STATE DIRECTORS

National Association of State Directors
of Career Technical Education Consortium

Two Minute State Round-Up *and* State Updates

Spring Meeting 2008
Washington, DC

Introduction

One of the highest-rated portions of NASDCTEc's meetings is sharing among states. To that end, we are continuing our tradition of the 2-minute state update at the upcoming Spring Meeting. For those of you who are new, the 2 minute round up is a fast paced, update of current state issues, successes and challenges. This year, the updates will be provided regionally. It is a great networking resource as you will learn which states are facing similar challenges or which states have found solutions to challenges you face. You might see ideas that will inspire you or ideas you want to replicate.

PLEASE NOTE: States submitted this content through a survey of four questions. These questions are designed to showcase your state's successes, greatest challenges and progress toward in developing programs of study. NASDCTEc did not author the content, but did format it into a single document for a consistent look.

1. Please share your state's top three CTE 2007-08 accomplishments.

2. Please list the top three challenges facing CTE in your state.

3. Please share your state's approach to developing, implementing and approving programs of study.

4. Please list your top three professional development needs.

****

Input from OVAE

Responses to the first two questions on behalf of OVAE's Division of Academic and Technical Education (DATE):

Please share your top three CTE 2007-08 accomplishments.

- Collaborating with the department's Office of Special Education and Rehabilitative Services (OSERS) to customize and adapt the Programs of Study (POS) model/career pathways for use with students and adults with disabilities.
- Negotiating new student definitions and measurement approaches with states and achieving far more consistency across the nation with those definitions and approaches than in year's past.
- Initiating work and sparking discussions on how best to measure student's technical skill attainment.

Three challenges facing State CTEs nationally:

- The implementation of programs of study (POS) requirement may present significant challenges for small rural school districts because of the difficulty to align with postsecondary institutions generally located in areas with larger populations.
- The emerging reality of declining revenues (i.e., foreclosures and the impact on a community's property tax base, escalating operating costs and overhead) nationally may ultimately impact a school's ability to purchase expensive equipment and technology for CTE classroom instruction.
- Concern that the rising targets for performance and accountability levels may also result in an increase in the level and extent of sanctions being placed on LEA's unable to sustain ever-increasing levels of performance.

Input from NASDCTEc

Responses to the first two questions, from the perspective of the State Director Group as a whole:

Top 3 accomplishments:

- In June 2007, Perkins was passed and included were most of the legislative priorities we campaigned for.
- Strength of membership continues: Again, all 50 states were represented as members of NASDCTEc this year.
- Career Clusters—programs of study were completed for 81 career pathways.

Top challenges:

- At issue: The economic downturn and impact it is having on our membership and congressional appropriations
- Less-than-positive public perceptions of CTE are still out there.
- Lack of research that proves CTE's effectiveness
- Technical assessment
- Professional Development

Table of Contents

Alabama

Accomplishments:

- Alabama Courses of Study written and submitted to State Board of Education for approval.
- STATE PLAN.
- Business/Industry Certification received continued approval by ISO standards.

Challenges:

- State funding
- Plans of instruction to support courses of study and statewide articulation.
- Implementation of early college enrollment.

Programs of Study:

- Over last 2 years courses of study (based on 16 clusters and 59 pathways) were completed and submitted to state board of education for approval.

Professional development needs:

- Technical Skills Documentation.

Alaska

Accomplishments:

- University of Alaska Career Clusters – Through the auspices of the University's Vice-President for Workforce Development and the various campus deans, Alaska's statewide university system has identified its programs – occupational endorsements through doctorates- by career clusters. http://www.alaska.edu/swacad/wp/careerclusters/index.htm
- Two state departments, Education & Early Development (EED) and Labor & Workforce Development, have partnered in the development and implementation of the "Alaska Career Ready" Initiative. Available at all public school sites and job centers, the initiative utilizes the CTE WorkKeys® Career Readiness Certificate assessments and associated WIN for WorkKeys web-based curriculum and assessments to provide skill level information and associated instruction to Alaskan students and job-seekers. All high school juniors will be required to take the ACT WorkKeys' CRC assessments by the 2009-2010 school year; pilot sites are being developed this year. More information is available at www.eed.state.ak.us/tls/CTE/workready.html

Challenges:

- Perkins IV Implementation – During the coming fiscal year, Alaska is scheduled to receive static funding – to the dollar - for the 18th straight year, and Tech Prep will be cut by over 30% to 1998 funding levels. Despite a renewed interest and enthusiasm for improved CTE programs at the secondary, postsecondary and apprenticeship levels, the loss of approximately 50 percent of the "purchasing power" for these federal funds through inflation creates severe challenges in meeting the enhanced expectations for EED as the eligible agency and our sub-recipients.
- WorkKeys/WIN – As a Governor's Initiative, this high profile project is taking the expectedly significant amount of EED time and resources to initiate and pilot test.
- State Staffing vacancies – Our small state staff of program specialists was reduced by half during the summer of 2007 through two retirements. Only one position has been approved for recruitment, and to date has not attracted adequate qualified applicants.

Programs of Study:

- We have used our work with the Statewide Tech Prep Consortium as a basis for developing and coordinating programs of study. EED has developed a basic template to be used for approval of programs developed by local entities. No statewide programs have been developed to date, but support is building at both the secondary and postsecondary levels to build a statewide model for the construction and administrative services pathways.

Professional development needs:

- Effective distance delivery models for CTE programs – does anyone have them, and what does it take to implement?

ARIZONA

Accomplishments:

- Innovative CTE Programs using the Reserve Funds: As outlined during the one-year transition plan of Perkins IV, $600,000 of secondary reserve funding will be made available to award grants to secondary Perkins recipients for career and technical education activities in 1) rural areas, 2) areas with high percentages of career and technical education students, and 3) areas with high numbers of career and technical education students.

  The purpose of this project is to develop innovative programs, address new and emerging occupations and demonstrate best practices that can improve participant performance measures and educational outcomes. This project should effectively demonstrate applicability to, and replicability of, career and technical education activities throughout various school districts.

  This is a one-year grant with the potential for renewal for an additional year. Prior to award of funds for the second year, a renewal application must be submitted. Each project year should have a defined focus and the project proposal should clearly articulate:

  Year 1 - Design and Development
  Year 2 - Implementation and Sustainability

  For the award Year 2007-2008, 5 districts received funding which collectively resulted in $538,000 awarded through this competitive process.

- CTSO affiliation approved as a requirement for an approved CTE Program: The State CTE Advisory Board revised and re-validated the essential elements of a Career and Technical Education approved/active program eligible to participate in State Block Grant and Federal Perkins funding. One of the required criteria is Career and Technical Student Organization (CTSO) affiliation for all students appropriate for the programmatic area. Student participation in an activity that connects classroom learning to actual work experience is an integral component of a sequence of instruction in a career and technical education program.

- CTE Assessment System: The Arizona Skills Standards Commission (ASSC) was formed as a collective that included the collaborative work between ASU and ADE/CTE. They have accepted the task of certification/documentation of student skills attainment of industry-validated technical knowledge and skills through on-line end-of-program assessments. The ASSC's product will support the requirements of HB 2700 and Perkins IV.

  We are on-track and meeting our goal for 2008 of piloting 18 program-specific Technical Assessments.

Challenges:

- New graduation requirements in Arizona: In September 2007 the Board of Education initiated its review of the current and new graduation requirements. Under consideration by the Board is:
  - Framing requirements as credits versus years (4 credits of math versus 4 years of math);
  - Requiring a student to earn a math credit during his/her senior year;
  - Defining a student's ability to earn HS credit while still enrolled in middle school;
  - Adding more specificity to defining science credits

  CTE's contribution will be addressing embedded math standards in CTE Programs to satisfy graduation requirements.

- Math standards embedded in CTE Programs to satisfy graduation requirements: Our goals and strategies to strengthen math standards in CTE Programs:
  - Identify the approved new high school graduation requirements;
  - Identify and invite key CTE leaders identify goals including prioritizing programs with current standards for the process;
  - Identify barriers and strategies;
  - Identify other key states;
  - Identify crosswalk processes from other states;
  - Prepare trends summary;
  - Identify key secondary and postsecondary math leaders and CTE program to do the crosswalk;
  - Also invite 1-2 industry representatives;
  - Pilot the crosswalk process with one CTE program;
  - Incorporate additional math standards in program as necessary;
- JTED report to the legislature: Each joint technological education district shall submit a detailed report to the career and technical education division of the department of education. The career and technical education division of the department of education shall collect, summarize and analyze the data submitted by the joint districts, shall submit an annual report that summarizes the data submitted by the joint districts to the governor, the speaker of the house of representatives, the president of the senate and the state board of education and shall submit a copy of this report to the secretary of state and the director of the Arizona state library, archives and public records.

Programs of Study:

- The Career and Technical Education (CTE) Section at the Arizona Department of Education (ADE) along with postsecondary partners has established a model Program of Study that leads to a baccalaureate degree. This model will be used to develop other CTE programs eligible for funding into Programs of Study.

  The current model is a statewide effort involving the three state universities, community colleges and secondary CTE programs. The structure is as follows:

- A *Program of Study*, facilitated by a grant from CCTI, established an associate degree at the community college level in the specific content.
- Through a state-wide articulation agreement the associate degree is accepted by the three state universities.
- Credits are articulated as a degree transfer from the community college to the university, meeting the first 63 hours of requirements for the baccalaureate degree in the content.
- The secondary program requires two Carnegie Units of prescribed instruction in the content area that is directly aligned with the first two entry courses of the associate degree; therefore, creating dual enrollment opportunities for the first six hours of the associate degree for students.
- Supporting academic courses and other supporting electives are identified at each year of the secondary experience to ensure that the student has the academic preparation at the secondary level to be successful at the post secondary level in the content area.
- Secondary instructors who teach these courses must meet postsecondary adjunct faculty certification requirements in order for students to receive dual credit.
- Secondary and postsecondary instructors participate in professional development activities, and other meetings to ensure alignment and equal rigor in instruction.

This model is being used to develop templates in each of the CTE program areas for *Programs of Study*. Not all program areas will go through the baccalaureate degree level. Also, Arizona community colleges enjoy a high level of autonomy; therefore, it will not be possible to achieve a state wide articulation agreement for each program area. In those cases, through the assistance of Tech Prep, the described model will be used as a template for programs to establish *Programs of Study* within their own community in partnership with their local community college or postsecondary institution.

Programs of Study will be approved utilizing the "Notifications of Intent" process and the Basic Grant Application process, currently used to approve CTE programs in Arizona secondary schools.

Professional development needs:

- Academic Integration Strategies: Arizona has an ongoing need to offer professional development opportunities for CTE teachers to develop effective strategies for identifying and teaching academic content within CTE programs. Arizona has long strived to meet this need for CTE teachers and is continuously looking for new and innovative ways to deliver strategies to the instructors. For example, two ongoing professional development strategies that are currently implemented are "Curriculum By Design" through Northern Arizona University and Lexile training. Curriculum by Design leads instructors through a process to look at the entire curriculum and the academic content within and maps ways to emphasize all academic instruction simultaneously with content instruction through lesson planning and content delivery methods. Lexile training focuses on helping teacher identify the reading levels of their students and instructional materials.

- Industry Specific Training: Arizona experiences the continuing need to keep instructors current in the specific industry skills of the content they are responsible for teaching. This need is amplified by teachers who come from traditional teacher preparation programs with little industry specific experience, as well as, teacher who are the classroom for long periods of time. State staff is always seeking new and innovative ways to get classroom teachers industry experiences and updates on a regular basis to keep them current with the industry trends, developments and changes.

- Classroom Management Strategies: Many Arizona CTE teachers are certified through business and industry routes and have not experienced a traditional teacher preparation program. It is an ongoing challenge to offer effective professional development experiences that teach these individuals, who have a wealth of business and industry content knowledge, the strategies necessary to effective deliver instruction, assess progress and manage a classroom.

  Arizona is currently in partnership with Arizona State University, Northern Arizona University and University of Arizona, to develop a unified comprehensive professional development plan to address to above ongoing needs as well as other identified professional development needs. Although efforts has always been in place to meet the needs, the intent of this partnership, is to develop a plan that will uniformly provide professional development opportunities to instructors state wide that are timely, accessible and affordable.

