

NASDCTEc Two-minute Roundup

SPRING MEETING 2015

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SUMMARY

It has been five years since the State Directors came together to coalesce around a bold, progressive vision for Career Technical Education (CTE). The five main principles touched on critical issues facing the field, including programs of study (POS), industry partnerships and work-based learning.

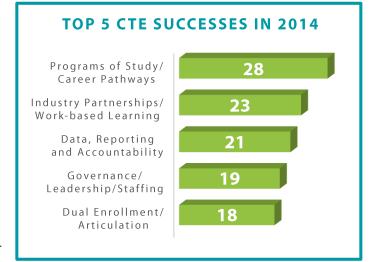
So, it should come as no surprise that these areas were among the top successes in 2014, as cited by 47 states in this year's Two-minute Roundup Survey. Yet, challenges still remain as states work through obstacles such as governance and CTE teacher recruitment and retention.

The Two-Minute Roundup Survey is a tradition for NASDCTEc and its members, providing an annual benchmark for the successes and challenges each state is facing. This year, NASDCTEc is taking the information one step further and is using the results to inform its own planning and to help identify areas for cross-state solution building.

SUCCESSES

Some highlights include:

- > Programs of Study Maryland is continuing to expand its statewide POS in the STEM Career Cluster®, and used federal grant funding to develop and pilot four online CTE courses in cyber security, law and computer science to be used in aligned state POS.
- Work-based Learning Tennessee redesigned its statewide program to provide greater flexibility to the Department of Education and districts to develop and deliver workbased learning, which is now



- supported by a revised framework that sets clear expectations for student learning and experiences. The state also launched a one-year pilot with five school districts to test the newly developed tools, trainings, policies and standards.
- Data, Reporting and Accountability To help districts make data-based decisions, Michigan has
 developed a series of reports to assist locals when analyzing CTE data to improve program
 quality.
- Governance, Leadership and Staffing In Louisiana, a Craft Workforce Development Task Force has been created as a partnership of industry, government and organized labor to work strategically to meet the forecasted need of 86,000 skilled craft workers.
- Dual Enrollment, Articulation, Early Colleges and Career Academies Since 2007, Career and Professional Education Academies in **Florida** have increased by 86 percent to 1,816 in the 2013-14 school year.

CHALLENGES

Interestingly, the challenges faced by the states in 2014 in many ways mirror the successes with governance, industry partnerships, work-based learning, and data and accountability being common areas of both struggle and accomplishment. Two other common challenges cited this year, and many other years, are teacher certification/professional development and the image of CTE.

A summary of the top challenges are:

- This broad category ranges from state office-level staffing and management to CTE's place within a state's broader governance structure. Challenges included: uncoordinated workforce training programs or interagency collaboration struggles; staff and leadership turnover and transition; and the balance of local control and the state's role.
- recruitment, retention and professional development were repeatedly listed as barriers to maintaining and growing high-quality CTE. However, with 14 states listing successes in this area, there is the potential for cross-state solution building to help overcome this critical issue.
- Data, Reporting and Accountability This wide-ranging category reflects both the growing desire and frustration of many states to harness the power of data to drive decision-making and quality in CTE. Barriers to data-sharing for third-party industry-recognized credentials and concerns about student privacy continue to thwart quick progress in this area, as well as knowing which indicators hold the most promise within state reporting and accountability systems.
- Industry Partnerships/Work-based Learning While this category was among the top successes for the states in 2014, clear challenges still remain. For some, engaging and sustaining employer engagement in CTE continues to be a struggle. For others, the greatest challenge was establishing a robust range of work-based learning opportunities beginning with career exploration – an effort that requires high-quality, active partnerships with business and industry to be ultimately successful.
- > CTE and Perception The final challenge is the pervasive and perennial issue of CTE's perception and image among parents, policymakers, counselors, teachers and students. At every level, CTE is increasingly being looked to as a way to better engage students, offer meaningful education and real-world experiences, and provide a skilled workforce to meet labor market demands. However, issues such as the so-called "college for all" agenda and deep-rooted historical bias and misperceptions can make this challenge seem, at times, impossible to overcome.

CONCLUSION

As evidenced by this document, states are making tremendous strides in advancing elements of high-quality CTE across the board; it is our hope that by sharing both those accomplishments and ongoing challenges, states can learn from one another and create common solutions.



ALABAMA

What were your state's top accomplishments in CTE?

- Alabama has a wonderful CTE/Workforce Development website (Alabama Career Information Network) that provides links to our programs, initiatives, projects, curriculum, Centers and Programs available in Alabama's 10 Workforce Regions.¹
- Alabama has created an apprenticeship program. Thanks to the efforts of state Rep. John Merrill, Dr. Philip Cleveland, and AIDT, as well as many more, this new initiative was made possible. Rep. Merrill said, "The future of Alabama is in the hands of our young people. As leaders in the fields of business, education, and government, it is our responsibility, and our duty, to provide our students with every opportunity to learn and grow-personally, professionally, and socially.

These apprenticeship programs will allow our students to experience the 'real world' work environment and will encourage them to make more meaningful decisions and choices about how they can positively affect our future as well as their own.²

Career and Technical Education Teacher Certification Program (CTE TCP) – Effective August 2013, Technical Education and Health Science teachers holding the Specialty Area 1 Certificate will go through an intense 12-month cycle of training that will include scheduled 2-3 day sessions as well as meeting with an assigned mentor at regular intervals throughout the year. If the new teacher completes all of the required sessions, they will have met the requirements for the Specialty Area 2 Certificate. This new certification program will take the place of the Holy 5 and New Teacher Institute (NTI). Teachers who hold the Specialty Area 1 Certificate valid to June 30, 2015 and who have not already completed the Holy 5 may choose to participate in this new certification process.³

Please share your CTE-related challenges.

- > Providing the teacher workforce to support the many new CTE Programs throughout Alabama
- > Keeping up with and managing the CTE Initiatives within the state.
- > Ensuring that Alabama Students ALL have the college- and career-ready programs that will enable them to become successful.

ALASKA

- > Process of cross-walking state academic standards into CTE coursework is nearly complete so rigor and relevance is across the board academically in all courses.
- > Initiated a Type M Certificate to assist districts staff and find qualified instructors for their CTE Pathways and courses.⁴

¹ http://www.alcareerinfo.org/

² http://alcareertech.org/apprenticeship_rfp/apprentice_landing.html

³http://web.alsde.edu/home/Sections/DocumentDownload.aspx?SectionID=52&SubsectionID=64&Year=2013&FileName=Career%20and%20Technical%20Education%20Teacher%20Certification%20Program.docx

⁴ http://education.alaska.gov/TeacherCertification/typeM.html

> Started process of integrating the state's five priority workforce development plans into prioritized CTE pathways to provide students opportunities upon graduation for post-secondary training or degree-pursuit.

Please share your CTE-related challenges.

- > Creating consistent course frameworks or pathways that are transferable across the state or nationally (globally for that matter) where students are able to complete in a timely manner while not accumulating large debt in postsecondary.
- Utilizing distance learning, online opportunities to provide quality CTE instruction and offerings to our rural sites in the state while maintaining some consistent level of rigor in the courses because local needs are so diverse and unique because of geography or isolation--ex. Welding in port town is different than welding in a mining town to meet workforce area needs.
- Maximizing and leveraging state and federal funding streams to receive maximum benefit from CTE offerings to our students, staffs and districts across the state, including our postsecondary partners.

ARIZONA

What were your state's top accomplishments in CTE?

- Twenty CTE programs have been approved by the State Board of Education as eligible for local governing boards to grant embedded academic credit. Nine programs are approved as eligible for fourth credit in mathematics, four programs as eligible for 0.5 credits in economics and seven programs approved for 1 credit in science if the program offers a 3 Carnegie unit course sequence and 2 credits in science if programs offers a 4 Carnegie unit course sequence.⁵
- Increased professional development collaboration between ACTEAZ, Joint Technical Education Districts (JTED), Arizona Curriculum Consortium and Arizona Department of Education to reduce duplication of efforts and maximize resources for professional development credit for teachers and administrators.
- > Increased opportunities for students to obtain third-party certifications through state budget items of \$1 million for Microsoft IT certification programs and \$500,000 for JTED Performance Pay, which is appropriated on a pro rata basis based on the actual costs incurred to secure industry credential assessments and examinations for JTED students.

- Redesigning a data collection system that is user friendly and has the ability to capture additional student data to provide reliable CTE data for use with administrators, policymakers and business and industry.
- Developing a process for reliable, valid data collection for third-party credentials and the ability to gain access to student data for industry recognized credentials.
- > Limited career exploration opportunities and resources prior to the ninth grade.

⁵ http://www.azed.gov/career-technical-education/files/2011/06/cte-programs-eligible-for-embedded-academic-credit.pdf

ARKANSAS

What were your state's top accomplishments in CTE?

- Developed and implemented Regional Advisory Councils to align in-demand CTE programs of study to address the labor market disparity with target training and identify valid industry certifications for Arkansas students to better prepare them for the workplace. Partners included Workforce Investment Board, economic developers, regional industry representatives, area high school administrators, secondary career center administrators, and educational cooperatives coordinator. All regional areas of the state have identified stakeholders and have held regional advisory council meetings.
- > Through our work with Regional Advisory Councils career pathways were identified which addressed high-demand, high-growth and high-priority areas. Existing programs were realigned to meet the current skill needs and in-demand programs that were not currently offered were adopted.
- Arkansas is in its third year of the Microsoft IT Academy program and its third year of a partial statewide MOS site license agreement for K-12, Adult Education Centers, and Workforce Service Centers. There are well over 5,000 MOS certifications and four Masters certificates to date for K-12 in 120 testing centers with 81 percent testing rate. In 2014, Arkansas had 5,793 active online learning users and 13,003 courses taken through Microsoft IT Academy.

