty states report that they are making strong progress in this area. Only six states are still in the beginning phases of implementing Career Clusters™ and POS, four fewer states than reported in 2010.

Overall, State Directors have not only increased the availability of Career Clusters™ and POS, but have increased their competency in delivering high-quality CTE through the Framework. Over the last two years, State Directors' increased confidence in implementing POS has led to more POS mandated in the states. Thus, federal legislation that prioritizes POS as the prime vehicle for CTE delivery should be a top priority.

Career Cluster™ Implementation

Career Clusters™ continue to be the preferred delivery method for CTE across the states. Ninety-four percent of states, up from 89 percent of states in 2010, have adopted or modified the Framework to reflect their state's economic, labor market, and political needs. Only six percent of states have created their own structure of CTE but crosswalk to the Career Clusters™ for federal reporting, down from 11 percent of states in 2010. These results indicate that most states and territories find the Career Clusters™ Framework to be a highly useful tool for implementing POS.

Overall Most Implemented Career Clusters™

Labor market demands strongly influence state decisions about which Career Clusters™ and POS should be offered, and high-demand areas such as Health Science and Information Technology continue to be some of the most widely-implemented Career Clusters™ across the states.

Overall, the Career Clusters™ most often implemented in 2010 are still implemented across most states and territories today. Several additional Career Clusters™ have increased in demand and are now offered in nearly every state, adding to the 2012 list of most implemented Career Clusters™.

While Information Technology topped the 2010 list of most implemented Career Clusters™, Health Science and Business Management & Administration have taken the lead this year with programs available in 47 states and territories. Agriculture, Food & Natural Resources and Architecture & Construction continue to be highly implemented. Manufacturing, implemented in 90 percent of states and territories in 2010, has been replaced in the list of top Career Clusters™ with Hospitality & Tourism, which is currently implemented in 45 states.

Most Implemented Career Clusters™ – Secondary Level

At the secondary level, the most widely implemented Career Clusters™ are Agriculture, Food, & Natural Resources, Health Science, Business Management & Administration, and Hospitality & Tourism.

In 2012:

- Health Science (Implemented by 90% of states and territories)
- Business Management & Administration (Implemented by 90% of states and territories)
- Hospitality & Tourism (Implemented by 90% of states and territories)
- Agriculture, Food & Natural Resources (Implemented by 92% of states and territories)
- Architecture & Construction (Implemented by 90% of states and territories)

In 2010:

- Information Technology (Implemented by 92% of states and territories)
- Health Science (Implemented by 92% of states and territories)

- Architecture & Construction (Implemented by 92% of states and territories)
- Agriculture, Food & Natural Resources (Implemented by 92% of states and territories)
- Hospitality & Tourism (Implemented by 92% of states and territories)

Most Implemented Career Clusters™ – Postsecondary Level

At two-year community and technical colleges, the most implemented Career Cluster™ is Architecture & Construction, followed closely by Science, Technology, Engineering & Mathematics, and Law, Public Safety, Corrections & Security.

In 2012:

- Architecture & Construction (Implemented in 80% of states and territories)
- Science, Technology, Engineering & Math (Implemented in 76% of states and territories)
- Law, Public Safety, Corrections & Security (Implemented in 76% of states and territories)
- Information Technology (Implemented in 74% of states and territories)
- Health Science (Implemented in 74% of states and territories)

In 2010:

- Health Science (Implemented in 85% of states and territories)
- Information Technology (Implemented in 81% of states and territories)
- Business Management & Administration (Implemented in 79% of states and territories)
- Manufacturing (Implemented in 79% of states and territories)
- Architecture & Construction (Implemented in 77% of states and territories)

Example of State Level Career Clusters™ Implementation: Alabama's ISO Certification and Business and Industry Certification

Contributed by Collie Wells, Alabama Department of Education

For nearly a decade, the Alabama Department of Education has maintained international certification from the International Organization for Standardization (ISO) for its Business and Industry Certification (BIC) process. In 2003, Alabama received its initial three-year certification, ISO 9001:2000, an internationally-recognized standard that helps organizations establish, improve, and maintain productive management systems. To remain certified beyond the initial three-year period, the department's CTE section participates in yearly external and internal audits.

For Alabama, BIC certifies CTE programs for industry compliance by monitoring and evaluating curriculum, equipment, and educational facilities to ensure the programs meet the standards of the business community. Programs certified

through the BIC process teach students the career and technical skills demanded by Alabama's employers, and assure business and industry that students are achieving the same high standards required in the workplace.

Course of Study and Plans of Instruction (POIs)

Alabama's public schools first implemented the National Career Clusters™ Framework during the 2009-2010 school year, just as the Alabama State Board of Education began to implement the Alabama Course of Study (COS) for all students in grades 7 through 12.ⁱⁱⁱ The Alabama administrative code requires the State Board's approval for all CTE COS. Within the COS, separate content standards have been developed for each of the 16 Career Clusters™, comprising 59 career pathways and 300 courses. Alabama's CTE curriculum empowers and prepares students for the future with career-readiness knowledge and skills that reinforce academic content through experiential learning.

Additionally, committees of subject matter experts from secondary and post-secondary education and industry have created Plans of Instruction (POI) to supplement the COS.^{iv} POI provide the classroom teacher with information needed for articulation, credentialing, and certification. In addition to the course content standards, the POI include: learning objectives; essential questions; detailed content knowledge; instructional activities; suggested materials, equipment, and technology resources; a description of an appropriate unit assessment; a suggested Career Technical Student Organization activity; a suggested culminating product; and an appropriate course or program credential.

Conclusion

In 2010, NASDCTEc unveiled *Reflect, Transform, Lead: A New Vision for Career Technical Education*, a new vision that illustrates how CTE is evolving and will continue to evolve to help meet the needs of the global economy and prepare students to be ready for college and careers. As part of this commitment, the fourth principle of the vision is "CTE is delivered through comprehensive POS aligned to the National Career Clusters™ Framework." The 2012 survey results make evident State Directors' commitment to this vision principle as they expand the use of Career Clusters™ and POS in their states. By partnering with business and industry to ensure that programs are meeting labor market demands, State Directors are helping to close the achievement and skills gaps and ensure both student success and economic competitiveness.

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i Please note the following caveats when interpreting this report: First, some answers are based on respondents' perceptions. Second, while representatives from fifty states and territories provided responses, some items may not have received fifty responses.

ii State Directors from 50 states and territories participated in the 2012 state profile survey.

iii Alabama Department of Education, Alabama Course of Study: Career and Technical Education: http://www.alsde.edu/html/sections/doc_download.asp?section=54&id=10163&sort=6

iv Alabama Department of Education, Plans of Instruction: http://alcareerinfo.org/resources_links/poi/