ARKANSAS

Accomplishments:

- We have been very successful in the use of the reserve fund to promote High Skill / High Wage / High Demand programs of study. While we are still in the beginning phase our initial professional development and grant preparation meeting was attended by over 300 participants. Teams from Perkins sites attended the two day event and heard presentations from the Directors of the Arkansas Department of Higher Education, the Arkansas Department of Education, the Arkansas Department of Workforce Services, the Two Year College Association, and the Deputy Director of the Arkansas Economic Development Commission. Examples of model programs of study were presented by practitioners. A discussion on the book *The 2010 Meltdown Solving the Impending Jobs Crisis,* by Ed Gordon and its impact on programs of study was also held. We already have a large number of grants submitted.
- The second accomplishment for which we are very proud was our efforts to promote nontraditional enrollment in the Manufacturing Cluster. *Manufacturing: A New Vision – Women Mentors Can Change the Future* was a great success, with over 220 teachers, counselors, principals, superintendents, coordinators, college professors, and staff agency representatives in attendance. The highlight of the conference focused on the accomplishments of women in this field – an area that has typically been considered a nontraditional field of study for women. Keynote speakers Peggy Walton and Karen Thompson, representing the Center for Workforce Success and Tyson Foods, respectively, were able to share their personal stories of working in this traditionally male-dominated field, and they were able to dispel the many negative pre-conceived notions surrounding manufacturing work, including the misconception that the US no longer produces any of its own goods – as was pointed out, more goods are being made today in the United States than in any other time in history (Japan, Germany, and China are the next largest economies in the world). Attendees could also choose 2 breakout sessions to attend – choices included *A Career Pathway in Advanced Manufacturing, Kuder & Non-Traditional Career Planning, Regional Efforts in Implementing an Advanced Manufacturing Curriculum, and What You Don't Know About Manufacturing.* All attendees took home with them curriculum guides, CDs, and other instructional materials – additionally, Helen Winter and Barbara Orwig, representing Career Communications, Inc., went through a step-by-step process of how to best utilize these resources in the classroom.

- The Arkansas Department of Workforce Education presented four regional workshops across the state entitled "***An Introduction to the MAX Teaching System***". These workshops introduced strategies based on reading across the curriculum and can be used in any CTE classroom. The goal of these workshops was to provide CTE leaders with an introduction to proven, student-centered literacy strategies. The **MAX Teaching System** targets language arts performance indicators as required by Perkins IV. Each workshop featured a CTE classroom teacher who has successfully used this system. Approximately 400 educators attended the meetings.

Challenges:

- Provide adequate state equipment funding for CTE programs. It will take nearly 23 years to replace our equipment at the rate of $5 million per year.
- The addition of and training for 100 New Career Development Facilitators to our CTE staff is our second challenge.
- The addition of 100 new Jobs for Arkansas Graduates programs to our state alternative education system through our CTE system will be our third challenge.

Programs of Study:

- All high schools in Arkansas are required to offer 1 program of Study in 3 separate clusters in order to maintain accreditation. Schools not offering these CTE offering are consolidated. The Department of Workforce Education identifies course sequence to include foundation, core, and elective classes within the pathway based on the national cluster organization.

Professional development needs:

- Research proven Integration methods.
- Literacy and numeracy Instructional Skills for CTE instructors.
- Training required to add rigor to all programs of study.

COLORADO

Accomplishments:

- In the past 6 months Colorado has finalized a state Plan (Program) of Study template and released examples for each of the 81 Pathways.
- In February a Marketing Kit related to the future vision of CTE was released to CTE administrators and provided to all legislators.
- Colorado added an Energy Cluster area to our state model to create a focal point for this important Colorado industry segment.

Challenges:

- Limited understanding of CTE by local administrators. Specifically related to how CTE can be at the core of their high school reform.
- The current push for graduation guidelines that may or may not include CTE.

Programs of Study:

- We have:
    - Developed a State Plan of Study Template (Based on the Texas Achieve Model).
    - Created Example Plans of Study for each Pathway.

- Set it up where Institutions will be submitting Plans of Study from April through June for Approval.

Professional development needs:

- A greater understanding of the Federal data requirements and how the negotiations will take place.
- How to connect with Counselors.
- Too young in the role to know!

CONNECTICUT

Accomplishments:

- Establishment of Career Pathways program of study model coined the "Student Success Plan" now an important component of the Secondary School Redesign proposal to be implemented for all Connecticut students. Under the redesign, all students would develop a Student Success Plan within a pathway beginning in the middle school. It is a comprehensive plan that includes rigorous academic courses and elective CTE and Art courses, experiential learning, and opportunity for alternative (dual/concurrent) credit. Each student would demonstrate knowledge and skills through a culminating capstone project within a pathway or area of interest.
- Implementation of Version IV of Connecticut's CTE Assessment integrated with very challenging academic standards was administered in 2006-2007. The findings have resulted in revisiting the assessment to fine tune questions and augment with performance-based elements in the next Version V. The secondary redesign effort has charged CTE with development of performance-based assessment that would be utilized for all CT students to measure attainment of 21st Century Skills.
- Development and implementation of an innovative program utilizing Perkins Incentive funds. The program called "Developing Tomorrow's Professionals" (DTP) is targeted for men of color to provide overlapping mentoring, academic skill set training, university linkage, and technology training. DTP is a three-phase program designed to create, improve and sustain a student approach to learning, college matriculation and career potentialities. The Department of Education is seeking state funding to continue the DTP program.

Challenges:

- To compensate for the shortage of CT CTE staff at state level to carry out federal and state requirements pertaining to programmatic support, technical assistance, professional development planning, and especially data collection and reporting.
- To meet the challenges of product and procedure development in response to the secondary redesign and career pathways.
- To work with districts and colleges in meeting core indicators performance levels.

Programs of Study:

- Career and Technical Education has collaborated with state staff to mesh the elements of the new Connecticut Comprehensive School Counseling Program Model with the CTE Student Success Plan proposed in the Secondary School Redesign Proposal. All grantees submitted at least one Student Success Plan/program of study with their grant proposals this year. Professional development has been provided and will continue to implement career pathways.

Professional development needs:

- CTE Content offerings.
- State-wide and regional Career Pathways workshops.
- Technical Assistance for RFPs and accountability.
- Hosting the NASDCTEc Fall Conference 2008 in Mystic, CT.

DELAWARE

Accomplishments:

- Development of statewide planned and sequential pathways.
- Development and implementation of a planned and sequential course numbering system which includes: reclassification/renumbering of CTE CIPs for program identification/Perkins data collection.
- Rollout of revised standards (Ag, BFM, Tech Ed, FCS) aligned with National Standards; alignment of pathways; crosswalks of CTE Standards with academic standards.
- Improved use of electronic communication including online access to CTE Delaware Recommended Curriculum; CTE Unit Count Report**;** State Approved CTE Courses**;** Career & Technical Student Organizations; Career and Technical Education Course Approval forms and guidance.

Challenges:

- Training and implementation for newly aligned Pathways & Standards.
- Identifying meaningful opportunities for cross-curricular integration (and the processes for doing so).
- Explaining the changes in Perkins and the State Plan, as well as the impact of these changes, to LEA administrators and teachers.

Perkins Plans Innovations/Challenges:

- Set aside funds for innovative programs (not a pass-through).
- Using data for planning purposes through Delaware's Education Success Plan and Evaluation System.
- End of pathway assessment.

Perkins Challenges:

- Assisting LEAs in setting local data targets; finding/creating appropriate end of pathway assessments.
- Collecting good, clean, meaningful data and using data for decision making.
- Shifting the paradigm from an "entitlement" to program innovation.
- Creating rigorous and meaningful integration activities.

District of Columbia

Accomplishments:

- Formal grand opening of the new **Academy of Construction and Design** at Cardozo Senior High School, offering a broad foundation in architecture, construction, and design, plus three fully operational programs of study: carpentry, electricity, and HVACR. Implemented with the strong support of the Associated Builders and Contractors (ABC) of Metro Washington DC, and the DC Students Construction Trades Foundation, and open to students from throughout the District, the Academy is organized around the nationally-accredited National Center for Construction Education and Research (NCCER) curriculum. Its staff (equally divided between men and women) all come with high qualifications from the private sector. Successful completers receive an Academic Foundation Certificate and are fully prepared for entry into both two- and four-year colleges and registered apprenticeships. See: http://www.dcstudentsctf.org/academy.htm.
- Launch of two complementary new programs of study—**Culinary Arts** and **Hospitality Management**—which together are repositioning Roosevelt Senior High School as in effect the "Hospitality High" of DC. Each program has its own, fully renovated and state-of-the-art quarters—the first with a commercial class kitchen, the second with a fully-equipped laboratory hotel, the Roosevelt Inn. The Hospitality program is organized as a public charter school-within-a-school (see www.hospitalityhigh.org). The Culinary Arts program uses the national ProStart curriculum. Both programs were implemented with determined support from the private sector: Culinary Arts with the backing of the Restaurant Association of Metropolitan Washington Education Foundation (RAMWEF—http://www.ramwef.org/main.asp) and Hospitality with that of the Hotel Association of Washington, DC (HAWDC— http://www.hawdc.com/hawdc.php).
- Final go-ahead for the complete renovation and retrofitting of the historic but long-closed Phelps Senior High School as the **Phelps Architecture, Construction and Engineering** (PACE) **High School**. Scheduled to reopen in September for the 2008-2009 school year, the new facility is projected to rival DC's own world class "High Tech High," McKinley Technology High School. Developed in partnership with the Associated General Contractors (AGC) of DC and the Carpenters Union Joint School of Carpentry, PACE will eventually offer at least ten new programs of study currently unavailable to students in DC—including: Plumbing, Masonry, Concrete Finishing, Sheet Metal Assembly, Construction Equipment Operation, Construction Management, Electronic Systems Installation, Architectural Technology, Interior Design, and Landscaping, among others—in addition to Carpentry, Electricity, and HVACR.

Challenges:

- Completion of the transition of Perkins State-level administration to the new Office of the State Superintendent of Education (OSSE).
- Incorporation of "College and Career Preparation Program Majors" into the newly-mandated Individual Graduation Plans (IGPs) of each DC student.
- Promulgation of a formal process for development and implementation of State-approved secondary/postsecondary CTE programs of study.

Programs of Study:

- The current District of Columbia Programs of Study Plan reflects 60 Programs of Study, organized into 12 Career Academies. About half of the programs of study are currently operational, at varying stages of development, in DC public and public charter high schools. All successful completer/graduates of CTE programs of study in DC represent "dual completers," since DC high school graduation requirements meet the minimum requirements for entry into both two-year and four-year college programs.

- The District's goal, over the life of the *Five-Year State Plan for CTE for Program Years 2009-2013*, is to upgrade all CTE programs in DC—an average of 12 per year—to the status of secondary/postsecondary, Tech-Prep/Early College offerings, fully meeting the mandate of Perkins IV section 122(c)(1)(A): operated with formal State Approval, spanning secondary and postsecondary education, incorporating dual completion options for all qualified students, built around nationally-validated, industry-based standards, assessments, and curricula, and culminating in high school diplomas, AAS degrees or higher, and skill certification for all students.
- A two-person team within the State Office of Career and Technical Education—a Program Development and Curriculum Coordinator and a Career Development and Assessment Coordinator—will lead the effort, in partnership with the Division of Postsecondary CTE of the University of the District of Columbia and the "LEA" Offices of CTE of DC Public Schools and each participating public charter high school.

FLORIDA

Accomplishments:

- The implementation of the Career and Professional Act of 2007.
- Post Secondary Adult Vocational Certificate (PSAV) programs are being reconfigured to ensure that students can attain program completion as well as industry certification.
- The State of Florida in consultation with its stakeholders revamped the distribution formula among the CTE delivery systems. Funding is now based on the relative need in each sector. Funds will be distributed to the 3 systems based on the proportionate share of total CTE FTE using a 3 year average. Annual sector allocations may change based on changes in reported FTE. This is a significant change from Perkins III, which locked in the percentage allocation to secondary (53%) and postsecondary (47%) all the program years of Perkins III.
- Perkins website: http://www.fldoe.org/workforce/perkins/perkins_home.asp.

Challenges:

- Correlation of appropriate industry certifications with secondary and postsecondary CTE programs.
- Implementation of the Career Pathways Consortia to carry out state program of study requirements and advance secondary to postsecondary statewide articulations in CTE.
- Measuring technical skill attainment as required for Perkins accountability measures Issues related to cost and lack of appropriate certifications in certain areas dominate the concerns.

Programs of Study:

- LEAs are required to convert a minimum negotiated percentage of CTE programs each year into viable programs of study using the state template. At the end of 5 years, all CTE programs must be delivered as part of a comprehensive program of study. The conversion percentage for each LEA will be negotiated with staff in the Division of Workforce Education. The programs of study must incorporate the elements in Section 122(c)(1)(A)(i-iv) and will be available to secondary and postsecondary CTE students in the school year following the development.
- LEAs will be required to select an existing local program of study and work with a Program of Study Team composed of other LEAs to develop a statewide model program of study and related secondary and postsecondary statewide articulation agreements.