Please share your CTE-related challenges.

- Improve the image of CTE is our greatest challenge. We are addressing this by developing partnerships with industry, post-secondary institutions and our secondary schools through our Regional Advisory Councils. We are also using our Career Coach program to help with the career guidance counseling for those students in located in Career Coach program sites. It is important to communicate with secondary guidance counselors as to the opportunities presented through CTE programs.
- > There are many workforce training programs in Arkansas; however, there has not been a clear coordination of the education and training opportunities for the secondary learner as well as the adult learner. Connecting these programs with a common goal and targeted funding, as well as accountability for funds are spent, is paramount to successful CTE programs.
- Preparing CTE instructors who are coming to the classroom from industry is imperative for the success for the instructor as well as preparing students with the necessary skill set for today's workplace. This continues to be work in progress for Arkansas as we restructure our CTE Teacher Preparation program.

CALIFORNIA

What were your state's top accomplishments in CTE?

In July 2014, the California legislature passed and the governor signed into law a second round of funding for the California Career Pathways Trust. Funds in the amount of \$250 million will be made available to school districts, county superintendents of schools, direct-funded charter schools, regional occupational centers or programs operated by a joint powers authority, and

- community college districts in the form of one-time competitive grants. Grants will be made available for kindergarten through grade fourteen career pathways programs. 6
- Over 12,500 CTE courses now meet University of California (UC) "a-g" admission requirements. UC is committed to advancing the development of integrated CTE courses to prepare every student to succeed in the colleges and careers of our 21st century society. Courses that integrate academic content knowledge with practical or work-related applications can be approved.

Such courses must satisfy the following conditions:

- Provide high-quality, challenging curricula that use and advance concepts and skills in the "a-g" subject areas
- Integrate academic knowledge with technical and occupational knowledge; and Include tasks that are rich in opportunities to develop knowledge of tools, processes and materials;
- Engage in problem-solving and decision-making; and
- Explain what one is doing and why.

An approved CTE course should demonstrate a close connection and integration with the academic curriculum. Approved courses may be designed to emphasize academic concepts using career-related applications to make ideas accessible to students. Conversely, these courses may be designed using career and technical applications to provide an entry point for understanding theoretical or technical aspects of an academic discipline. An approved CTE course may include relevant applications of academic content outside the classroom through work-based learning, challenging hands-on projects, service learning and/or project-based learning that integrate with the academic curriculum. It may utilize alternative assessments such as work products and/or project exhibitions in addition to more traditional forms of assessment such as unit exams, midterm and final exams, reports and culminating projects that may include both an oral presentation and a written report.⁷

- Over 8,000 CTE lesson plans have been posted to CTE Online. CTE Online is the California resource devoted to connecting educators and leaders within the unique field of Career and Technical Education to quality professional development tools that emphasize the role rigorous academic skills play in pursuit of industry- and career-related coursework. CTE Online provides free access to the following tools⁸.
 - CTE Online STEM integrated projects
 - Over 3,000 lesson plans aligned to CTE Standards, Common Core and Next Generation Science Standards
 - Over 50 CTE model course outlines
 - Professional curriculum development tools
 - Professional alignment and instructional strategies resources

⁶ http://www.cde.ca.gov/ci/ct/pt/

⁷ http://www.ucop.edu/agguide/career-technical-education/course-criteria/index.html

⁸ https://www.cteonline.org/cms/page/about##OnlineCommunity Groups

CONNECTICUT

What were your state's top accomplishments in CTE?

- > CT State Department of Education staff actively collaborates with the Board of Regents on an Early College Committee to ensure that the CTE College Career Program offers opportunities for dual concurrent credit and fulfills accreditation requirements.
- > CTE state policies for grant submission and follow-up have been strengthened to ensure the best use of funds and to meet federal and state accountability measures.
- > The CTE state staff has been increased and reorganized to meet contemporary issues and reform in CTE, which include competency-based learning and digital learning.

Please share your CTE-related challenges.

- > CT State Department of Education needs to fortify support to districts to develop or improve programs of study.
- > CT State Department of Education must work with districts to emphasize reestablishment of workforce advisories for CTE.
- > It is a challenge to establish a network of partners in the secondary, postsecondary and labor who collaborate with consistent priorities and objectives.

DELAWARE

What were your state's top accomplishments in CTE?

- > Revised policy and procedures for secondary CTE program development, implementation and continuous improvement. Defines state and locally developed programs of study as well as a process to engage local education agencies, postsecondary partners and representatives from business and industry to collaboratively develop and improve secondary programs of study.
- > Establishment of the Delaware Pathways initiative, a public-private partnership designed to develop career pathways in high-growth, high-demand occupations for all Delawareans. Led by the Governor, this effort aligns work at various state agencies with two- and four-year institutions of higher education and business partners.
- Pilot of the Successful Partnerships and Roads to Careers (SPARC) project, which is a web-based career preparation and readiness platform that integrates career development tools, social media and workforce data for students, educators, parents and job creators. The project was piloted with seven local education agencies, has engaged more than 100 business partners, and is staffed by more than 300 career coaches. The project is led by the Department of Education, the Delaware Business Roundtable for Education Committee and United Way.

- > Common accountability measures to advance and promote CTE (beyond the required performance measures in Perkins).
- > Best practices with regard to dual enrollment policy.
- > Best practices with regard to staffing and supporting CTSO activities.

FLORIDA

What were your state's top accomplishments in CTE?

- > In the 2013-14 school year, 63,328 high school Career and Professional Education (CAPE) participants earned 88,634 certifications with a pass rate of 78.2 percent.
- > The number of CAPE Academies have grown from 246 in 2007-08 to 1,816 in 2013-14.
- > 80 percent of CAPE academy graduates in 2011-12 were found enrolled in postsecondary education or employed in the fall of 2012.

Please share your CTE-related challenges.

> Marketing of CTE programs to the citizens of Florida. The restrictions on the use of state and federal funding for marketing purposes continues to make this a challenge area. Many parents continue to be unaware of the programs and opportunities that are available through CTE.

GEORGIA

What were your state's top accomplishments in CTE?

- > The State of Georgia CTAE Division completed an alignment of Georgia Career Pathways with the National Career Clusters® Framework.9
- > The State of Georgia CTAE Division has developed several promotional materials to assist counselors in working with CTAE Students.¹⁰
- > The State of Georgia CTAE Division has developed and implemented a "NEW Leaders Professional Development" series for new CTAE Directors. This is a yearlong series of workshops on leadership skills, budgeting, state law, finances, etc.

Please share your CTE-related challenges.

- > The greatest challenge in this area was trying to engage participation of business and industry in the process of curriculum alignment.
- > The greatest challenge in accomplishment two is trying to get counselor release time to participate in the training with the new CTAE counselor resources.
- We had to limit participation because the program is so popular CTAE Directors want to send all of their supervisory personnel to the training.

HAWAII

- The graduation rate for secondary CTE students was 98.71 percent. It's been at 98 percent or higher for the last three years. (The rate for all secondary school graduates is approximately 82 percent.)
- A bill was crafted by a statewide joint DOE/UHCC task force and then submitted to the state legislature as part of the University's package, asking for support for dual credit options for high

⁹http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/Career-Cluster-homepage.aspx

¹⁰ http://www.gadoe.org/Curriculum-Instruction-and-Assessment/CTAE/Pages/Counselor-Information-.aspx

- school students. Specific language related to CTE programs is included. (As of March 12, the bill is still under consideration by the state legislature.)
- > Significant progress was made in advancing the partnership between the UHCC and Workforce Development's One Stop programs.

Please share your CTE-related challenges.

- Race to the Top had the DOE Central Office operating very top-down. Now that it's over, there are indications that DOE is giving more authority, responsibility, and accountability to the local districts and principals. With marked differences on the various islands, we're struggling to ensure we provide CTE equitably.
- > Preparing for OCTAE's monitoring visit!

IDAHO

- > The Division completed initial development of a statewide micro-certification/badging system in 2014 and is conducting a pilot during the spring 2015 semester. The platform is initially envisioned to provide validation of skills gains as students' progress through programs of study. The micro-certifications will be cross-walked against industry certifications and postsecondary courses to provide stackable credentials that lead toward in-demand occupations. A director of business outreach was hired in late 2014 to complete development of the platform and take it to market.
- After more than a decade of relatively flat funding, the Division received funding increases for each of its program areas. Although in the increases in most areas were modest, the Division's Agricultural and Natural Resources received a large funding increase, including funding for two grant programs, one for high-quality teachers and one for start-up programs. 11
- Idaho currently has 17 Professional-Technical High Schools (PTS), which are intended to deliver high-end technical education programs that go beyond the scope of professional-technical education programs found in the comprehensive high school. Over the past five years, Idaho has seen a shift in its enrollment from the comprehensive high schools to the PTS schools, which reinforces not only the critical role Professional Technical Education (PTE) plays with our secondary students, but the value PTE adds in providing students with relevant, high quality education and training. PTS schools, which continue to see significant growth statewide, must meet four of the following five criteria:
 - Serves students from two or more attendance zones with at least 15 percent of the students residing in a different attendance zone from the main student body.
 - Majority of classes have dual credit options with postsecondary
 - All programs have at least one supervised field experience
 - School is administered and funded as a distinct school
 - Facility is located at a separate site from regular high school

¹¹ http://pte.idaho.gov/AG/Quality Program Standards.html

Please share your CTE-related challenges.