Professional development needs:

- Reporting valid and reliable data for Perkins accountability.
- Industry recognized certificates for instructional staff.
- Ongoing professional development related to state and federal requirements for new CTE administrators due to high attrition and retirement rate.

GEORGIA

Accomplishments:

Secondary

- Re-engineering efforts, initiated almost three years, have facilitated many positive changes for Career, Technical and Agricultural Education (CTAE) in Georgia. Students are now, more so than ever, being afforded opportunities to participate in CTAE programs that are academically rigorous and aligned directly with industry standards. All efforts associated with the following initiatives have been implemented to continually support student achievement gains in Georgia. CTAE has:
  - Completed Phase III of our Curriculum Revision Process which was re-designed to support Georgia Performance Standards (GPS) and the career pathway model. This final stage of revision will ultimately provide Georgia students with 48 career pathway options. Additionally, our middle school curriculum is being revised based on the GPS and expanded to provide greater CTAE options in the middle grade levels. http://www.georgiastandards.org/career.aspx?PageReq=PhaseI
  - Interacted extensively with the department's policy makers' group to adopt a New Graduation Rule which supports one diploma for all Georgia students. The new graduation rule is inclusive of definition for career pathways and provides that identified CTAE courses count as science credit.
  - Re-engineered its Professional Learning Unit (the CTAE Resource Network – CTAERN) to act not only as a clearinghouse to facilitate professional learning needs, but to also support activities associated with curriculum and assessment development. This entity also supports our new communication mechanism (C-NET) which houses instructor/administrator contact information as well as critical Teacher Program of Work and Work-Based Learning Reports.
  - Completed the identification/modification of eight end-of-pathway national, third-party exams for Phase I Career Pathways which will ascertain the level of technical skill attainment on behalf of CTAE pathway completers. Phase II and III development will take place in subsequent years.
  - Developed an increased focus on Career Related Education (CRE) through the publication of a manual that highlights the various work-based learning opportunities available for students in grades 9-12.

Postsecondary

- The Technical College System of Georgia has continued its focus on collaborating locally and at the state level to provide a more seamless transition for students to stay in school and negotiate the matriculation from middle school to high school, and high school to higher education. Three initiatives are moving this process forward:
  - During FY2008, 16 technical colleges are partnering with middle and high schools throughout Georgia to reach out to secondary students beginning in the eighth grade as a part of the state funded Stay in School Initiative (SiS). The SiS Initiative's purpose is to encourage 8th, 9th, and 10th grade students to stay in school and successfully complete high school by focusing on the crucial transition from middle school to high school. The SiS initiative provides students early opportunities to explore career options and the connection between their current academic preparation and their future career

opportunities. Additionally, eighth grade teachers meet with 9th grade teachers regarding course content and academic expectations in order to better prepare students for the tricky transition to high school, as well as participating in professional development regarding career development, vertical curriculum alignment, and other middle to high school transition topics.

- Seven Career Academies were selected to receive funds through the State funded Career Academies Project grant. The Career Academies Grant requires extensive collaboration between the local secondary system and the technical college, grantees include: Savannah Technical College/Effingham County $3.2 million; Coastal Georgia Community College $3.2 million; Coosa Valley Technical College/Floyd County $3.2 million; Atlanta Technical College/Fulton County-Hapeville $3.2 million; Athens Technical College/Walton County $500,000; Southwest Georgia Technical College/Thomas County $2.7 million; and, Atlanta Technical College/Atlanta Public Schools-Tech High $500,000.
- Through our newly implemented High School Initiatives all technical colleges will expand Dual Enrollment offerings. The purpose of Dual Enrollment is to offer additional educational opportunities for secondary students that allow them to earn course credit from both Georgia Department of Education and Technical College System of Georgia. The courses supplement career and technical courses already offered in the local high schools and include courses that are required within a technical certificate of credit or diploma program awarded by the technical college. Secondary students who enroll as Dual Enrollment students must meet all technical college admission requirements for the selected program of study.

Challenges:

- Bridging the gap between secondary and post-secondary in reference to developing programs of study that are truly seamless and connect at the college/university level.
- Supporting local systems in their efforts to build the capacity needed to implement career pathways, particularly, smaller systems with limited resources.
- Assisting local systems in understanding the new graduation requirements (and realizing the vital role career development plays in sustained CTAE enrollment).
- Funding (lack of) to support the new mandates stipulated in the new Perkins IV Legislation (i.e. building valid programs of study, technical skill attainment, increased CTAE supervision costs, etc.)

Programs of Study:

Georgia's approach includes the following steps:

- The Governor's Strategic Industries were reviewed to determine which programs of study were needed to sustain the state's industry needs.
- Once it was determined which programs of study would be offered, curriculum teams were comprised which worked to align secondary and postsecondary curriculum. Team members included representation from secondary, postsecondary, and industry. Curriculum was approved by the State Board of Education.
- An education and career planning tool (Peachstate Pathways) was then devised which depicts secondary and postsecondary components of the program of study.

  http://www.gadoe.org/ci_cta.aspx?PageReq=CICTACareer

- Lastly, Georgia's Education & Career Partnership (ECP) was charged with working with local secondary and postsecondary systems to develop opportunities for programs of study through articulation, dual enrollment and increased support from business and industry.

Professional development needs:

- Curriculum training on new Georgia Performance Standards (GPS).
- Career guidance training on career pathway implementation.
- New teacher training for industry based professionals.

HAWAII

Accomplishments:

- Hawaii has built a career pathway system that meets not only the letter of the law but the spirit of the law. We have worked diligently to put together a six-pathway system that incorporates all occupations and utilizes individual pathway advisory councils to develop standards for each of the levels in the pathways.
- These Pathway Advisory Councils (PACs) have a majority membership of representatives from business and industry but also include secondary- and postsecondary-level representatives. The PACs will also be working with educators to validate the test items we are developing to assess student achievement of the standards.
- All of this should lead to a pipeline of students successfully completing programs of study at the secondary level and moving into advanced postsecondary-level CTE courses because of the dual articulated credits they should be earning while in high school.

Challenges:

- A stagnant relationship between secondary and postsecondary.
- A postsecondary system that doesn't believe in dual credits.
- A postsecondary system that still believes that keyboarding is a 100-level course.

Programs of Study:

- The procedures are still in draft form. However, the secondary system and postsecondary system have determined which programs of study to designate as "dual credit articulated programs of study" and eligible for Perkins funding. The Superintendent of Education and the Vice President for Community Colleges must annually commit to the articulation agreement. The procedures are for the secondary system to approve which courses (core, cluster, and academic) comprise the program of study. The student must take an assessment and based on the designated level of achievement, the postsecondary system will grant credit(s) to that student for that program of study.

Professional development needs:

- In-serving the field on "what is a program of study."
- Administering the program of study assessment.

IDAHO

Accomplishments:

- The Division of Professional-Technical Education has initiated a process to make every approved secondary professional-technical education program a program of study.
- There has been a 7% increase in the number of secondary professional-technical education courses that count for academic credit.
- The Division of Professional-Technical Education has implemented six projects to develop Math courses with professional-technical education content.
- 63.4% of professional-technical education school students and 60.5% of all professional-technical education completers went on to college in FY2007. This compares with the overall state rate of 47.4%

Challenges:

- Experiencing a shortage of qualified professional-technical education teachers, particularly in rural areas.
- Building capacity at the technical college to keep up with growing demands from business/industry and expanding enrollments as the economy softens and the unemployment rate climbs.
- Implementing high school reform efforts in the professional-technical education programs at the secondary level.
- Implementing technical assessments in the secondary and postsecondary professional-technical education programs.

Programs of Study:

- In accordance with Perkins IV, all school districts and technical colleges were required to have at least one program of study in order to receive federal funds. The Division of Professional-Technical Education provides state general funds to secondary school districts to cover a portion of the added cost of operating professional-technical education programs. School districts were required to submit a "Request for New Program" for each program as a way to transition all approved programs to a program of study. This initiative has involved our professional-technical education leaders statewide. Program managers were responsible for the initial approval and will be working with teachers to refine, improve, and complete the programs of study. This will include adding academic and technical courses, clarifying and strengthening postsecondary connections, and in some instances bringing a focus to a sequence of courses.

  At the June PTE Annual Summer Conference, teachers were introduced to the programs of study. In October, the Curriculum Coordinator and the Guidance Coordinator presented webinars to provide technical assistance to teachers. In addition, program managers provided technical assistance to teachers in their program areas.

  Schools are encouraged to use the programs of study as the individualized graduation plans mandated by state law at the end of the 8th grade. These plans are reviewed and signed off by parents each year.

Professional development needs:

- Implementing technical skills assessments.
- Preparing and retaining professional-technical education teachers.
- Training and certifying professional-technical education teachers as appropriate in math/professional-technical education curriculum.
- Providing leadership development for professional-technical education leaders

ILLINOIS

Accomplishments:

- A Curriculum Revitalization Initiative providing web-based lessons aligned to Illinois Learning Standards (ilcte.org).
- Moving all Perkins and state grant administration to a web based e-grant management system.
- CTE division undertook a statewide Career Development Taskforce for the Illinois Workforce Investment Board.

Challenges:

- Shortage of certified teachers.
- Declining enrollments in light of increased graduation requirements.
- "Dumb remediation" of struggling students, without attention to instructional methods.

Programs of Study:

- Programs of Study: Using federal incentive funding, targeting Health Occupations and Manufacturing for regional pilots of local POS collaboration models. Using Title II funds to establish Programs of Study Partnerships using TP consortia structure.

Professional development needs:

- CTE and mathematics instruction.
- CTE and language arts skills.
- Use to data to improve instruction.

INDIANA

Accomplishments:

- Purdue University Project Lead the Way Program: Indiana is first in the nation in the number of schools participating in the program. Over 231 Indiana schools are currently involved with Project Lead The Way. In Indiana, Project Lead The Way courses are technology education course offerings as designated by the Indiana Department of Education. Additionally, Indiana is one of seven states piloting the program in biomedical sciences, and 15 high schools are offering the course, more than twice the number of any other state. The high schools offering the new curriculum each received $25,000 from the Indiana Department of Workforce Development to start the program.
- New internship opportunity for Career and Technical Education teachers: The state's Department of Workforce Development is partnering with Indiana INTERNnet to offer a new internship program for teachers from career and technical education designed to boost their understanding of how the business world operates. The four week internship, slated for the summer of 2008, is called Future Workforce Connections (FWC) program. Its goals are two-fold: one, the teachers will help the participating

businesses with important projects or activities. Secondly, the teachers will gain valuable on-site business experience that will strengthen their understanding of how the real world operates. This will ideally help them gain valuable insight and make them better teachers. Two Career and Technical Education teachers will be selected from each of the state's eleven economic growth regions. DWD will work directly with area Career and Technical Education directors around the state to identify a pool of candidates from which to choose this year's interns. The 22 Educator interns ultimately selected will work with employers to complete need-based, project work. In turn, business expectations include exposing educators to current business practices and procedures, working with teachers to apply work-site experiences to the classroom, and developing action plans for the business to further impact and be directly involved with students following the internship. Businesses in the science, technology, engineering and math related fields are being sought.

- Indiana is supporting the planning and implementation of an Advanced Manufacturing educational collaboration between MSSC, DOE, and Ivy Tech – the State of Indiana's two year community college system to increase the pipeline of advanced manufacturing workers the state requires to compete in the global economy.
- Tech Prep is growing: Tech Prep, which began in the early 1980s as a small, locally driven high school improvement strategy, has grown into a major national strategy for improving students' academic knowledge and technical skills. Approximately 20,000 secondary students throughout the State are enrolled in Tech Prep educational programs.

Challenges:

- Recruitment and retention of CTE teachers: Numerous factors impact State efforts to recruit and retain CTE teachers, including: low pay compared to the private sector; supply of qualified CTE teacher candidates; and, pressure on the CTE teacher to continually retrain in order to keep pace with industry trends.
- Developing a statewide articulation agreement.
- Determining the best method to collect data for skill attainment indicators, and assisting locals in developing and instituting teacher and 3rd party developed assessments.

Programs of Study:

- Indiana has adopted the States' Career Clusters Models that incorporate the required knowledge and skills for career and includes both secondary and postsecondary components. Sample POS will be developed by the State to serve as models for local recipients. Locals may implement these samples or locally develop their own POS using State criteria. Sample POS will be available on the Indiana Department of Education website. State POS models may be adopted by the local recipient and/or locally developed POS that meet State-defined criteria may be submitted by the local recipient to the State for approval. Local implementation of POS will be subject to review that will include renewal of POS approval every three years. All local recipients will be required to implement a minimum of one (1) State-approved POS of their choice (or a locally-developed POS that meets State criteria) by the end of FY 2008. All new programs of study to be implemented beginning in FY 10 will be required as part of the local plan application. Also, eligible recipients must have a plan to transition existing programs into POS resulting in at least 85% of State-approved secondary career technical education programs with a State-approved POS by 2013. Postsecondary recipients will follow the same plan in collaboration with secondary recipients to develop/review/revise POS. The State will provide technical assistance and professional development to locals as they develop local POS. State approved locally developed POS will be posted on the DOE websites.

Professional Development Needs:

- Preparing and retaining professional-technical education teachers.
- Special Populations.
- Academic integration.

IOWA

Accomplishments:

- In the fall, 2007, Iowa's community colleges agreed to recommend to the Iowa Department of Economic Development that the $1mil appropriation designated to advance community college technology in support of occupational programs tied to the state's three targeted industries, be dedicated to the implementation of their priority of assisting schools in the implementation of Project Lead the Way; then the community colleges agreed to match the $1 mil with $900,000 of their funds. The Kern Family Foundation has agreed to support this state-wide effort to increase student access to PLTW with $1.2 mi. Iowa is working to double the number of locations and students next year. Iowa will work with the Kern Foundation in developing a means to report on the effectiveness on this private/public partnership.
- The $150,000 reserve funds were utilized to leverage for additional funds of $300,000 to initiate the Math-in-CTE project. This is an opportunity for the high schools, Area Education Agencies, community colleges and the Department of Ed to cooperate in the enhancement of the academic performance of CTE students.

Challenges:

- The Perkins IV accountability measures pose a significant challenge in the development of data elements and their analysis, especially the post-secondary definition of concentrator, and the technical skills assessment.
- Iowa is seeking to reduce the complexity of its Perkins Local Application.
- The data and accountability requirements of Perkins IV pose a significant challenge to the limited number of staff in the state office. The state community college management information system is a point-in-time reporting system and is not a unit student record system and the state office continues to be challenged with linking to the k-12 data system.

Perkins Plan Innovations/Changes:

- Hans Meeder Consulting conducted an assessment regarding the preparedness of Iowa to respond to the Perkins IV. Iowa will continue to review the recommendations contained in his report.
- Sustaining the public interest in CTE generated through the Statewide Perkins Stakeholders Group will be a priority.

KANSAS

Accomplishments:

- The 2007 Kansas Legislature established the Kansas Postsecondary Technical Education Authority which has delegated authority by the Kansas Board of Regents to coordinate and oversee all postsecondary technical education in the state. The initial priorities of the 12-member Authority include establishing the leadership necessary for the Authority to accomplish its mission, reviewing workforce intelligence and system production, raising the awareness of and participation in technical education, and establishing standards of excellence by implementing a program standards and alignment process. Dr. Blake Flanders was selected as the new Vice President for Workforce Development reporting directly to this new Authority and the President/CEO of the Regents.

- The 2007 Kansas Legislature also appropriated $4 million of additional funding for postsecondary technical education technology and equipment grants. These grant funds were awarded to institutions to purchase technology and equipment needed to expand technical program capacity in targeted industry sectors.
- As of July 2007, Alexa Posny was named Commissioner of Education for K – 12. Her return to Kansas from Washington D.C. where she was director of Office of Special Education began a significant change in emphasis for Career and Technical Education in Kansas. In October 2007, Robin Harris was promoted to Assistant Director for Academic and Technical Education—the K – 12 CTE Director and Linda Oborny's replacement. Robin's title is significant because Kansas is no longer considering Technical Education as Vocational Education, but truly as Career Education and Technical Education. Academic education is going to be integrated into technical education.
- To accomplish this, the Kansas State Board of Education has taken on as one of its priorities, "redesigning the education delivery model to meet the needs of all learners." This priority has meant that the State Board is considering a list of some 30 policies including eliminating content standards and program standards and replacing them with integrated standards that are aligned. This will have significant implications for our assessments as well.
- The final significant accomplishment was the launch of the Kansas Career Pipeline. This is a state-wide online portfolio builder free to any citizen who has an interest. It is powered by the KUDER instruments, but is much more robust. With the involvement of Kansas businesses and industries, the site allows the end users to see what career opportunities are available, as well as what education and training they can access. Since the state-wide launch, two thirds of Kansas school districts have signed up, making this available to more than 170,000 of the 250,000 secondary students.

Challenges:

- Identification, implementation of appropriate technical assessments and associated data collection issues for reporting performance on the core indicators for both K-12 and postsecondary students.
- Implementation of the postsecondary program standardization/alignment process.
- Align K-12 system with postsecondary system including our state programs.
- Being relentless with our vision for Career Education for each student regardless of the obstacles.

Programs of Study:

- Over the next 3 years, statewide career cluster advisory committees will be established for each of the 16 career clusters. These advisory committees will utilize the models developed through the States' Career Clusters and CCTI initiatives to develop and recommend program of study models for state approval at the cluster and pathway levels. Approved state models will provide the framework to be used by secondary and postsecondary institutions in the development of local programs of study addressing the career and technical education offerings at each institution.

Professional development needs:

- Technical Skill Assessments.
- Programs of Study.
- Development of adult career pathways for both under-prepared adult students as well as those returning for retraining for career advancement and/or re-entry into the workforce.

KENTUCKY

Accomplishments:

- University of Louisville gets $20.5 million grant for CTE research: UL has been awarded a $20.5 million five-year grant to study ways to increase academic achievement and success among CTE students. The university's College of Education and Human Development will fund the National Research Center on Career and Technical Education (NRCCTE.) OCTE is familiar with the group through a collaboration between the agencies to develop the Math-in-CTE program. The goal of the center is to provide research, professional development and technical assistance that will lead to improved technology teaching methods. UL becomes the fourth institution to host the NRCCTE, and James R. Stone III, a nationally known expert on technical education, will serve as director. The center opened Oct. 1, 2007.
- CTSO Conference host: The SkillsUSA National Leadership and Skills Conference will return to Louisville for six years beginning in 2015.
- Kentucky Tech is the first system of area technical centers to receive district accreditation under Advance-Ed (or Sacs-CASI).

Challenges:

- Budget cuts are severe and impact our effectiveness.
- The need for CTE to find its place in education reform.
- Meeting industry needs/concerns.
- Finding room for technical training when it's being crowded out by academic training.

Programs of Study:

- Kentucky has completed identifying the sequence of courses and possible exit points that end with a certificate, an industry certification, diploma, or an associate degree for six programs of study (career pathways). Those programs of study are, manufacturing, health sciences, education, construction, information technology, and STEM (science , technology, engineering and mathematics) The second group of programs of study being developed are agriculture, business and marketing, communication, human services, and transportation. The remaining programs of study will be developed as the second group is completed. A committee defined the program of studies (career pathways), designed a template for aligning curriculum, and developed six model programs of study (career pathways) and templates for eligible recipient use. The definition of a career pathway is: "Career Pathways are systemic frameworks for transforming our education institutions by proactively addressing the needs of students and employers across the learning continuum. Career pathways are developed, implemented and improved in partnership among secondary and postsecondary institutions, business and industry, employers. They are available to all students, including adult learners and are designed to lead to rewarding careers." A curriculum template was used to align curriculum in career clusters being developed and implemented. A joint curriculum committee, consisting of both secondary and postsecondary teachers from the specific program and business and industry representatives from that employment sector will evaluate the content and make appropriate changes. Programs consist of non-duplicative course sequences that include coherent and rigorous academic and technical content needed for the occupation. The integration of academic content into technical instruction will occur as joint instructional activities are developed between academic and technical instructors. Workshops will be provided to assist academic and technical teachers in jointly developing challenging instructional materials and implementing instructional strategies to apply academic content in a technical setting.

- Articulation and dual credit agreements are in place for the majority of secondary and postsecondary institutions across the state.
- For the programs of study not having a statewide articulation agreement, representatives from the secondary and postsecondary institutions will be encouraged to develop local articulation or dual enrollment agreements for career and technical education courses. Representatives from schools with agreements will be encouraged to meet annually to discuss the agreement and identify any problems students may be having in receiving and applying the credit toward degree requirements.
- Relevant technical content with appropriate applied academics for each ofthe programs of study are developed in conjunction with and validated by appropriate business and industry representatives. Where national or state industry certifications are available, secondary and postsecondary teachers will be encouraged to obtain certification by the industry and to obtain program certification. Where industry certification is not available, the appropriate industry will validate the technical program content which includes appropriate applied academics and student standards of achievement.
- The sequence of courses for these pathways will be reviewed annually to assure the content and student standards meet the requirements of the appropriate business and industry. Changes will be made where appropriate. Each eligible recipient was required to implement at least one program of study during the transition year (07-08).
- Professional development specific to implementing programs of study will be held and program/curriculum consultants will provide technical assistance throughout the implementation process of each program of study.

Professional development needs:

- Professional development for CTE teachers, to teach applied academics in their curriculum (math, science and English especially), and prepare the teachers to approach the curriculum at a higher level and translating this to students, enabling them to understand the academic theory behind the trade

LOUISIANA

Accomplishments:

- Completion of the Transition Plan and the State Plan.
- The development and implementation of one Local Application Plan Packet for use by both secondary and postsecondary.
- Joint regional planning meetings with secondary and postsecondary partners to plan for the 2007-2008 LAP, particularly the in the area of linkages and professional development.

Challenges:

- Technical Skill Attainment – the development of a process, the selection of an assessment methodology and the implementation of the methodology and process.
- Additional state funding for CTE programs – both secondary and postsecondary.
- The profession of adequate professional development activities that will enhance the knowledge base of instructional personnel, counselors and administrators regarding career pathways.

Programs of Study:

- Louisiana is creating and implementing Programs of Study (also known as *"Louisiana Career Pathways)* that will help students engage in rigorous and relevant learning at the secondary level by offering a program of study that connects challenging academic coursework with relevant career and technical coursework. Each *Louisiana Career Pathway* will offer the student a clear pathway to postsecondary

studies and skilled employment. Adult career pathways are important to the training of those adults not currently in a program to earn a credential (certificate, diploma, or associate degree).

- With the Transition Plan, Louisiana initiated the development of programs of studies in seven identified areas important to the economic and workforce development in the state. The pathways identified are Health Sciences, Construction, Automotive, Education, Manufacturing (Advanced), Hospitality and Tourism, and Information Technology.

Professional development needs:

- Instructional strategies relative to the integration of academic and career technical courses within the postsecondary arena.
- Strategies to successfully initiate cultural/organizational climate changes as it relates to CTE.
- How to assess and design professional strategies.

MAINE

Accomplishments:

- Online application for postsecondary CTE.
- Successful submission of transition plan with no State director.
- Successful submission of on time online applications by 99% of recipients.

Challenges:

- Maine CTE is facing challenges as high school reform is discussed and implemented, particularly around core learning standards and how our programs can satisfy the high school graduation requirements.
- Decisions around Technical Skill Assessment.
- Supporting CTE students to be prepared for postsecondary placement in the areas of math and reading.

Programs of Study:

- Currently Maine is using its current articulation agreements as a starting point on the program of study development. CTE schools have been provided with the definitions and the timeline of the program of study requirement. Some of our schools currently have a program that would comply with the requirement; one is an engineering program with academic requirements which tie to the high school and a postsecondary articulation. We are using this as a model for the other schools. We are in the process of filling a consultant's position that will work on completing the development and helping schools implement the required program of study within the 5 year timeline. The postsecondary schools currently have a program of study which incorporates technical skills and academics into one sequence of courses which lead to an associates degree or certificate.

Professional development needs:

- PD for secondary instructors on Numeracy strategies and partnerships with high school math.
- PD for state administrators on new Technical Skill assessment requirements.
- PD for state and locals on program of study requirements.

MARYLAND

Accomplishments:

- At the secondary level, increased implementation of State CTE Programs aligned to the career cluster frameworks, as well as an overall increase in CTE graduates. More than one-fourth (26%) of the high school graduates in 2007 completed a CTE program of study. At the postsecondary level, expanded CTE programs in Maryland's Community Colleges (more than 55,000 enrolled) and increased alignment between high school and community college programs through credit articulation, dual enrollment and transcript credit options.
- Increased CTE student achievement measures for college and career readiness. More than half (51%) of all CTE completers also met the University System of Maryland entrance requirements.
- Received a $100,000 grant from Citigroup Foundation to conduct the Citigroup Schools That Work Institute. The Institute was created as a year-long professional development series designed for middle and high school leadership teams. The Institute series provides schools with opportunities to learn from experts, intensive team action planning, and follow-up on-site coaching from content experts to support implementation of school reform strategies.