- Idaho PTE is currently working to overcome the challenge of academic equivalency. PTE courses are often in competition with other courses necessary for high school graduation. As graduation requirements increase, PTE courses are often offered solely as electives. The Division is actively working to find solutions that will afford students the opportunity to receive appropriate academic credit for those PTE courses that meet relevant graduation requirements in an applied setting.
- > The Division continues to see challenges in how PTE is perceived. Efforts are underway to learn more about whether stakeholders have a lack of information or understanding of PTE, perceive it as an inferior educational option to a more traditional 4-year degree, aren't aware of local PTE opportunities, or a combination of those factors.
- > PTE continues to struggle with its teacher pipeline, particularly in rural areas or in fields where private sector salaries are well beyond that of a teacher's salary. Recruiting high quality educators who are willing to leave much higher industry wages directly affects the quality and number of PTE programs that are available to students.

ILLINOIS

- > The University of Illinois Project Lead the Way brings early exposure of engineering concepts to students in high school, providing the path to more formal engineering preparation in institutions of higher education or the path to technologically oriented jobs. The project provided training and professional development for those who teach this core group and engineering-oriented courses in Illinois high schools. In Fiscal Year (FY) 14, approximately 175 Illinois high school teachers attended training and/or professional development.
- The Southern Illinois University Curriculum Revitalization Project provides professional development opportunities and technical assistance to career and technical educators in Illinois through the development and dissemination of revitalized CTE curriculum in all content areas, curriculum research and planning in each of the approved content areas, and up-to-date technology support to deliver innovative and effective resources. In FY 2014, 1,651 educators and stakeholders were served through 80 professional development sessions and presentations.
- The Illinois Career and Technical Education (CTE) Special Populations Leadership Project provides statewide professional development and technical assistance to educators for the improvement of instructional services for special populations in CTE with an emphasis on the recruitment and retention of students preparing for a nontraditional career field. Leadership activities included a focus on performance assessment and accountability training, professional development, and technical assistance educator resources. The project website (www.illinoiscte.org) hosts resources for CTE programs and the educational community. Along with the website, Facebook and Twitter accounts are used to provide information regarding newly developed and updated resources on gender equity. More than 300 educators were directly served through professional development activities in FY 2014, resulting in an impact on more than 18,000 students.

Please share your CTE-related challenges.

- > Illinois is having difficult times fiscally. It impacts all aspects of education. Many schools must cut programs and CTE is an elective program. This makes it difficult for schools to maintain programs.
- > Illinois has seen a decline in the number of students entering CTE teacher education programs.
- > Illinois schools are having a hard time finding qualified CTE teacher educators.

INDIANA

What were your state's top accomplishments in CTE?

- 25,594 CTE students earned at least three college credits, generating tuition savings of over \$8 million each year.
- Development and implementation of innovative career pathways is supported by policies and funding practices put in place by DOE, DWD, CTE districts, postsecondary institutions and Regional Works Councils.
- > CTE concentrators outperformed "all graduates" on graduation exams, graduation rates, and remediation rates during their first year in college.

Please share your CTE-related challenges.

- > Support for development of work-based learning (WBL) sequences and professional development for all CTE teachers to implement a progressive series of WBL opportunities across all courses in our pathway sequences.
- Increasing opportunities for end of course and end of pathway assessments and achievement of meaningful credentials, especially in those pathways with no industry-recognized certifications or licensure.
- > Nontraditional participation and completion at both secondary and postsecondary program development as well as recruitment.

lowA

- A legislatively appropriated intermediary network program where community colleges within a specific region of the state act as the intermediary connecting business and industry to high schools. The services that are typically discussed run the gamut of the work-based learning spectrum from the low end of industry tours and job shadows to the high end of apprenticeships.¹²
- The Secondary Career and CTE Task Force was established as part of the Iowa House File 604 in 2013 to make recommendations that reduce skill shortages, enhance economic growth, and ensures that all students have access to high quality, globally competitive career and technical education programs. This legislation directed the Department of Education to establish a Secondary CTE Task Force to review and make recommendations on secondary CTE programs. This review is to consider measures to ensure consistency in secondary CTE program quality

¹² https://www.educateiowa.gov/adult-career-and-community-college/career-and-technical-education/intermediary-network-statewide

statewide. The legislation directs the task force to review provisions of the lowa Code and related provisions of the lowa Administrative Code relating to vocational CTE. The task force shall consider measures to ensure rigorous standards, consistency in program quality statewide, alignment with postsecondary programs leading to middle-skill occupations with family-sustaining wages, curricula that align workforce skills with industry-recognized standards where such standards exist, responsiveness to labor market needs, robust business and industry participation, including participation on advisory committees, and efficient statewide delivery of programming. The task force shall also review the definition of "career academy" and review and recommend core components of career academies and regional centers. Taskforce recommendations are to be presented to the legislature by November 2015. The task force and associated work teams have achieved tentative consensus around the type of activities that needs focusing:

- Articulate/sequence high school CTE courses within a defined career cluster to postsecondary programming with dual credit options
- Integrate academic/technical curricula within a whole school reform effort
- Build a career guidance system that is aligned to further education and workforce development, focusing on careers viable in the future; and
- Provide work-based learning as spectrum of curricular experiences, including preapprenticeship/apprenticeship options.¹³
- CompTIA Data Exchange Product: The project is based on a multi-year roadmap for the development of a national data exchange clearinghouse that will allow states and educational institutions to gain access to data on industry-recognized certifications earned by students. The project focuses on raising overall awareness of the need for improving data exchange, and a pilot project is being conducted between a consortium of states (lowa, California, Florida, Oklahoma and Illinois) CompTIA – a leader in independent information technology assessment and certification, to develop subject matter experts, who would then be able to widen the project beyond the consortium states and be able to incorporate other certification agencies into the data exchange project. Iowa is excited to serve as the lead state and by partnering with the other states within the consortium, help move the Certification Data Exchange Project forward. The consortium is expected to receive technical assistance from the U.S. Department of Education Office of Career, Technical and Adult Education's (OCTAE) leaders, Association for Career and Technical Education (ACTE) consultants. Some of the states within the consortium are already participating in the Certification Data Exchange Project and the additional request for technical assistance from OCTAE should assist the consortium efforts to efficiently and effectively conduct the data match and generate findings useful to state industry and education partners.

Please share your CTE-related challenges.

> The state of lowa consists of a very small number of large urban school districts, with the rest being small to midsize rural school districts. The latter have considerable difficulty in offering and teaching CTE in at least four service areas, and three sequential credits within each service area, which is a statutory mandate. The inability to offer and teach CTE leads to ancillary and related issues regarding teacher recruitment and professional development, and consequently leading reduced CTE enrollment and limited career guidance. To a certain extent, this challenge is being partially alleviated by lowa's extensive dual/concurrent enrollment offerings,

¹³ <u>https://www.educateiowa.gov/secondary-career-and-technical-education-cte-task-force</u>

- specifically in the CTE area, mainly through the establishment of career academies. However, such programs are not widespread and limited to only a few places within the state. The CTE task force is addressing these issues as part of it work.
- lowa has a statutory requirement that, beginning in the eighth grade, all high school student must have plan, and requires updating throughout their high school years. Called I Have a Plan lowa (IHAPI), a single source component-based career guidance system requires all school districts (namely counselors) to work with all students to develop these plans, and required to collect a common set of data for use by the state. Wrapped around the IHAPI system is an extensive but hands-on state support system that has provided invaluable assistance to individual school districts. A major challenge faced by the state is the fact that the statutory requirement remains but the IHAPI system, including the support system, will sunset starting June 30, 2015. To meet the statutory requirement, there is danger that school districts may choose multiple systems, and with limited support, collecting disparate and unconnected data elements, any progress, and it has been slow, on establishing a systematic career guidance system will be stymied, and even disappear.
- lowa faces a critical shortage of CTE teachers, specifically in the old-line vocational areas such as industrial technology, agriculture, and family and consumer sciences. Growing this cadre of teachers is a challenge that as yet has limited solutions. The situation is even more severe outside the urban corridors of lowa. At the same time, long-term professional development opportunities for incumbent teachers is getting even more limited as the number of organizations offering such opportunities get even smaller. A related issue is the inability of certain courses in agriculture and industrial technology that address Math and Science components to count even partially for meeting state academic standards. The cascading effects on student enrollment are now showing up in the courses that are offered and taught within lowa high schools.

KANSAS

What were your state's top accomplishments in CTE?

- > Implementation of performance-based funding pilot project (Outcome Metrics).
- > Development and implementation of Employer Engagement Initiative, which recognizes employers on a tier-based model depending on level of engagement.¹⁴
- > Started process of develop policy for approval of industry-recognized credentials.

- > Validation of performance data.
- > Ensuring institutional compliance with new OMNI Circular.
- > Replicating successful regional advisory committees.

¹⁴ http://www.kansasregents.org/workforce_development/employer_engagement_initiative

KENTUCKY

What were your state's top accomplishments in CTE?

- Transitioned the Kentucky Occupational Skill Standards Assessments and ACT WorkKeys (NCRC)
 to an online format for all preparatory seniors.¹⁵
- Additional funding was provided by the General Assembly to hire 34 additional CTE teachers in the state-operated area technology centers, and \$250,000 was provided to fund the planning of a regional technical high school/early technical college.
- > There was expansion of the pre-apprenticeship program called TRACK (Tech Ready Apprentices for Careers in Kentucky).¹⁶

Please share your CTE-related challenges.

- > The state continued to struggle to determine which industry certifications should be included in the accountability model related to career readiness.
- > Helping non-CTE educators understand career clusters, career pathways, and programs of study.
- > Expanding career exploration programs in the middle schools.

Louisiana

- Establishing the Craft Workforce Development Task Force. The task force is a partnership of business and industry, government and organized labor. The group developed a plan driven primarily by industry demand for over 86,000 skilled craft workers needed to support the growth of industry in Louisiana. Education and training opportunities for skilled craft areas, continues to expand as all partners join forces to meet the growing demand (search for skilled craft taskforce).¹⁷
- Jump Start is the state's new program for school districts, colleges, and business to collaborate in providing career courses and workplace experiences to high school students, certifying them for the career fields most likely to lead to high-wage jobs. Jump Start will be an elective path for students pursuing a university-preparatory diploma, and a required path for students pursuing a Career Diploma. Jump Start will ensure students access to state-of-the-art facilities, equipment, and professionals to prepare during their high school schedules for careers in Louisiana's high-growth job sectors. 18
- > Supplemental Course Allocation (SCA) gives school districts and other public schools an MFP allocation related to the cost of high school credit courses. Funds allocated through SCA may be utilized for the following courses: CTE, academic, advanced coursework, dual enrollment, and intense remediation.¹⁹

¹⁵ http://education.ky.gov/CTE/kossa/Pages/default.aspx

¹⁶ http://education.ky.gov/CTE/cter/Pages/TRACK.aspx

¹⁷ http://www.laworks.net

¹⁸ http://www.louisianabelieves.com/courses/jump-start-career-education

¹⁹ http://www.louisianabelieves.com/courses/supplemental-course-academy

Please share your CTE-related challenges.

- > The image of CTE needs to change. Louisiana has launched several marketing campaigns to provide current information around CTE.²⁰
- > Recruitment of instructors for most CTE program areas.
- > Complete student placement data collection.

MAINE

What were your state's top accomplishments in CTE?

- New certification law for CTE teachers passed into law. "The summer and early fall of 2012 saw the State Board react to a directive from Public Law 635: LD 1858 'An Act to Ensure Effective Teaching and School Leadership' and establish an alternative pathways stakeholders group to review possible changes to Maine's certification regulations. The group made recommendations to the certification examination process for Career and Technical Education (CTE) teachers. The content knowledge exam would be replaced by industry credentials or industry-related exams. The pedagogical skills and knowledge assessment would be replaced by a series of four pedagogical courses. Also recommended is the requirement of a CTE orientation program for new teachers within the first year of employment. Transition language is included to allow those continuously certified under conditional certificates to continue under current rules, but all new CTE teachers would fall under the new rules from September 1, 2015, forward." 21,22
- Establishment of a comprehensive team to develop a process to validate program standards. This team will select the assessment for our mandated national and state certified standards per program area. All programs have certified to their standards and the assessment committee has started the work of selecting summative third party assessments, Industry recognized credentials and possible stackable credentials per program. We hope to complete this work in FY 15.
- Statewide articulation MOU between the community colleges and the secondary CTE schools. Continued work with the community college system academic deans and the secondary CTE schools has led to 26 statewide articulations and several more in the process of being developed. This process is eliminated much of the escrow credits for transcripted credits. Individual school to school articulation agreements are also being honored. All schools are expected to have 50 percent of their programs articulated and we far exceed that expectation.²³

Please share your CTE-related challenges.

Maintaining the option of CTE for students whose high schools' focus has become the Common Core. Maine's proficiency-based diploma requirement has had some schools increase required academic courses leaving less time for students to attend CTE.²⁴

²⁰ http://goo.gl/PiRYtW

²¹ http://mainedoenews.net/2014/05/07/certification-changes-to-become-effective-may-14/

²² http://www.maine.gov/doe/cte/resources/certification.html

²³ http://www.mainelegislature.org/legis/statutes/20-A/title20-Asec12709.html

²⁴ http://maine.gov/doe/proficiency/index.html

CTE teacher effectiveness and evaluation requirement. Our schools are in the process of developing a teacher evaluation process for their CTE teachers that provides effective, accepted student measures to relate to teacher performance. The established teacher effectiveness models do not currently have a CTE teacher rubric for applied technical skills assessment which has become problematic in an effective evaluation system for CTE teachers.²⁵

> Data

- Obtaining CTE student data without social security numbers; obtaining the earning potential of an industry-related credential (not a college degree credential)
- Collecting date form credentialing agencies on our graduates; collecting the academic learning (academic standards proficiency per academic learning objective) that is taught within the CTE standards
- Continued issues with 1S1 (Perkins core performance indicator for secondary education in academic attainment in reading/language arts) and 1S2 (Perkins core performance indicator for secondary education in academic attainment in mathematics) as we do not have students long enough to effect the testing outcomes.

MARYLAND

What were your state's top accomplishments in CTE?

- Continued to expand State CTE Programs of Study in STEM career fields. Twenty percent of Maryland's high schools now offer the program in Biomedical Sciences; last year's enrollment again jumped significantly 46 percent over the previous year. The state doubled the number of schools (a total of 38 in the current school year) offering the CTE program in Computer Sciences. This CTE pathway includes AP Computer Science coursework as well as a Cyber Security option. A consortium of Maryland's community colleges was successful in obtaining a \$5 million grant to expand the postsecondary options in the Cyber Security pathway.
- Streamlined the process for certification of secondary CTE teachers by revising the Code of Maryland Regulations in partnership with a design team that included representatives from MSDE's Certification Office, and local school system human resources personnel, CTE administrators and teachers. As part of the new process, teachers can use industry certifications as a means of documenting required experience in their field.
- Completed and piloted, with RTTT funding, four online CTE courses for use in aligned CTE State Programs of Study. Courses include: Cyber Security, Administration of Justice II, Foundations of Computer Science, and Computer Science Concepts and Principles.

- A new governor and many new members of the General Assembly will require Maryland CTE to communicate the important contributions that CTE is making to economic and workforce development.
- > Encouraging school systems to add additional CTE State Programs of Study, especially in the comprehensive high schools, to provide more opportunities for students to earn industry credentials and early college credit that ensures students graduate college AND career ready.

²⁵ http://maine.gov/doe/effectiveness/index.html

 Expanding high quality career development across the learning levels so that every student can make informed decisions regarding high school course selections and post-secondary career planning.

MASSACHUSETTS

What were your state's top accomplishments in CTE?

- Massachusetts' Vocational Technical Education (VTE) Frameworks were completed and approved. The VTE Frameworks are in Curriculum Search Tool: One can now search the VTE Frameworks and the Academic Curriculum Frameworks, separately or together, or using keywords.²⁶
- > The VTE Frameworks are being uploaded into the Edwin Teaching and Learning System, along with competency tracking feature that allows teachers to track student knowledge and skills.
- Massachusetts completed seven additional statewide articulation agreements with 15 Community Colleges in 2014, for a total of 14 agreements.²⁷

Please share your CTE-related challenges.

- Constraints with access for all students. A declining student population and uneven occupational growth across the state has led to intense student recruitment for Career/Vocational Technical Education (CVTE) students in some parts of the Commonwealth and too few seats available for these CVTE students in other parts of the Commonwealth.
- > Tracking utilization of articulated credit.
- > Transferring of articulation credit awarded by community colleges to four0year public institutions.

MICHIGAN

- Michigan has experienced an expansion of both Statewide Articulation Agreements as well as Early/Middle College Programs. Both strategies give students the opportunity to earn college credit while still in high school. Almost all community colleges and several state universities participate in one or both of these activities.^{28, 29}
- Michigan has developed a series of reports to help districts analyze the quality of their CTE data, and to improve their ability to use their data for program improvement and for data-based decision making. Many of the reports allow the districts to drill down to student-level data and can only be access by secure login. One report available publicly that assists districts to diagnose the quality of their assessment is the TRAC Assessment Report. This report allows districts to review the percent of students who took an assessment, compared to the number that should have taken an assessment. It also shows students who took the assessment who were not eligible because it was too early in their program.³⁰

²⁶ http://www.doe.mass.edu/frameworks/search/default.aspx

²⁷ http://www.masscc.org/articulation

²⁸ http://www.michigan.gov/mde/0,4615,7-140-6530 2629 68426---,00.html

²⁹ http://www.michigan.gov/mde/0,4615,7-140-43092 51178---,00.html

³⁰ http://www.cteisreports.com/Reports/Rpt Tracassessment.aspx

> The Governor, legislature and business and industry have a renewed interest in CTE programs across the state. We have started a web page that will include robust resources for "Decision Makers". The idea is to have one place for information that can assist stakeholders when discussing legislation, talent gaps and available instructional programs.³¹

Please share your CTE-related challenges.

- > We still struggle with finding assessments that align to program standards as well as appropriate industry certifications.
- > Secondary CTE programs are within the Department of Education. Postsecondary CTE is in the Workforce Development Agency. With competing department priorities and initiatives, it is difficult to find ways to make meaningful connections between the two levels.
- > There is a growing interest in CTE programs. Governor Snyder would like Michigan to be number one in the country for CTE. However, not all communities in the state have maintained or grown CTE programs. There are gaps in many areas of the state. We are looking at creating ways to offer career readiness opportunities in those communities that do not have access to CTE.