  The Institute is designed around research-based school reform strategies that contribute to improvements in student achievement. Institute strands include:

  - Using Data For Instructional Improvement;
  - Shared or Distributive Leadership through Professional Learning Communities and Common Course Syllabi; and
  - Implementing Career Guidance & Advisory Systems.

  This year, a new strand of the Institute will focus on district leadership teams working with CTE leaders and principals to address:

  - Career Technology Education (CTE) Program Development and Implementation

  A recent data analysis of schools attending the Institutes on a consistent basis reveals greater improvements in student achievement and school performance.

Challenges:

- Development of new Maryland CTE programs and ensuring full implementation and quality assurance of current Maryland CTE Programs (i.e., professional development, resources, equipment, student and program certification, qualified teachers).
- Identifying and expanding student access to appropriate industry-recognized certifications to document technical achievement of CTE students at the high school and college level.
- Providing an in-depth analysis of special populations data and leveraging the resources to improve the performance outcomes of special populations students.

Programs of Study:

- Career and technology programs are developed under clusters and pathways, as part of a local school system's (LSS's) entire program offerings. The Maryland CTE program approval process is outlined in the Policies & Procedures for the Development & Continuous Improvement of Career and Technology Education Programs. As new programs are developed, LSS use Program Advisory Committees (PAC) that represent the full range of occupations in a career cluster. LSS will also specify the contribution of

each PAC member in terms of providing industry standards, program development resources, and/or work-based learning opportunities.

To facilitate the development of new programs and the continuous improvement of existing programs, MSDE has identified State CTE Programs of Study. These are CTE programs that not only meet the requirements for state program approval, but also include curriculum and professional development resources that ensure high quality and allow them to be replicated by local school systems. Maryland's CTE Programs have been either partner developed (e.g. Pre Engineering – Project Lead The Way) or developed through a statewide collaboration process following the state policies and procedures (e.g. Teacher Academy of Maryland). To date Maryland has developed 30 model programs of study, with at least one in each of the 10 career clusters. By 2012 Maryland will have 48 model programs of study.

Professional development needs:

- Using data-driven decision making in the planning process to drive program improvement.
- Identifying available and appropriate measures for technical skill attainment and ensuring CTE faculty align instruction to prepare all students for industry certification, college credit or other measure of technical skill attainment.
- Expanding professional development opportunities for Maryland CTE Programs in partnership with CTE Program Affiliates—postsecondary and industry partners supporting the development and implementation of Maryland CTE Programs of Study.

MASSACHUSETTS

Accomplishments:

- The Massachusetts Career and Vocational Technical Education unit of the Massachusetts Department of Education worked in collaboration with other units in the MADOE and with school districts, colleges and consortia with career and technical education programs to:
    - Improve data collection and analyses of program outcome data, in particular for students who are members of special populations.
    - Deliver high quality and sustainable professional development and technical assistance for Massachusetts' educators focused on: (1) implementing the Massachusetts Vocational Technical Education Frameworks including piloting of a statewide competency tracking system for documenting students' acquisition of framework-based knowledge and skills, (2) career planning based on assessment results and programs of study and (3) implementation of interventions and programs to support students enrolled in career/vocational and technical education programs that prepare them for careers nontraditional for their gender, in particular to support educators in assisting students to make career decisions not limited by gender, sexual orientation, or perceived sexual orientation.
    - Transition and improve tech-prep delivery with the goal of increasing the number of CVTE students entering postsecondary education and training programs, including apprenticeship programs, remediation free and completing such programs on time.

Challenges:

- The negotiation of district FAUPL's in combination with the overarching goal of all Massachusetts CTE students reaching proficient by 2014.
- Implementing the performance test for CTE students pursuing the Certificate of Occupational Proficiency.

- Establishing a system for the collection and analyses of tech-prep accountability data (i.e., the 10 core indicators.)

Programs of Study:

- MADOE will provide its current 43 MA Vocational Technical Education Frameworks (and additional MA Vocational Technical Education Frameworks to be developed) as the basis for Massachusetts' programs of study. MADOE will also provide assistance through tech-prep in the completion of Program of Study "Grids" based in part on the MA Vocational Technical Education Frameworks. Each tech-prep consortium in Massachusetts is charged with ensuring that appropriate secondary and postsecondary staffs contribute to the development of these Grids for each program in the high school that meets the Perkins IV definition of career and technical education used in MA.

Professional development needs:

- *For all educators and administrators* - Essential knowledge and skills in using data to guide their efforts in getting all students to proficient by 2014.
- *For school counselors* - Essential knowledge and skills in coordinating meaningful academic and career guidance and counseling for CTE students and documentation of such assistance in students' career plans.
- *For all educators and administrators* - Essential knowledge and skills for preparing CTE students to not only transition to postsecondary education remediation free but to complete their college and apprenticeship programs on time.

MICHIGAN

Accomplishments:

- In a state that has operated under local control for decades, we will be implementing statewide technical standards for all of our state-approved CTE programs.
- We have convened Career Cluster Task Forces comprised of academic and CTE educators and have developed lesson plans to teach the cluster foundation skills for all of our state-approved programs within the clusters.
- We have successfully completed a transfer back to the Michigan Department of Education from the Michigan Department of Labor and Economic Growth. This change was made by our Governor in order to increase the connection between academics and CTE in high school core curriculum as well as other (new) high school graduation requirements.

Challenges:

- New high school graduation requirements include 18 mandatory core academic curriculum credits. Our challenge will be to keep CTE as a viable option for students without being squeezed out of their elective credit options. To do this, we are encouraging local districts to create crosswalks between the academic requirements and CTE curriculum and encouraging collaborative teaching and integration of academics.
- Although high school Perkins was transferred back to the Michigan Department of Education, the postsecondary staff remains as a part of the Michigan Department of Labor and Economic Growth. Our challenge will be to increase collaboration with our postsecondary colleagues.
- The implementation of new, statewide technical standards for CTE programs will mean a tremendous amount of professional development for teachers.

Programs of Study:

- In Michigan, state approved CTE programs at the secondary level are already required to have an aligned curriculum with a postsecondary partner. Most of the development and implementation work will be at the postsecondary level. It will not be mandatory for the postsecondary programs to align with the high school programs, however. We are exploring options of statewide articulation, or aligning programs using the Career Clusters.

Professional development needs:

- How to implement technical assessments meaningfully and at the same time cost effectively. Our fear is that the majority of Perkins funding will be spent on technical assessments in the future.
- Tech Prep data collection continues to be a challenge, especially in states that do not have a P-16 longitudinal data system.
- How to infuse rigorous academics into CTE courses at the same time being able to show that students have mastered the academics taught through the CTE courses.

MINNESOTA

Accomplishments:

The proposed **Minnesota Five-Year Career and Technical Education (CTE) State Plan** has:

- Strengthened secondary and postsecondary collaboration by requiring high schools and colleges by establishing formal consortia of secondary and postsecondary partners to receive Perkins funds and jointly administer programs and support services for all secondary and postsecondary CTE students through an annual joint local consortium plan. In Minnesota, 26 CTE consortia have been formed to implement the intent of Perkins IV locally. For more details see www.perkinsplan.project.mnscu.edu.
- Used the career pathways/POS framework developed nationally and by other states, but in particular Nebraska, Minnesota has developed an organizing framework of the foundation knowledge and skills, career fields, career clusters, and career pathways that Minnesota will use for developing programs of study in career and technical education. For more details see www.programsofstudy.project.mnscu.edu. Also see below.
- Explored coordinated data systems that allow for a wider array of accountability measures as students move directly from high school to college, in and out of education, and transition between education and employment. For example, Minnesota has established a post-secondary CTE entry-cohort based data system that is able to not only meet the accountability measures under Perkins IV but also serves as a vehicle for initiating continuous improvement at the local level.

Challenges:

- High School to College Transitions Accountability Framework:
    - The inability of Minnesota to collect broad-based high school to college transition data and information continues to be a challenge to determine Perkins program effectiveness and quality, particularly in light Minnesota's plan to establish formal consortia of high schools and colleges at the local level.

- High School/College Readiness Knowledge and Standards:
    - The lack of clarity regarding the perceptions and knowledge about the alignment of high school exit requirements and the college readiness entrance standards, particularly in math but in reading and writing as well, pose a significant challenge for improving high school to college transitions within CTE.
- Program Quality:
    - Crowding of the high school day and the addition of new academic requirements is making it difficult for students to participate in CTE programs. In addition, when CTE courses could be offered, by restricting the awarding of academic credit through CTE due to licensure, and Highly Qualified Teacher provisions in No Child Left Behind, reduce participation in CTE even more.
- The growing shortage of teachers, particularly in critical areas such as Mathematics and Sciences, and also certain CTE fields like allied health services and engineering technology, and, the professional development of existing teachers to ensure that they keep abreast of a changing dynamic economy, is an immediate challenge that will need to be taken up not only within Perkins but statewide.

Programs of Study:

- With standards on program approval and new program development in place at both the secondary and post-secondary levels, and capitalizing on much of the development work done in other states, Minnesota intends to implement programs of study (POS) and career pathways as a primary mechanism to identify, build and sustain its new consortium structure proposed under the State Plan.

  Minnesota strongly feels that the development and implementation of career pathways/ POS will be facilitated by having the new consortium structure in place. The State contends that the new consortium structure will support the Perkins IV requirement for building increasingly strong collaborative models built around a career pathway/POS framework, and in turn, will help pave the way, beyond just CTE, for developing other linkages that connect the secondary and postsecondary systems.

  With its new consortium structure in place, Minnesota has begun exploring the use of career pathways/POS as a structural framework for organizing the coordinated delivery of CTE in high schools and colleges. After consultation with the 26 local consortia, Minnesota has set the following parameters for developing and implementing a statewide career pathways/POS strategy. Programs of Study (POS) within Minnesota CTE are required, at a minimum, to meet the following criteria:

- Career pathways/POS will either be developed locally or developed by the State with local input;
- Span at least grades 11-14 by identifying a non-duplicative sequence of both academic and technical courses within a program of study;
- Make high school graduation a minimum requirement;
- Lead to an industry-recognized certification or a certificate, diploma or an associate degree from a two-year college;
- Align with the program approval processes established by the Minnesota Department of Education and the Minnesota State Colleges and Universities system; and,
- Incorporate articulation agreements, dual- or concurrent-enrollment opportunities, or postsecondary enrollment options so that students may earn college credit while in high school.

  To receive approval of the self-defined program of study that each local CTE consortium seeks to develop and implement, Minnesota requires that full details of the process by which the POS is developed and implemented locally and must be detailed under the Program of Study goal, objectives,

strategies and measures that is identified in the annual joint local consortium plan. By receiving State approval of the annual joint local consortium plan, the proposed POS identified in the annual joint local consortium plan will also be simultaneously approved.

Professional development needs:

- Implementing a Comprehensive Technical Assessment System.
- Developing a fast-track licensing and credentialing system for CTE teachers to ensure a rapid deployment of programs of study across the CTE spectrum.
- To assure students transitioning from secondary into post-secondary education, in and out of post-secondary education, and, between education and employment, CTE practitioners and key informants need to become trained in informal and formal methods of collaborating within and across CTE consortia in Minnesota.

MISSISSIPPI

Accomplishments:

- As part of Redesigning Education for the 21st Century Workforce Initiative, new courses related to Information and Computer Technology (ICT I) and Technology, Engineering, and Mathematics (STEM) were piloted in fourteen sites across the state.
- Ten Career Pathways in Career and Technical Education are under development and will be piloted in selected sites across the state in the 2008-2009 school year.
- Statewide Guidelines for Attaining Advanced Placement Credit at the community college level were adopted.

Challenges:

- Meeting needs of academically disadvantaged students while maintaining a rigorous and relevant curriculum.
- Providing technical assistance to local school districts with limited state staff and under constraints posed by statewide and district testing calendars.
- Collecting student level data at the community college level.

Programs of Study:

- Programs may be implemented by the Office of Vocational Education and Workforce Development on a statewide basis or at the request of a local school district.
- Staff at the Research and Curriculum Unit, Mississippi State University, is assigned to work with educators and industry personnel to develop a statewide curriculum framework and assessment for all programs. The curriculum framework and assessment are based on national standards where available.
- Curricula and programs are approved by the Mississippi State Board of Education and by the Mississippi Board of Community and Junior Colleges (postsecondary programs only).

Professional development needs:

- Developing leadership and administrative skills for new vocational administrators.
- Increasing pedagogical skills of incumbent and new teachers.
- Implementing online professional development courses and programs.