MINNESOTA

- MN Local Consortia: Twenty-six secondary/postsecondary consortia focused on development of rigorous Programs of Study, partnerships, success for all students, transitions for students and regional planning and integration with other district/college initiatives.³² Sustained professional development program for new CTE coordinators with mentor-mentee relationships, face to face workshops, and webinars. Recorded webinars on accountability, finances, and programs of study.³³ Annual CTE Works! Shaping the Future conference for consortium leaders and their teams of teachers, faculty, administrators, counselors and business and industry leaders in conjunction with the Governor's Workforce Development Council.³⁴
- > Technical Assessment Project--2009-2014: Over 600 teachers and faculty developed secondary and postsecondary core competencies and state approved technical skill third party assessments including those with industry credentials validated by over 200 business/industry representatives in 60 MN Career Pathways.³⁵ MN Department of Labor and Industry Pipeline project in IT, Healthcare, Manufacturing and Agriculture, Career Clusters Leadership Project in Manufacturing with five other states.
- > Connecting CTE with other MN state priorities and initiatives: Pathways to Postsecondary Summits to bring secondary and postsecondary leaders together to advance pathways to postsecondary³⁶; Adult Pathways to Postsecondary in collaboration with Adult Basic Education

³¹ http://www.michigan.gov/mde/0,4615,7-140-6530 2629 69638---,00.html

³² http://www.cte.mnscu.edu/consortium_resources/index.html

³³ http://www.cte.mnscu.edu/professionaldevelopment/index.html

³⁴ http://www.cteworksminnesota.org/

³⁵ http://www.cte.mnscu.edu/programs/mntsa.html

³⁶ http://readysetgo.state.mn.us/RSG/Educator/Ready/index.html

and Developmental Education³⁷; Moving Pathways Forward³⁸; secondary personalized learning plan legislation which requires each school district to implement a plan for students no later than the 9th grade that includes career and college planning; World's Best Workforce legislation, MnSCU Charting the Future^{39,40}; Advancing CTE in State and Local Career Pathway Systems.⁴¹

Please share your CTE-related challenges.

- Qualified CTE teachers and faculty: Dual enrollment disconnect between credentialing requirements for college faculty and licensure for secondary CTE teachers increased interest in dual enrollment programs from high schools, parents, the legislature. Shortage in CTE teachers, especially at the secondary level, rural communities, regional high-demand industry sectors as det-health, IT manufacturing, early childhood, education, agriculture.
- > Engaging employers in meaningful ways: providing experiential learning opportunities, regional planning, employability skills⁴²; aligning curriculum with workforce needs ^{43, 44}
- > Career advising and guidance to a more diverse broader group of stakeholders. The MN College and Career Readiness Collaborative^{45, 46, 47}; services to low performing groups, males, special populations, economically disadvantaged and people with disabilities.

MISSISSIPPI

What were your state's top accomplishments in CTE?

- > Full implementation of new CTE teacher alternate route program. One-year program based on the Southern Regional Education Board (SREB) teacher certification process.
- > Addition of additional school selecting to be involved in CTE through career academies.
- > Change in graduation options that allow CTE to be on pathway to a standard diploma through meeting CTE requirements and the addition of CTE component to the acceleration component of the state accountability model.

- > Establishing polices that can increase work-based learning opportunities.
- > Identifying national certifications that have meaning to the employers in our state.
- > Changing the perception of CTE in all areas of the state.

³⁷ http://www.cte.mnscu.edu/documents/2014-Adult-Pathways-to-Postsecondary-Forums-flier-FINAL.pdf

³⁸ http://lincs.ed.gov/publications/pdf/Moving-Pathways Overview.pdf

³⁹ http://www.mnscu.edu/chartingthefuture/index.html

⁴⁰ http://www.education.state.mn.us/MDE/SchSup/WorldsBestWorkforce/index.html

⁴¹ http://www.cte.mnscu.edu/programs/advancing-cte-initiative.html

⁴² http://www.cte.mnscu.edu/programs/Tech%20Skill%20Asses/Assessments/Foundation-Knowledge-and-Skills.pdf

⁴³ http://www.mnscu.edu/business/workforceassessment/index.html

⁴⁴ http://www.cte.mnscu.edu/consortium_resources/documents/MN_handbook_2010_lower_res.pdf

⁴⁵ http://mn.gov/deed/programs-services/mn-career-college-collaborative/

⁴⁶ http://www.mnprogramsofstudy.org/mnpos/

⁴⁷ http://careerpathways.org/

MISSOURI

What were your state's top accomplishments in CTE?

- Continued expansion of the Pathways to Prosperity initiative. A teacher externship is being implemented as well as an expanded number of work-based learning opportunities for students.
- > Formalized a process for approval of industry-recognized certificates and credentials.
- Legislation was passed in 2014 that directly impacts CTE. One bill allows for the waiver of required units of core academic credits for students enrolled in CTE content. The other bill awards school districts credit toward their accreditation for entering into partnerships with area career centers, comprehensive high schools, industry, or business to develop a pathway for students to enroll in a CTE program, participate and complete an internship or apprenticeship during their final year in high school and obtain industry certification and credential s applicable to their program, internship or apprenticeship.

Please share your CTE-related challenges.

- > Ongoing discussions around how to finance CTE in Missouri.
- > Vocational-Technical Enhancement Grant redesign and implementation
- > CTE Advisory Committee implementation

MONTANA

What were your state's top accomplishments in CTE?

- > Great Falls College/Great Falls Public Schools dual-credit welding program:
 - Students went through application process
 - Attend high school in the morning, travel to Great Falls College in the afternoon.
 - Will complete Certificate of Applied Science in welding technology prior to graduation from high school.
 - Twelve students anticipated to complete program.
 - Eight or nine general education courses.
 - Half of tuition and no mandatory fees apply.
 - Trying to initiate similar program with carpentry.
- > Dual Enrollment Incentive Program⁴⁸
- Montana received a 2nd TAACCCT Grant⁴⁹

- > High school counselors unwilling to provide information to students about CTE. There is a definite bias against two-year and CTE education.
- > Lack of certified CTE instructors at the secondary level.

⁴⁸ http://mus.edu/board/meetings/2014/Sept2014/TwoYear/BORDualCreditReportSept2014.pdf

⁴⁹ http://swib.mt.gov/92414/TAACCCT%20Round%204%20briefing.pdf

> More than 50 percent of the jobs open in Montana do not pay a livable wage.

NEBRASKA

What were your state's top accomplishments in CTE?

- > Completed year two of reVISION process for the review of career technical education programs. The evaluation process is designed to engage employers and local workforce development and economic development professionals in aligning career technical education programs to state and regional labor market needs and Nebraska's economic priorities.⁵⁰
- A central feature of the revision process for the Nebraska English/Language Arts (ELA) Standards and the Nebraska Mathematical Standards was the engagement of employers and the embedding of the Nebraska Career Readiness Standards. Both the ELA and Math writing teams embedded the Nebraska Career Readiness Standards into the core academic standards, and the both teams participated in meetings with employers to make sure that the standards reflected the content knowledge and skills that students need for postsecondary education and careers.
- Implementation of Habitudes for Career Readiness Students aligned with Nebraska's Career Readiness Standards: This book and curriculum was created in partnership with Growing Leaders, Inc. It provides a vehicle for teaching Nebraska's Career Readiness Standards using imagery. Professional development is provided before teachers can use the books or corresponding lesson plans.⁵¹

Please share your CTE-related challenges.

- Teacher supply: Working to create a new partnership with Nebraska employers to provide loan forgiveness and scholarships to CTE teachers in shortage areas. Our first \$40,000 annual donor is working with Agriculture, Food & Natural Resources programs on their teacher shortage. Also working to strengthen our teacher education institutions providing CTE teacher training. Just restarted a Skilled and Technical Sciences (Industrial Education) teacher education program that had been cut.
- As a state without an ESEA waiver, the Perkins Performance Measures continue to be a challenge.
- Reimaging how we effectively implement and evaluate great career guidance and work-based learning programs. We are beginning a "refresh" of both programs based on employer and postsecondary input. Getting schools to value both in the schedule to provide the time and resources to do both right!

NEVADA

What were your state's top accomplishments in CTE?

> Expansion of the state system for end-of-program technical assessments to capture over 95 percent of CTE program completers. In May, state-end-of-program assessments were administered for 49 CTE programs.⁵²

⁵⁰ http://www.education.ne.gov/nce/revision.html

⁵¹ http://www.education.ne.gov/nce/habitudes.html

⁵² http://cteae.nv.gov/Career_and_Technical_Education/Assessments/2013-2014/

- > The Nevada State Board of Education and the Nevada Board of Regents approved a new policy governing the issuing of articulated credit. According to the new policy, students will earn articulated credit (re-branded as CTE College Credit) based on more rigorous program completion requirements, whereby students must:
 - Complete the core CTE course sequence of 3 credits with a 3.0 GPA;
 - Pass the related end-of-program technical assessment; and
 - Pass the state Workplace Readiness assessment for employability skills.⁵³
- To support the new policy for CTE College Credit, Memoranda of Understanding were approved between higher education and the Department of Education. The MOUs were signed by each college president and the state superintendent of public instruction. The MOUs authorize the development of statewide articulation agreements based on state standards for each eligible CTE program.⁵⁴

Please share your CTE-related challenges.

- > Clear strategies to align CTE programs to economic and workforce development priorities.
- A national recommended list of industry certifications to help states align programs to viable industry certification. There has been ongoing discussion about establishing a clearinghouse for industry certifications.
- > The need for more cohesive and meaningful performance indicators should become/remain a top priority. The performance indicators for nontraditional training and employment should be reconsidered.

NEW HAMPSHIRE

What were your state's top accomplishments in CTE?

- 2 + 1 and 2 + 2 pathways between CTE center program in Mechatronics and the Manchester Community College. 2 + 2 pathway between Berlin CTE Welding and White Mountains Community College. Business pathway, 2 + 2 between Salem CTE and Manchester Community College. Pathways with stackable credits, certificates and degrees.
- > Expansion of Girls Technology Day a collaboration between CTE and the community colleges to expose females to technology.⁵⁵
- Proposed legislation to increase access to CTE.

- > Barriers to CTE due to scheduling.
- > Marketing of CTE a continued lack of understanding to the value of CTE and their pathways.
- Not recognized and not promoted despite unprecedented success over the past five years.

⁵³ http://cteae.nv.gov/Career and Technical Education/CTE College Credit/

⁵⁴ http://cteae.nv.gov/Career and Technical Education/CTE College Credit/

⁵⁵ http://www.education.nh.gov/news/tech-days.htm

NEW JERSEY

What were your state's top accomplishments in CTE?

- > State Board adoption of revised CTE standards (CCTC) including the Career Ready Practices⁵⁶
- > Piloting and implementation of many statewide programs of study in multiple Career Clusters⁵⁷
- > Enhanced collaboration and partnership with Department of Labor and Workforce Development and Office of Higher Education on aligning education and workforce programs through National Governors Association (NGA) Policy Academy participation⁵⁸

Please share your CTE-related challenges.

- > Improving access to and opportunities for quality CTE programs in comprehensive high schools, especially urban districts.
- > Identifying appropriate third party, valid reliable assessments for technical skill attainment in all CTE program areas
- Ongoing perception that four-year college completion is the only or the best measure of student success

NEW MEXICO

What were your state's top accomplishments in CTE?

- Throughout Perkins IV, the New Mexico Public Education Department (PED) would post CTE Perkins performance data on its website for school, district, and public view in various noncongruent formats. Last year, the PED consolidated all Perkins IV data into a single Excel workbook so all data for the secondary and postsecondary entities is visible in one place for each year and each indicator. The workbook was built with a pre-populated chart builder so that institutions can filter for their data, drop it into a pre-determined table, and Excel would automatically create visual representations of their trend data. Institutions now have a single location for which they can extract their data and immediately create impactful charts, and they can compare their institutions against other entities of interest. When demonstrating this rather simple technology to local CTE directors/coordinators, they were very appreciative, but we also learned that many did not know how to use their data to mathematically calculate how many more students they needed to support in the numerator to meet the established performance target for the indicator. While we have provided technical assistance on the matter, we also included a self-calculating data point on the self-populating chart. This feature allows institutions to quantify the needed impact to meet performance, and in most cases provides a realistic goal. A training video has been developed and provided to support the use of the data tool for continuous improvement. The agency is looking at more sophisticated software to accomplish our data dashboard goal.⁵⁹
- New Mexico joined the Council of Chief State School Officers (CCSSO) and other state leaders from across the country to analyze high-level career preparation practices in the United States

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http://lwd.dol.state.nj.us/labor/forms_pdfs/lwdhome/press/2015/Releases/20150210_CumberlandSalemWorkforceInvestmentBoardprint.pdf

⁵⁶ http://www.state.nj.us/education/cccs/2014/career/

⁵⁷ http://www.nj.gov/education/cte/career/

⁵⁹ http://www.ped.state.nm.us/ped/CCRdocuments/Proficiencies%20by%20school%202007-2014.xlsx

and abroad. The CCSSO identified specific policies states must adopt to dramatically improve the preparation of their high school graduates. Because of the state's early involvement in the examination of career readiness realities and opportunities, early implementation of the report's recommendations was possible. Overarching recommendations call for enlistment of the employer community as lead partner, raising the bar for quality of career preparation programs, and making career preparation matter to schools and students. In response to the recommendations, early implementation activities are:

- The development of Program of Study focus groups, including employers;
- Development of state programs of study for local adoption; and
- A program of study approval process lead by employers for the development of quality CTE program of study, which is developed locally and approved by the state.

Legislation has been developed and introduced in the 2015 New Mexico Legislative session to provide additional GPA weight for those students who earn an industry credential (HB178).⁶⁰ House Memorial 014 would require state agencies to include the New Mexico Higher Education Department, the PED and the Department of Workforce Solutions to establish career pathways that bridge high school curricula, postsecondary studies and job opportunities for New Mexico students, including the creation of guidance systems for career information, exploration and advisement for secondary students and early advanced credential programs for students pursuing economically viable career pathways.⁶¹

Nearly one year ago, the PED contracted with the Southern Region Education Board (SREB) to conduct a CTE assessment. The assessment includes desktop audits of current CTE course offerings at New Mexico's 144 high schools, 12 state charter schools, 19 community colleges and two four-year institutions offering two-year degrees and certificates. The SREB will offer the administration of these institutions an analysis of surveys completed by the state's CTE stakeholders. The assessment also includes New Mexico workforce data and the critical skills needed in the workplace, as well as current research on college and career readiness. This is the first comprehensive CTE study conducted in the state since Perkins III. The final needs assessment report will be available in spring 2015, and will include a summary of findings in the context of a Strengths, Weaknesses, Opportunities, Threats Analysis, recommendations for next steps and the findings, disaggregated by region, including population and demographics, with the 16 national career clusters and New Mexico's targeted economic sectors. The findings will be structured and reported by the four local workforce development board regions. There also will be a strategy to imbed implementation of the CCSSO task force report discussed in the second accomplishment, which is currently in development. When the report is published, it will be available on the PED website.⁶²

- > Capacity is the first and foremost challenge. Public Education Department has surveyed its local Perkins directors to ascertain the amount of time/experience in CTE role. For the last three years, more than 1/2 of the Perkins directors indicated that they have one year or less in the role.
- Alternative licensing for CTE teachers has come with some challenges. Those teachers that come from industry into the classroom on an alternative license are leaving because of the lack

⁶⁰ http://www.nmlegis.gov/Sessions/15%20Regular/bills/house/HB0178.pdf

⁶¹ http://www.nmlegis.gov/Sessions/15%20Regular/memorials/house/HM014.pdf

⁶² http://www.ped.state.nm.us/ped/CCR_index.html

- of support/mentoring while in their first year in the classroom. May report that that they cannot get a handle on what an EOC, EPSS, WEB-EPSS, SCA, PSAT, etc., is,...and "what's a lesson plan",.... and "how do you control these kids". Guidance on structured mentoring for alternative licensed teachers would be useful.
- As the state is promoting employer engagement in the development and approval of local programs of study, many rural schools struggle with implementation. As a result, we are organizing our strategy to move toward regional implementation. Not having done this before, we often don't know what we don't know. Presentations, resources, etc. in this area would be helpful. This support was addressed during the fall meeting, but we were asked to brainstorm with the breakout facilitators we need more concrete "how to" guidance.

New York

What were your state's top accomplishments in CTE?

- > CTE included in ESEA Waiver Renewal as a whole school reform model.
- Board of Regents established CTE Pathway model that includes technical assessment options for graduation purposes. www.regents.nysed.gov October 2014 Board meeting
- High level recognition of the value of CTE by Board of Regents including proposals for additional funding in state legislative agenda.

Please share your CTE-related challenges.

- > Identifying appropriate program models to facilitate greater student access to high quality CTE.
- Broadening definition of a CTE teacher for state certification purposes to address new and emerging programs without an alignment with existing titles.
- Maintaining state capacity to service increased demands on establishing high-quality CTE programs.

NORTH CAROLINA

What were your state's top accomplishments in CTE?

- > Expanded Pathways initiative to include collaboration with other state agencies--including state workforce commission, department of commerce, NGA Policy Academy
- > Over 100,000 credentials earned by students
- > 94 percent graduation rate for CTE concentrators

- > Better understanding of career pathways and the related elements
- > Stressing the need for career guidance and counseling throughout middle and high school
- Placement for students in work-based learning activities

OHIO

What were your state's top accomplishments in CTE?

- Created a pathway to high school graduation for students who earn an industry credential and earn a passing score on a work-readiness assessment (WorkKeys), expanded CTE to middle grades in the Ohio Revised Code, and created senior-only, credential-only pathways for indemand jobs in Ohio.^{63,64,65}
- Published model career advising policies and students' success plan for districts to localize.
 These models are flexible to recognize the diverse array of districts in Ohio.⁶⁶
 - A webinar reviewing the model policies will be available later this month.
 - Ohio Department of Education (ODE) in partnering with Battelle for Kids to develop a
 professional development curriculum that districts, ESCs and CTPDs may deliver
 locally. These materials are expected to be available summer 2015. DRAFT topics may
 include:
 - Advising students using Academic and Career Pathways preparing all students for successful transitions⁶⁷
 - Becoming an OhioMeansJobs K-12 Power User Using OhioMeansJobs K-12 to Develop Student Success Plans (training for beginners is online⁶⁸)
 - Getting your classroom connected to careers Embedding Career Connections Learning Strategies into Local Curriculum and Instruction (sample strategies embedded in the ODE model curricula⁶⁹)
- Worked with the Governor's Office for Workforce Transformation in the development of OhioMeansJobs.com⁷⁰

- Data collection: Ohio is challenged with the collection of student information, e.g., not permitted to collect student names, etc. This impacts our work with the Governor's Office of Workforce Transformation in the ability to collect Workforce Success Measures⁷¹
- > Statewide postsecondary articulation agreements: Although great progress has been made, the process requires too much time and money.
- Work-based learning and CTSO activities: Relevance of CTSO activities related to career field technical content standards. Increased competition for student involvement in other organizations that are more relevant e.g., ProStart, Junior Achievement, etc. Many CTSOs are slow to respond nationally so change must take place on the state level. CTSOs can be a tremendous vehicle to promote work-based learning.