Missouri

Accomplishments:

- Development of a number of resources for Career Cluster implementation at the local level (*What's the Plan*, GOALS Toolkit, and a Career Clusters video).
- Missouri was one of five states invited to participate in the National Alliance of Partnerships in Equity (NAPE) STEM Equity Pipeline Project funded by the National Science Foundation.
- The Division of Career Education invited input from business and industry to validate the Career Clusters knowledge and skills for Missouri. We had over 750 responses to the online validation process. Over 80 individuals representing all 16 Career Clusters participated in a final validation during a statewide meeting held in January 2007.

Challenges:

- Programs of study implementation and approval.
- Technical skill assessments.
- Implementation of a new electronic planning and grants system (ePeGs).

Programs of Study:

- As proposed in our state plan, Missouri is in the process of developing sample programs of study using Career Clusters and Career Pathways as the framework. The network of 15 Tech Prep consortiums will be utilized to assist local Perkins grant recipients with local development and implementation of at least one program of study during the life of Perkins IV. Local Perkins grant recipients will be encouraged to transition to additional programs of study as the requirement is met for at least one program of study.

Professional development needs:

- Programs of study implementation and approval strategies.
- Technical skill assessments.
- Tech Prep data collection.

Montana

Accomplishments:

- Creation of an innovative leadership structure that fosters a strong partnership between the Office of Commissioner of Higher Education and the Office of Public Instruction that produces collaborative decision-making in the management of the Perkins grant.
- Redesign of Tech Prep from regional consortia to a single statewide Big Sky Pathways Consortium with a centralized system for information sharing and data collection.
- Use of the Big Sky Pathways Consortium to develop the pathways models (programs of study) for use at the local level.
- Creation of a system—Escrow of Credits— for banking earned Tech Prep credits at the time of completion and placing on a Tech Prep Earned Credit Transcript to be requested by student upon enrollment in a postsecondary institution.

Challenges:

- Building a pool of qualified CTE teachers/faculty to replace those leaving the field due to retirement and other factors.
- Creating comprehensive professional development opportunities that are intensive and long-term resulting in improved instruction.
- Understanding that statewide articulations can only be accomplished if progress at the state level regarding transfer of credit and dual credit is achieved.

Programs of Study:

- In implementation of the new Perkins Act, Montana's Office of Commissioner of Higher Education (the eligible agency) and Office of Public Instruction are collaborating on program development and oversight to a higher level than ever before. This joint leadership structure (State CTE Leadership Team) will provide ongoing review of state activities and progress in improving CTE programs, especially programs of study, and making key decisions in the allocation of Reserve funds, leadership funds, and managing the Tech Prep Consortium activities. This joint leadership will be informed by the ongoing involvement of a State CTE Advisory Committee representing business/industry and state agencies that provide federal funding for workforce education and training, such as Department of Labor, Department of Commerce, Department of Public Health and Human Services and others.

  In support of this joint leadership structure, both state agencies have aligned their staff to six career fields that incorporate all 16 career clusters and related Pathways. State staff will also function as liaisons between the Tech Prep Statewide Consortium and the local Perkins projects in the development of programs of study (Big Sky Pathways).

Professional development needs:

- Basic Understanding of Career Clusters at the local level.
- Integration of Academics and CTE curriculum.
- Counselor/Advisor training.

NEBRASKA

Accomplishments:

- Modeling the creation of rural career academies with two different models:
  - Sixteen rural schools working together to develop cluster/pathway based career academies with the local community college to develop dual-credit courses for junior and senior level classes focused to meet local workforce and economic development needs. Regional labs will be created to augment the instruction.
  - In a more rural part of the state, the local community college is working to develop on-line cluster/pathway career academies that meet the local workforce and economic development needs. The courses will supplement local offerings. Regional labs facilitated by community college instructors will be conducted to provide additional instruction and skill development.

- Successfully launched our "Partnership for Innovation" statewide Perkins consortium, funded with 10% of LEA allocation provided to statewide consortium to accomplish:
    - **Secondary-Postsecondary Transition**

      The development of a statewide system to ensure that NCE students make the transition to further education or employment at various self-determined stop-out points along a chosen career path. Examples of this work include:

        - Developing statewide articulation agreements.
        - Expanding opportunities for dual credit.
        - Develop new partnerships between secondary and postsecondary education to expand the use of distance learning and on-line courses to increase availability of career education courses to secondary students, especially in rural areas and/or small schools.
        - Curriculum alignment of secondary and postsecondary for programs of study.
        - Examining outcomes of secondary courses to ensure students are prepared to enter postsecondary education both in career education and academic preparation.
        - Identifying policy issues that provide barriers for successful student transition and working to overcome those barriers.

    - **Improved Data and Reporting Systems**

      Continue the development and coordination of database and reporting systems to ease the burden and improve the quality of data required by Perkins IV and necessary for program improvement. Examples of this work include:

        - Clarifying and improving data needed to respond to Perkins IV Accountability.
        - Developing statewide systems for follow up data and management of that data.
        - Continued partnership with NE Staff and Student Record System, finding ways to eliminate duplication of data reported by eligible recipients.
        - Explore ways to share data between secondary and postsecondary more effectively to reduce burden on locals.

    - **Technical Skill Assessment**

      The work of PFI will be instrumental in developing this new statewide system of measuring and documenting technical skill attainment.

- **Statewide Partnerships**

  PFI will provide the potential for securing statewide license agreements that are determined priority need areas. Examples of this include:

    - National Student Clearinghouse follow up data system, CC Benefits, Industry Certifications, Software and other curricular tools.

- **Professional Development**

  PFI will coordinate professional development that includes training in emerging areas, technical skill development, and in new instructional strategies for secondary and postsecondary instructors.

- **Curriculum in Emerging Areas**

  Development of secondary/postsecondary aligned curriculum in new and emerging, or targeted areas.

- Contracted for research to be completed that evaluates Nebraska career education availability, service, and impact on special populations with an emphasis on gender nontraditional. Results of the research study to be completed this summer will help guide future policy and practice in serving the needs of special populations and gender nontraditional students at both the secondary and postsecondary levels. The need for this study was predicated on the lack of significant gains in our nontraditional performance measure for Perkins.

Challenges:

- Limited resources (money and time) to accomplish everything that needs to be done.
- Moving to a more appropriate measurement for technical skill attainment.
- Recruitment of teachers in CTE shortage areas.

Programs of Study:

- Nebraska is providing three options for approval of programs of study. The first is to adopt one of our state model programs of study. The second option is to create local programs of study and submit for state approval. The third option is to fully implement a national curriculum such as Project Lead the Way, Cisco or Oracle Academies, etc.

Professional development needs:

- As a state:
  - Continued implementation of the Nebraska Career Education model
  - Successful implementation of programs of study to be used appropriately
  - Implementing seamless transition between secondary and postsecondary including overcoming barriers created by turf, policy, law, etc.
- As NASDCTEc members:
  - Technical skill attainment and assessment strategies
  - Using technology to more efficiently achieve our mission and goals (e.g. Web 2.0., social networking, etc.)
  - Training on the ability to prioritize and say **NO** (or at least delegat**e)!**☺

NEVADA

Accomplishments:

- After much work by CTE advocates and supporters with the State legislators during several legislative sessions, the FY 07 Nevada State Legislature awarded CTE $4 million dollars for each year of the FY08-09 biennium. This major coup was that the funds would be a line item for the local CTE programs. (For the rest of the story, see item #1 of the top three challenges.)
- There has been overwhelming interest and support from secondary, postsecondary, and the private sector in the development of our five-year State plan. As a result, the State plan evolved into a quality, viable document with substance for CTE currently and in the future.

- During the past year a major, statewide marketing campaign was implemented focusing on the lower dropout rate, higher graduation rate, and higher scores on proficiency tests of CTE students, as well as the positive economic impact of career and technical education.

Challenges:

- After CTE's historical victory during the FY07 State legislative session of receiving $4 million dollars for each year of the FY08-09 biennium, disaster struck. During November 2007, due to Nevada's budget crisis, the Governor mandated a budget cut of 4.5% of State agencies, school districts, and postsecondary education. For CTE this translated to cuts in the unspent State CTE funds at the local level for FY08 and the elimination of the $4 million for the second year of the biennium for FY09.
- Providing technical skills assessments for CTE.
- Increase the development and implementation of programs of study.

Programs of Study:

- CTE programs are organized under six umbrella areas which are further defined by the State approved sixteen career clusters. Programs are also organized in career pathways with corresponding course titles to help guide students in career development. The Nevada Information System realigned career clusters with sixteen state and national ones. The secondary and postsecondary linkages that were promoted, developed, and implemented since the early 1900s through local articulation agreements continue with an emphasis on every secondary CTE program for which there is a complementary postsecondary program.

Professional development needs:

- CTE educators need additional professional development in the integration of academics and CTE.
- Training in technology and technology applications implemented within a framework of rigorous and relevant inter- or multidisciplinary context including hands-on experiences.
- Provide professional development that incorporates Nevada's program quality standards into recommended courses of study with emphasis on approved State skill standards and the integration of academics into CTE courses.

NEW HAMPSHIRE

Accomplishments:

- Have created 26 CPPOS – Career Pathway Program of Studies – aligned with post-secondary.
- Have created a statewide CTE Advisory Council to inform us about the future and delivery of CTE in NH.
- Have finished the competencies for all of our curriculum. This is significant as NH will require all secondary programs (academic as well) to be competency based as of September 2008. We helped the secondary core subject teachers develop competencies based on our expertise.

Challenges:

- Not enough spaces in many of our programs; lack of understanding on the part of Guidance Counselors and parents about the value of CTE for "their" child and thus no one in the Manufacturing or IT pipelines; resources and state funding support.

Programs of Study:

- With the CPPOSs we have better articulated the curriculum needed to be successful in any given career cluster or area and linked it to postsecondary at the two year level. We have increased the number of Running Start and dual enrollment courses and we now have incorporated Alternative Education Pathways with CTE at our regional centers. The age of compulsory education has risen to age 18 in NH so we need many opportunities for children to be successful and get a secondary diploma.

Professional development needs:

- More CTE teachers trained in math and its relationship to CTE.
- More degreed staff so that they can embed core credits within their programs.
- More training of Guidance staff in the CPPOSs; and more awareness on the part of postsecondary faculty about the CPPOSs.
- http://www.ed.state.nh.us/education/doe/organization/adultlearning/careerdevelopment.htm (This is where you will find our Program Competencies).

NEW JERSEY

Accomplishments:

- Establishment of the State Advisory Council on Career and Technical Education charged with reviewing and making recommendations on the State Plan, its development and implementation, and assisting the OCTE in identifying best practices and working toward continuous improvement in various aspects of CTE statewide administration and service delivery. There has been active participation from various stakeholder groups at all meetings. This is also serving to raise the awareness of the value of CTE.
- The Office of Career and Technical Education has been actively involved with high school redesign issues with an acknowledgement that quality CTE programs can enhance the high school experience.
- Renewed collaboration with the Department of Labor and Workforce Development, the State Employment and Training Commission and the Office of Economic Growth. This has expanded opportunities for the OCTE to be part of the statewide Industry Workforce Advisory Groups to engage business in industry in discussions regarding the needs of their particular industry and how CTE can contribute to preparing individuals to meet these needs. This collaboration has also provided opportunities for the OCTE be involved with three WIRED grants in New Jersey that are addressing areas of biosciences, biotechnology, transportation, education, entrepreneurship, entertainment and health services. There are real opportunities for connections with the CTE community with these collaborations.

Challenges:

- Raising rigor and quality of all CTE programs has remained a challenge. Enhancing the skills of our current CTE teachers is a part of this challenge.
- Identifying strategies to address technical skills measure remains difficult.
- Current fiscal crisis in the state is hampering decision making and creating no opportunities for increased state support. Our postsecondary CTE programs are currently at risk of losing a significant amount of state funding.

Programs of Study:

- Using the career cluster program of study templates as a model, OCTE has asked each district to identify at least one current program of study offered. OCTE is prioritizing the development of programs of study to align with the Governor's Economic Growth Strategies. We have identified 10 career clusters that are most aligned to the industries identified in the Governor's plan and will focus on these initially. The OCTE is also working on identifying model Tech-Prep programs based on rigorous criteria and will be providing funding to districts to support the establishment of mentorship activities to assist other schools in replicating their design. The OCTE has also inventoried all secondary education CTE programs and will begin a process of re-approval of programs to meet the new Perkins criteria. During this process we will be able to focus attention on enhancing programs of study.

Professional development needs:

- Integrating academics in CTE and working together with academic teachers.
- Developing quality programs of study.
- Effective collection and use of data to improve program quality.