⁶³ http://education.ohio.gov/Topics/What-s-Happening-with-Ohio-s-Graduation-Requiremen/Graduation-Requirements-2018-Beyond/Ohios-Options-for-a-High-School-Diploma

⁶⁴ http://education.ohio.gov/Topics/Career-Tech/News/Ohio-Department-of-Education-releases-partial-list

⁶⁵ http://education.ohio.gov/Topics/Career-Tech/CTE-Middle-Grade-Programming

⁶⁶ http://education.ohio.gov/Topics/Career-Tech/Career-Connections/Career-Advising-Policy-and-Student-Success-Plan

⁶⁷ http://education.ohio.gov/Topics/Career-Tech/Career-Connections/Career-Pathways

⁶⁸ http://education.ohio.gov/Topics/Career-Tech/Career-Connections/Event-and-Training-Resources

⁶⁹ http://education.ohio.gov/Topics/Career-Tech/Career-Connections/Resources-for-Teachers

⁷⁰ https://jobseeker.k-12.ohiomeansjobs.monster.com/seeker.aspx

⁷¹ http://workforce.ohio.gov/Initiatives/WorkforceSuccessMeasures.aspx

OKLAHOMA

What were your state's top accomplishments in CTE?

- Grouping of initiatives such as instructional framework redesign, certifications, ecosystems, assessments, and performance funding to increase individuals training opportunities and outcomes to meet the workforce needs.
- > Through the integration of technology into CTE, we have developed a new data system, career development system, and digital curriculum portal.
- > Expansion of scope on accreditation to allow for all distance education courses be eligible for students enrolled to receive financial aid if they qualify.

Please share your CTE-related challenges.

- Maintaining cooperative alliances for CTE students to be able to obtain college credit through CTE courses.
- Recruiting students into CTE and demand occupations.
- > Retaining and recruiting qualified teachers.

OREGON

What were your state's top accomplishments in CTE?

- > Building a stronger/broader legislative support structure for CTE including a 15-17 \$35,000,000 proposal in the Governor's budget for secondary CTE⁷²
- > Implementing the CTE Revitalization Program and expanding business and industry partnerships.⁷³
- > Converging the CTE/STEM business coalition and becoming a part of the Oregon Business Plan: Connecting Education to Careers.⁷⁴

Please share your CTE-related challenges.

- > The ongoing transition of leadership and restructuring of government and agencies.
- > Data collection and utilization without a functional longitudinal data system.
- > The ongoing secondary-postsecondary alignment challenges including dual credit, college boundaries, competing programs.

PENNSYLVANIA

What were your state's top accomplishments in CTE?

> Forty-two state developed Programs of Study; 523 statewide articulation agreements averaging nine credits; statewide articulation agreements with surrounding state; stackable credentials—secondary-to-associate-to-baccalaureate⁷⁵

⁷² https://www.youtube.com/watch?v=Y2n RgDLO60&list=PLHgKl1VSK4lQ62h1NrNXeKpn9Lw6cc2NH&index=8

⁷³ http://tinyurl.com/CTEAdvocacy

⁷⁴ http://www.oregonbusinessplan.org/About-the-Plan/Summits-and-Meetings.aspx

⁷⁵ http://www.portal.state.pa.us/portal/server.pt/community/programs of study/7686

- > K-12 career counseling plans developed between school districts and CTE schools⁷⁶
- Additional state funding to support secondary school entities purchasing equipment. The purpose of the CTE Supplemental Equipment Purchase program is to purchase equipment for the classroom that meets industry standards. Funds must be used to purchase equipment for the purpose of training students (i.e., hands-on use of the equipment) in Pennsylvania Department of Education-approved career and technical education programs.⁷⁷

Please share your CTE-related challenges.

- > Ensuring adequate staffing at the state level.
- > Ensuring adequate state regulation exists to support quality CTE at the adult level.
- > Defining Career Readiness.

RHODE ISLAND

What were your state's top accomplishments in CTE?

- > Rhode Island has a newly established CTE Board of Directors.
- > Rhode Island is migrating CTE data collection over to the State data system.
- > Rhode Island piloted a new CTE program approval process.

Please share your CTE-related challenges.

- > Understanding and preparing to implement the intent and interests of the new CTE Board of Directors largely comprised of industry sector representatives.
- > Expanding the State's data collection and reporting system to support CTE Accountability in Rhode Island (different from Perkins Accountability).
- > Creating and using an online program approval process.

SOUTH CAROLINA

What were your state's top accomplishments in CTE?

- > Graduation rate for CTE concentrators was 96.9 percent and placement rate was 97 percent.
- > Full implementation of local plan web-based application that allows real-time transparency at state and district level.
- > Partnership with South Carolina Technical College System to establish Youth Apprenticeship program for secondary students. Participation increased 400 percent in one year.

Please share your CTE-related challenges.

- Difficult to establish statewide secondary-to-postsecondary articulation agreements.
- Getting students, parents, and guidance counselors to recognize the relevance, rigor, and return on investment of CTE programs. Often hard to attract students to programs due to outdated graduation requirements and class weightings.

http://www.portal.state.pa.us/portal/server.pt/community/career and technical education/7458/career and technical education equipment grants/507847

⁷⁶ http://www.portal.state.pa.us/portal/server.pt/community/guidance counselor resources/7341

> Data and other issues related to using industry certifications to document technical skill attainment.

TENNESSEE

What were your state's top accomplishments in CTE?

- Completion of CTE course standards revision aligned with Tennessee State Standards and postsecondary. Created either new or revised standards for nearly 200 courses for approval by the State Board of Education. Over 100 of these courses were implemented during 2014-15. The remaining will be implemented for the 2015-16 school year.⁷⁸
- > Expansion of Pathways Tennessee initiative, which is now active in four regions.^{79,80}
- Redesign and pilot of our statewide Work-based Learning initiative, including State Board rule and policy changes, as well as the development of a Work-Based Learning Framework, Policy Guide and Implementation Guide.^{81,82}

Please share your CTE-related challenges.

- > Professional development for teachers and district administrators to support the implementation of our new course standards.
- > The ability to collect and/or obtain meaningful data related to student experiences, achievement, and outcomes specifically data that reflects student achievement in CTE coursework/programs of study, early postsecondary opportunities, and post-high school experiences/success.
- Outdated Perkins requirements that are misaligned with current needs and practices of educational institutions and the labor market.

TEXAS

- Funding committed by Texas Education Agency, Texas Higher Education Coordinating Board, and Texas Workforce Commission to support innovative education partnerships between local school districts and public community and technical colleges for the establishment of Career and Technical Education Early College High Schools (CTE ECHS).⁸³
- Implemented a CTE Professional School Counselor Academy. This academy is an intensive, sustained, yearlong program including two face to face meetings and virtual meetings throughout the year. Activities include strategic district-wide planning, help with technology, exchange of new information and resources, determining how to help a student find the most appropriate career path and how CTE plays a role in a student's total academic experience.⁸⁴

⁷⁸ http://tn.gov/education/cte/doc/cte_year-in-review_2014.pdf.

⁷⁹ http://tn.gov/education/cte/doc/cte_year-in-review_2014.pdf

⁸⁰ http://www.tn.gov/education/cte/PathwaysTN.shtml

⁸¹ http://tn.gov/education/cte/doc/cte_year-in-review_2014.pdf

⁸² http://tn.gov/education/cte/work based learning.shtml

⁸³ www.thecb.state.tx.us/cterfa

⁸⁴ http://cte.tamucc.edu/counselor-academy/

> Review and revision of the Texas Essential Knowledge and Skills for secondary career and technical education.⁸⁵

Please share your CTE-related challenges.

- > Collaborating/partnering with the Texas Workforce Commission to more effectively use workforce data in meaningful ways for our schools and programs.
- > Executing the review and revision of the Texas Essential Knowledge and Skills.
- > Operating for six months without a state director for CTE.

UTAH

What were your state's top accomplishments in CTE?

- Adoption of new College & Career Awareness standards for 7th grade CTE course requirement. New resources and lesson plans are also be developed. A statewide professional development is being held for over 600 College & Career Awareness teachers to shift the direction of this course.
- Successful change in methods used to gather placement data for Perkins indicators. Utah has had to shift from statewide data sharing agreements using student social security numbers to LEAs manually gathering of placement data. This has been difficult but is now achievable.
- > Undertaking a CTE reFOCUS initiative to streamline programs, courses, and pathways; revise courses to align to higher student expectations.

Please share your CTE-related challenges.

- > Coordination with various STEM initiatives across our state. We have worked to build collaborative partnerships with these groups and facilitate efforts through CTE.
- > New standardized testing in general education areas how can CTE improve student scores in these areas now that testing is being done (and reported) in earlier grade levels.
- > Ending the stigma and isolation of CTE at all levels from parents to political leaders and business and industry representatives.

VERMONT

- Began process of implementing new legislation requiring all students to have a personalized learning plan beginning in grade 7 and that has CTE and work-based learning as a significant component of those plans. This is complemented by new State board of education rules that change our graduation system from a base in Carnegie units to a base in proficiency. Learning is now to be focused on increased rigor, on-going assessment, and individual proficiency development. CTE is an important resource for general education.
- Vermont's Agency of Commerce and Community Development included an Agency of Education/CTE Division proposal related priority pathways/sectors of the economy in the

⁸⁵http://tea.texas.gov/Curriculum and Instructional Programs/Curriculum Standards/Career and Technical Education Texas Essential Knowledge and Skills/

- State's Comprehensive Economic Development Strategies (CEDS) plan. The proposal identifies six areas of the economy that are projected to be high demand in the next decade.
- > Four pilot sites started work in the STEM Equity Pipeline through a NAPE-led project, funded by the National Science Foundation. The STEM Equity Pipeline focuses on teacher professional development and action planning to understand what prevents young women from enrolling in and persisting in STEM related programs of study. Two of the pilot sites are engaging with NAPE for teacher PD using their "Micromessaging to Reach and Teach Every Student" curriculum.

Please share your CTE-related challenges.

- Next steps related to implementation of the CCTC. What kind of professional development to provide, how, and when?
- > Finding time to focus on needed state-wide professional development rather than each regional center offering its own PD.

VIRGINIA

- > Beginning with students entering ninth grade for the first time in 2013-2014, a student must earn a board-approved career and technical education industry credential to graduate with a Standard Diploma.
- > The 2014 General Assembly amended and re-enacted § 22.1-253.13:4 of the Code of Virginia to allow the use of computer science credits for high school diploma course and credit requirements. The Virginia Board of Education was directed to develop guidelines defining how computer science coursework could satisfy graduation requirements. The Boardapproved guidelines allow Advanced Placement Computer Science A to satisfy mathematics, laboratory science, or career and technical education graduation requirements as a standard credit under certain specified conditions and regardless of the diploma type. These guidelines are effective for the students entering ninth grade for the first time in 2015-2016 and beyond.
- April 2014, the Virginia Department of Education released the report, "A Strategic Review of Work-Based Learning in Virginia: Expanding Opportunities for Students." This report included the culmination of statewide survey results, national literature research, and input from stakeholders representing business and industry and secondary education. The report reinforced the need to (1) redefine the work-based learning (WBL) methods for students in career and technical education; (2) refocus the implementation guidelines to ensure a direct connection between the student's WBL experience and his/her program of studies; (3) provide relevant experiential learning in the workplace that can lead to high-demand, high-skill, high-wage careers; and (4) streamline procedures to increase flexibility for schools in redesigning and offering WBL experiences. July 2014, the revised Career and Technical Education Work-Based Learning Guide was released based on the redesigned work-based learning (WBL) methods of instruction. This implementation guide for CTE administrators, teachers, and coordinators supports the recommendations presented in the report, "A Strategic Review of Work-Based Learning in Virginia: Expanding Opportunities for Students."

⁸⁶ http://www.doe.virginia.gov/instruction/career_technical/work-based_learning/index.shtml

Please share your CTE-related challenges.

- > Strengthening and expanding sustainable business and industry partnerships at the local, regional, and state levels.
- > Strengthening career guidance and support services at the school level.
- > Improving the alignment of career programming with two-year and four-year postsecondary education institutions.

WASHINGTON

- > There will be two examples below one for secondary and one for postsecondary:
 - (Secondary) Statewide Course Equivalencies: The 2014 Legislature passed SSB 6552 which called for the Office of Superintendent of Public Instruction to develop curriculum frameworks for CTE courses that may be offered by high schools or skill centers, whose content in science, technology, engineering, and mathematics is considered equivalent in full or in part to science or mathematics courses that meet high school graduation requirements. Statewide approved equivalencies will assist districts in allowing students to receive math and science credit through CTE.⁸⁷
 - (Postsecondary): Four Washington State two-year colleges will start training students to become "Limited License Legal Technicians" (LLLTs). Washington is the first and currently only state to endorse this new profession. Much like nurse practitioners in the medical field, the LLLT license has been dubbed the "next big thing" in the rapidly changing legal environment because it allows licensed individuals to provide limited legal services directly to clients. The LLLT license presents a new career path for paralegals. (Paralegals work directly for lawyers and cannot give legal advice.) LLLTs can open their own businesses, independent of attorneys, and provide limited legal advice directly to clients.⁸⁸
- > There will be two examples below one for secondary and one for postsecondary:
 - (Secondary) The Healthcare Core is a pathway's partnership between Clark College and participating local high schools which allows students to earn up to 16 college credits in CTE classes related to healthcare professions. This is built upon unique competency-based articulations for 9-12th graders, enabling students to link into Clark's nine healthcare certificate programs, five Associate of Applied Science degrees, and on into two Bachelor of Applied Science Degrees.⁸⁹
 - (Postsecondary) In January 2015, thirteen Washington community colleges will be the first to launch an online, competency-based business transfer degree. Competency-based degrees offer a shorter path to a degree because students advance work at their own pace and move as far and fast as their proven knowledge takes them. Students in this particular competency-based program will be taught by full-time, highly qualified instructors and will receive guidance from navigators. The degree will transfer to four-year universities so students can get a jump-start on a bachelor's in business administration.⁹⁰

⁸⁷ http://www.k12.wa.us/CareerTechEd/Forms/EquivalencyCreditToolkit.pdf

⁸⁸ http://www.sbctc.ctc.edu/general/documents/LLLT-final-03-26-2014.pdf

⁸⁹ http://www.clark.edu/academics/programs/tech_prep/HealthCareCore_chart.pdf

⁹⁰ http://www.sbctc.ctc.edu/general/documents/comp-based-issue-paper06-16-14.pdf

- > There will be 2 examples below one for secondary and one for postsecondary:
 - (Secondary) Puget Sound Skills Center: Advanced Manufacturing Aerospace Composites
 Program The Aerospace Composites program is designed to prepare students to fabricate,
 assemble, and repair composite materials as they apply to aerospace and manufacturing.
 Students will also design, build, and repair composite parts and assemblies using the same
 techniques as our industry partners. Program fees apply.
 - (Postsecondary) Twenty-four of Washington's 34 community and technical colleges2 offer training demanded by the state's aerospace-related firms, moving well-trained workers into well-paying jobs. Composites are crucial to the aerospace and marine industries and other key economic sectors, including energy, automotive and mass transit. An alliance of community and technical colleges called "Composites Washington" is creating a talent pool of technicians for the more than 100 Washington companies engaged in composites manufacturing, fabrication, repair and advanced materials research and development. The group is led by two Washington State Centers of Excellence: Aerospace and Advanced Materials Manufacturing at Everett Community College, and Marine Manufacturing and Technology at Skagit Valley College. Washington⁹¹

WEST VIRGINIA

What were your state's top accomplishments in CTE?

- > Expanded the Simulated Workplace initiative from 60 to 260 schools. Data from first pilots phenomenal. www.simulatedworkplace.com
- > First year for the English and Math teachers in every CTE facility in WV.
- > Finalizing the opportunity for embedded math and ELA credits within the applicable CTE programs of study.

Please share your CTE-related challenges.

- > Changing the CTE culture to simulated workplace environments.
- School counselors' perceptions of CTE.
- > Attracting more students to CTE.

Wisconsin

- Act 59 provided the K-12 System with funding to support CTE programming that ended with the attainment of a certification. Additional information can be found on the Department of Public Instruction website. 92
- Successful completion of the Rigorous Program of Study Grant in manufacturing which leveraged additional partnerships and identified resources that may be able to be used as promising practice statewide.

⁹¹ http://www.sbctc.ctc.edu/general/documents/aerospace-April.pdf

⁹² http://dpi.wi.gov/

Wisconsin was awarded its third system-wide TAACCCT grant which highlights CTE programming and related support activities such as stacked credential, credit for prior learning and career pathway development.

Please share your CTE-related challenges.

- > Concern about the teaching shortage in K-12 and how to manage this in the near future as well as in the future.
- > Continuing to stay involved in national and regional activities is a challenge with the local issues and challenges looming.
- Dual enrollment will be challenging in the future due to the expanded guidance from the Higher Learning Commission. We need to work on some flexibility in terms of the end goal which is to partner between K-12 and higher education.

WYOMING

What were your state's top accomplishments in CTE?

- > The Wyoming Department of Education CTE section sponsored its Roadmap to STEM Conference 2014 that took place at the University of Wyoming as a professional development for Wyoming CTE and STEM teachers. The conference allowed these secondary teachers to find new resources for their classrooms and collaborate with university faculty.⁹³
- > Wyoming's vocational education standards revision was approved by the governor.94
- > The Wyoming Department of Education CTE section continued its effort to build the state's network of career guidance counselors and staff by sponsoring another career development facilitator training.

- > Finding qualified CTE teachers to replace teachers that are retiring.
- > Local control limits growth of strong CTE programs in some instances.

⁹³ http://edu.wyoming.gov/in-the-classroom/career-tech-ed/wystem/2014-conference/

⁹⁴ http://edu.wyoming.gov/downloads/standards/2015/2014-CVE-WyCPS-FINAL.pdf