New Mexico

Accomplishments:

- Expansion of memberships in State Career Technical Student Organizations, HSTW/SREB programs/NM Jobs for American Graduates (NM JAG), and dual credit opportunities.
- Refinement of data reporting systems.
- Hosting of OVAE monitoring team.

Challenges:

- Data reporting on technical skill attainment and postsecondary placement, and other reporting measures.
- Providing enough technical assistance to LEAs.
- Addressing pre-service training opportunities.

Programs of Study:

- Identify needs regarding workforce and economic development activities, identify national then state cluster, identify pathway, align coursework within pathway in a manner leading to certification, associates degree, or baccalaureate degree.

Professional development needs:

- Clear definitions for performance measures.

New York

Accomplishments:

- 892 state-approved CTE programs (programs of study) with 187 re-approvals for a second 5-year cycle (as of 1/08).
- NYS Board of Regents focused on CTE issues and using CTE as a strategy for increasing student performance and decreasing the dropout rate. http://www.regents.nysed.gov/2007Meetings/December2007/1207emscvesidd6.doc

- CTE students' performance is comparable to their non-CTE peers in the required Regents examinations—illustrating that the added courses do not appear to detract from overall performance. It is also noteworthy that CTE performance is strongest in areas in which CTE is offered through integrated academics: English, mathematics and science.

Challenges:

- Maintaining rigorous, quality CTE programming.
- Increasing access to CTE by more students.
- Addressing shortages of appropriately certified teachers.

Programs of Study:

- Providing local control yet maintaining state-level oversight a fully developed approval process is detailed at http://www.emsc.nysed.gov/cte/ctepolicy/.

Professional development needs:

- Alternate certification paths for professionals to enter the teaching profession.
- Providing sustained, research-based in-service professional development to enhance technical skills.
- Identifying more academic and technical skill integrated delivery models to enhance existing teacher skills.

North Carolina

Accomplishments:

- Data analysis of high school completion that indicates CTE has a significant positive impact (12%) on high school completion. For the graduating class of 2007 who entered the ninth grade four years prior the completion rates are:
    - 69.5% for All Students
    - 81.7% for CTE Concentrators (4 courses in a CTE Pathway with one as a Completer Course)
- Completion of eight curriculum products using Revised Bloom's Taxonomy as the curriculum redesign structure. These products will be released at the CTE Summer Conference in July 2008.
- Statewide technical attainment as measured by the North Carolina VoCATS Instructional Management System has reached an all time high of 68% of students at proficiency or above.

Challenges:

- Making an impact on Academic Attainment when the NCLB required assessments occur BEFORE most students are able to take more than one CTE course.
- Assisting school districts in identifying assessments for local option courses that meet the requirements for reliability, validity and accountability.
- Updating the statewide Standard Course of Study to reflect both state and national requirements.

Programs of Study:

- North Carolina has 53 Career Maps that have been in place since 2000. These Career Maps outline the academic and career and technical education courses that lead to a diploma. North Carolina will be redesigning our CTE Standard Course of Study to reflect the Career Clusters and the Career Pathways under each cluster. We anticipate that the state will recognize 16 secondary clusters and between 10 and 16 postsecondary clusters. Academic courses required for secondary graduation are specified by the N.C. Board of Education.

Professional development needs:

- Local implementation of Career Clusters.
- Implementation of Perkins IV requirements at the local level.
- Implementation of new curriculum designed using Revised Bloom's Taxonomy.

North Dakota

Accomplishments:

- Established three new Area Career & Technical Centers, focusing on blended delivery of CTE programming, which includes interactive TV, online, mobile units, and traditional delivery. Centers are located in the western part of the state that is more sparsely populated which limits the transportation of students, and is experiencing extreme job growth due to energy development.
- Received first time state funding to support existing statewide elementary entrepreneurship programming in 10 regions across the state.
- Incorporated the Career Resource Network into our agency when they lost federal funding.

Challenges:

- Continued state fiscal support for the development of additional area centers. During the application process there were additional centers that were not funded. On a positive note it also raised the level of discussion about the needs for CTE in schools and student decision making.
- Implementation of technical assessments at secondary and postsecondary.
- Encouraging more people into the teaching field – new career teachers and out of industry.

Programs of Study:

- We modified clusters to fit our state and then used state staff with local input to develop POS templates. We will be rolling out these POS to schools and teachers for more comment.

Professional development needs:

- How to successfully integrate academics into CTE – such as Math-in-CTE model– on a statewide scale.
- Providing up-to-date technical training and updating for instructors.
- Providing new teacher and administrator training and mentoring.

Ohio

Accomplishments:

- The drafting of an innovative state plan that raises the bar for CTE in Ohio by including all students in the Tech Prep system and emphasizing student success.

- The focusing of Ohio's secondary career-technical activities on three outcomes: 1) increasing the graduation rate, 2) ensuring that all students are prepared for both postsecondary study and the workplace and 3) implementation of an accountability system that connects funding to performance – causing Ohio to evaluate all career-technical education work in terms of what work should be done given limited resources (e.g., what work has the most direct relationship to the listed outcomes) and how that work should be done to ensure that it results in the identified outcomes.
- Recognition of Ohio as a top performer nationally in the implementation of PLTW.

Challenges:

- Implementation of open entry to Tech Prep programs which will require capacity building among educators and administrators in order to maintain high program standards while addressing the needs of both advancing students and a higher-than-average population of students with disabilities.
- Moving more CTE into the middle and early high school years in order to increase successful transitions from middle to high school and from 9th to 10th grade – because the dropout issue can best be addressed at these earlier grade levels.
- Implementation of a rigorous academic core for secondary students, including career-technical students – to increase non-remedial enrollment in postsecondary education without an increase in the high school dropout rate.

Programs of Study:

- We will establish a state template based on the work of CCTI and Career Clusters. We will provide technical assistance for local recipients to develop their own POS. We will develop an electronic submission process. We will integrate the POS approval process with our application process for state weighted funding and Tech Prep program approval. Our plan calls for all programs to have a state-approved POS beginning with all new programs in 2010 and including all new and existing programs by 2014.

Professional development needs:

- Differentiated instruction, including the identification of individual learner needs and the use of appropriate interventions.
- Development and use of the IEP and other personalized learning plans.
- Data-based decision making.

OKLAHOMA

Accomplishments:

- The work that has been done to create an instructional framework that embraces.
- The 16 career clusters and its alignment with the work of the Oklahoma Governor's Council on Workforce and Economic Development to identify, promote, and grow Oklahoma's industry sectors. This framework gives us the ability to restructure our system to align with industry sectors and other educational entities to create talent pipelines for Oklahoma industries (gives us the ability, but we aren't there yet).
- Implementation of a true Statewide Marketing Campaign focusing on the economic impact of CareerTech. Survey results revealed that the public values the work of our system and key opinion leaders are taking note of the difference we make in Oklahoma's economy.

- The evolution of high-tech, STEM programs such as pre-engineering, biomedical, and biotechnology with the ability to include the delivery of rigorous academic (AP) math/science courses as part of the course sequence. Also the ability to immerse students in those fields through opportunities such as FIRST Robotics, biotech research projects with Noble Foundation, capstone senior projects, etc.
- Increased partnerships and cooperation with our Alliances, Higher Education, Business & Industry, Department of Commerce, Common Education, working with over 600,000 enrollments, 500 schools and 6,900 different companies delivering training, curriculum/testing/printing/etc. in high wage, high demand, high skill careers.

Challenges:

- Funding is a major issue that includes unfunded mandates, limited lottery revenue, threats to the ad valorem system and Carl Perkins funding, needed support for new legislation such as ACE, EOI Testing, etc., teacher recruitment & retention, increased operational costs, and competition from private and public sector.
- Helping our state staff, technology centers, high schools, and skills centers to realize the amazing opportunities for CTE to work with our education partners, workforce and economic development systems, and industry to create engaging and challenging high-tech training/education opportunities that embrace emerging technologies.
- To ensure that CTE students in Oklahoma who earn college credit in our technical programs have the academic skills and support to complete college degrees in higher numbers and that we as CTE system take ownership of that process.
- Academic emphasis that includes being involved with increased academic requirements, emphasis on college readiness, increased testing and course requirements – ACE, financial literacy, while still maintaining autonomy and respect for CareerTech's long standing role in business and industry training.

Professional development needs:

- Change management centering on restructuring, abandonment, and budgetary adjustments, intergenerational differences, leadership, cross training and preparation for and improvement of managerial skills.
- How to successfully incorporate different delivery avenues into instruction-blended learning methods that include online, hands-on, and at the same time effectively communicate the capabilities and resources of the system and efficiently assess client needs.
- Counselor training that focuses on using student data for advisement, creating a rigorous plan of study, providing support for students to reach high expectations, and college/work transitions. (TCTW and HSTW networks can offer us amazing professional development ideas and resources and we could restructure some of Perkins dollars to make it happen.)
- Leadership training that focuses on instructional improvement, creating a culture of high expectations, using data to increase student achievement, relationships with stakeholders, leading change, etc.

OREGON

Accomplishments:

- Effective communication and participation strategies to keep the field engaged with Perkins IV implementation.
- An Oregon legislative appropriation to conduct a CTE funding study to inform CTE funding needs in Oregon and possible state CTE funding scenarios.

- Broader scope of stakeholder involvement; especially with the Oregon workforce development community.

Challenges:

- Teacher supply. Oregon continues to be challenged with sustaining existing programs when veteran CTE teachers retire. Oregon is challenged with expanding CTE capacity because of the severely limited CTE teacher supply.
- Professional development of existing CTE teachers to support the intent of Perkins IV; specifically, academic integration.
- Erosion in the depth of administrator understanding for the role of CTE in the comprehensive high school or community college.

Programs of Study:

- The Oregon Department of Education has established a set of core elements that are required for approved, state-recognized CTE programs of study. The core elements must be explicit in the local design of a CTE program of study. There are plans to establish CTE program of study examples that could be adopted locally for "fast track" approval.
- Existing state-approved CTE programs will be expected to transition to a state-recognized CTE program of study at the time the existing program is scheduled for program renewal (4-year cycle). All existing programs wishing to remain eligible for Perkins support will have the opportunity to transition to a state-recognized CTE program of study by the 2012-2013 program year.
- Approval of a CTE program of study will first seek local or regional endorsement by local administrators, Regional CTE Coordinators and industry advisory committees. Locally endorsed CTE program of study applications will be submitted to the Oregon Department of Education for recognition.

Professional development needs:

- Oregon's reliance on alternatively licensed CTE teachers, primarily from industry, has caused a void in a solid, pedagogical foundation for these individuals. There is also a need for understanding of adolescent development and classroom management.
- Identification of the embedded academic content that resides in CTE knowledge and skills and the instructional reinforcement of this academic content. Partnering with academic colleagues to implement effective instructional strategies like the methods used by the "Math in CTE" approach.
- An increase in depth of understanding for alignment and articulation between secondary and postsecondary levels based on industry-based, technical standards rather than courses. Also, the role and function of measuring technical skill attainment spanning the secondary-postsecondary CTE program of study.

PENNSYLVANIA

Accomplishments:

- **One** is our effort to reform career counseling: Transforming School Counseling in the Commonwealth of Pennsylvania.

- School counselors and what they do are topics conspicuously missing from school reform initiatives across the county. Yet, school counselors are in the best position to identify barriers that hinder academic success for some students. In addition, their unique understanding of local equity and access issues and what support interventions are needed to ensure college and career readiness for every student make school counselors vital to the success of any school's improvement efforts. The Bureau of Career and Technical Education (BCTE) has partnered with the Bureau of Teaching and Learning Support (BTLS), the Pennsylvania School Counselor Association (PSCA) and The Education Trust's National Center for Transforming School Counseling (NCTSC) to place school counselors front and center in Pennsylvania's school improvement initiatives.
- The Transforming School Counseling (TSC) effort in the Commonwealth is multifaceted. BCTE personnel are part of an Advisory Committee that guides the initiative. TSC activities in which BCTE has a major role include:
- Pennsylvania's Counselor Preparation Program Certification Guidelines Committee: This committee is charged with recommending revisions for regulations concerning standards for university school counselor preparation programs.
- Model School Counseling Program Professional Development: This two year professional development series is working to create model school counseling programs in more than 20 Commonwealth high schools and career centers.
- Project 720: Transforming the role of the school counselor is a major focus of Pennsylvania's high school reform initiative, Project 720. School counselors are seen has critical leaders and advocates in the development of successful efforts to ensure academic rigor for all students, relevance of the curriculum for college and career success, and strong, positive adult-student relationships.
- PSCA Summer Academy: TSC tenets are presented and action plans for the ensuing academic year are developed during this summer professional development opportunity for school counselors.
- BCTE has also collaborated with NCTSC in the development of the RFP and reporting process for PA's College and Career Counseling Grant and is currently working to revise the BCTE school counseling program monitoring process. BCTE has and continues to play in important role in ensuring both the inclusion of career and technical education issues in the TSC initiative and maintaining consistency of the TSC tenets across current and emerging PDE projects.

- **Second** is the program of study effort and development of a template for the program and for the articulation agreement. See 'Template for Programs of Study' below.
- **Third** is the development of an ad hoc committee to review issues surrounding part time career and technical centers and sending school districts. The ad hoc committee is comprised of the Secretary of Education, Deputy Secretary of Elementary and Secondary Education, Executive Directors of the School Administrators, Career and Technical Education Administrators and the School Boards Associations.

Programs of Study:

- **<u>Template for Programs of Study</u>**
  Pennsylvania Department of Education
  Bureau of Career and Technical Education
  Each Program of Study (POS) shall be developed in compliance with all of the following template elements:

1. Incorporate and align secondary and postsecondary programs: (a) using Pennsylvania approved SOC Codes and CIP Codes; (b) by developing a competency list based on an occupational analysis using resources such as O*NET, VTECS, and MAVCC; (c) by aligning with PA recognized industry-based credentials or certifications; and (d) by securing validation of the Occupational Advisory Committee.

2. Include coherent and rigorous academic content aligned with PA Academic Standards and relevant career and technical education content integrated in a coordinated, non-duplicative progression of courses that align secondary and postsecondary education to adequately prepare students to succeed in careers.

3. Include the opportunity for secondary education students to earn postsecondary education credits through dual or concurrent enrollment, articulated credit, or other ways which lead to a PA-recognized, industry-based credential, credit-bearing certificate, or associate or baccalaureate degree.

4. Establish all new career and technical education programs based upon the current PA Department of Labor and Industry's High Priority Occupations list.

5. Develop articulation agreements between secondary and postsecondary institutions which shall include:

- Content specified in courses offered by the secondary institution that aligns with course content at the postsecondary institution. Syllabi and/or competency lists of courses from the institutions involved must be maintained in the appropriate offices.
- The operational procedures and responsibilities of each party involved in the implementation of the articulation agreement.
- A student evaluation plan and process including descriptions of required proficiency levels and criteria for measurement.
- An evaluation plan that includes an annual review and a renewal date not to exceed three years.
- A description of student admission requirements.
- Signatures of authorized representatives of participating institutions.
- On a case-by-case basis, provide options for out-of-county students to articulate without sanction if equivalent articulation elements are satisfied.

PA Programs of Study

The Carl D. Perkins Career and Technical Education Act of 2006 requires the development and implementation of career and technical programs of study (POS). Programs of Study incorporate secondary education and postsecondary education elements; include coherent and rigorous content aligned with challenging academic standards and relevant career and technical content in a coordinated, non-duplicative progression of courses that align secondary education with postsecondary education to adequately prepare students to succeed in postsecondary education; may include the opportunity for secondary education students to participate in dual or concurrent enrollment programs or other ways to acquire postsecondary education credits and lead to an industry-recognized credential or certificate at the postsecondary level or an associate or baccalaureate degree.

Each local recipient receiving Perkins funds under the Act will be required to offer the relevant courses of at least one POS. POS are similar to PA initiatives such as Tech Prep, career pathways, career academies and career clusters.

The development of statewide Programs of Study is underway and will continue during the 2007-2008 Perkins funding cycle related to 31 identified Classification of Instructional Program (CIP) Codes. Initially, six of the list of 31 CIPs will be addressed in order for the POS development process to be established.

Implementation of the POS by those institutions receiving Perkins funds is slated for 2009-2010.

Bureau of Career & Technical Education (BCTE)
Programs of Study & Statewide Articulation Agreement Timeline through June 2008
Implementation of Programs of Study

Goal 1: Review CIP codes/certification
Objective 1: Review CIP codes/certification

Review of CIPs by BCTE program specialists and selected school personnel to determine viability of each CIP—state and regional High Priority Occupations (HPO) CIPs only. *List of 64 CIPs compressed to "First Tier" list of 34 CIPs—HPO, direct postsecondary connection industry certifications, program demographic (number of programs, number of students). Slated for development during transition year 2007-2008.*
"First Tier" list reviewed and revised to include 31 CIPs with six (6) CIPs highlighted for immediate development. *Completed 12-20-2007*

BCTE/OCA will work with certification when eliminating CIPs or combining into a different CIP. *Ongoing*

Goal 2: Validate Technical Standards/Knowledge and Skill Statements
Objective 1: Conduct Technical Standards committee Meetings

1. Determine format* for submission template. *Completed January 9, 2008*
2. Identify statewide committee members by contacting all CTCs for recommendations, use Tech Prep committee lists and PA Industry Partners—Criteria established. *January 2008*
3. Solicit task lists from CTCs for six (6) initial programs for blending. *January 2008*
   O*NET list will be blended into product for validation. *February 2008*
4. Technical Standards Committee validates competency lists and highlights core competencies. *March 2008*
5. Technical Standards Committees review available end-of-program assessments and industry certifications to determine correlation with identified technical standards. *April 2008*
6. Develop remaining 25 CIPs into Programs of Study. *May & June 2008*

Goal 3: Develop Statewide Articulation Agreements
Objective 1: Coordinate activities leading to signed statewide articulation agreements for "first tier" CIP codes

1. Focus Group of secondary, postsecondary, PASSHE, PA Commission for Community Colleges, PDE's Office of Higher Ed to review issues with Program of Study and articulation. Result will be transcripted, articulated credit. *In process*
2. Focus Group (secondary and postsecondary educators) identifies related academic courses and alignment with Academic Standards and sequence technical standards into duty areas. *March 2008*
3. State policy/rules for alignment of secondary and postsecondary courses and articulation. *In process*
4. Focus Groups will establish format for statewide articulation agreements by cluster. *March 2008*
5. Cluster workgroups will design cluster articulations. *April & May 2008*

***Format for POS Submission**

Career Cluster and #

Career Pathway and #
CIP Code
CIP Definition
SOC Code (O*NET)
Occupations—HPO highlighted and others—these job titles will be aligned with O*NET
Competency List organized by occupations at top—each competency will be checked in each occupation column
Competency List with related academic standards to include Math, Science, RWSL, and CEW
Equipment list-major equipment
Assessment
Certifications/Credentials

Scope and Sequence—include statement of DE credits as "opportunity" (regional)
Articulation Agreement

Approving is through an electronic system and requires extensive data submission that evidences meeting state regulations found at:
http://www.pacode.com/secure/data/022/chapter339/chap339toc.html

Challenges:

- One challenge is the academic achievement levels of career and technical education students compared to students in basic education.
- Second challenge is to address the issues surrounding the part time career and technical centers and the academic coursework students receive.
- Third challenge is to locate resources such as sustained professional development to work with career and technical centers in the area of student academic achievement.

Professional development needs:

- Connecting CTE and high school reform.
- Working with large urban districts.
- Use of data for decision making.

Rhode Island

Accomplishments and Challenges:

- Accomplishment – The state plan is written, endorsed by the Governor's Workforce Board and authorized by the Regents.
- Challenge – The Regents and Governor's Workforce Board will need to come to the table to support career and technical education in unprecedented ways.
- Accomplishment - Rhode Island secured the endorsement of the Board of Regents for a new statewide delivery system for career and technical education. This system will be predicated on a statewide program approval process that includes a new funding application (peer) review, program self assessment and site visit processes.
- Challenge - The challenge to the new design is that the cost implications for funding all students at +1.25% and transitioning all CTE centers into full day schools that the governor and legislature cannot consider. Rhode Island has a $150 million deficit this year and anticipates a $300 million deficit for next year.

- The Rhode Island Department of Education has been restructured with Career and Technical Education now coupled with Adult Education.
- The challenge to this organizational change is to make sure that CTE and state's High School Reform remain connected.
- Accomplishment/Challenge - The CTE community is moving ahead with programs of study and RIDE has established annual goals for local recipients to implement programs of study (see below).

  CTE regions must increase the percentage of funds requested for programs of study according to the following schedule for the 2008 – 2013 academic years. Note that the listed percentages are approximations due to the variance in size and number of programs among the CTE regions. Note also that CTE regional leadership should work with CTE schools, centers, and comprehensive high schools to support the development and increased number of approved programs of study as the main recipient of Perkins funds.

Academic Year	Minimal Percentage of Funding for CTE Programs of Study by Regional Allocation
2008-2009	15%
2009-2010	30%
2010-2011	45%
2011-2012	60%
2012-2013	75%

- Challenge - Data collection and reporting continues to be problematic however RIDE hope to learn and benefit from a technical assistance session provided by MPR Associates as a part of one of OVAE's support to states initiatives.
- Challenge – Technical skill assessments will be impossible for Rhode Island without professional development and collaborating with others – nationally or regionally.

SOUTH CAROLINA

Accomplishments:

- South Carolina has been recognized as one of the fastest growing states in the High Schools That Work network, currently boasting 154 HSTW sites, an increase of 80 sites within the past three years, and added 26 new Making Middle Grades Work sites to increase the total to 88 sites.
- During the 20th Annual Southern Regional Education Board (SREB) Staff Development Conference, South Carolina was recognized as having the greatest percentage of career/technical students earn the Award of Educational Achievement among the 16 SREB states.
- The network continues to rank in the top three SREB states for student academic achievement.
- Over 900 students were recognized in 2006 as having completed the HSTW recommended curriculum that is nationally recognized for its rigor and relevance.
- South Carolina partnered with SREB and the 30 Leadership Institutes, eight in Charleston and 22 others (middle and high schools) along the I-95 Corridor.
- Anticipate the expansion of HSTW sites to all 205 South Carolina high schools by school year 2009–2010.

- Received a health science career cluster partnership grant from the state legislature to increase awareness of the healthcare career options and improve preparation of students entering postsecondary health science programs.
- Created a comprehensive health careers Web site for parents, educators, students, and healthcare partners; www.BeSomethingAmazing.com
- The National Healthcare Skill Standards assessment will be funded for 600 health science concentrators to complete the new online assessment.
- Health Science and Biomedical Program of Study workshop is provided for teacher teams to learn of the new national integrated, interdisciplinary curriculum units that overlay health science into academic subjects.
- Established 6 Project Lead the Way Biomedical Sciences program pilot sites, and will add an additional 5 sites for school year 2008–09.
- Project Lead The Way Pre-Engineering:
    - 138 sites
    - 78 PLTW high school sites (35 certified for dual university credit)
    - 57 Gateway to Technology middle school sites
    - Affiliate University - University of South Carolina
    - 2 LEAs - Orangeburg-Calhoun Technical College and Piedmont Technical College
    - 2 Gateway to Technology recognized middle schools
- Automotive Technology:
    - 20 NATEF Certified Automotive Programs
    - 6 AYES Certified Programs
- Established a pilot Bioengineering and Nanotechnology program with a cutting-edge curriculum and equipment.
- Anatomy in Clay workshops were provided for over 60 Science and Health Science teachers this year. Seven grants for Anatomy in Clay learning systems ere provided to classroom teachers.

Challenges:

Program Perkins Plan innovations/changes:

- South Carolina is planning to fully fund the Reserve and award these funds to eligible recipients based on the number of CTE completers. We feel this will encourage completer programs and better match Perkins funds with CTE students.

Perkins transition challenges:

- Determining **who** to assess, **what** technical skills assessments are available, **when** the resulting data could be reasonably available, **how** we comply with FERPA, how to collect timely data from an outside source, and **how much** this is going to cost.

State Challenges:

- State funding support.
- 35 Career and Technology.

South Dakota

Accomplishments:

- The Office of Career and Technical Education has taken the leadership role for high school reform.
- Career Guidance is and will continue to be a major initiative in the future: "MyLife/Career Clusters"-Programs of Study-Personal Learning Plans…. are currently and will continue to be implemented with Teachers as Advisors.
- State Board of Education and Legislative support.

Challenges:

- Time, staff and funding….
- Data

Programs of Study:

- We have 12 (plus) Career Cluster committees working on:
  - Scope and sequence of courses/per pathway
  - 6-8 common core standards/per course
  - Developing 3-4 Understanding By Design units/per course
  - Integration of Academics
  - Utilization of Technology
  - Committee members represent secondary, postsecondary and industry.

Professional development needs:

- Career Clusters 101.
- Programs of Study/Personal Learning Plan.
- Integration of Academics.

Tennessee

Accomplishments:

- Technology Accomplishments
  - Revised updated website that is user friendly with links to Program Areas and post secondary education. Online data reporting for LEAs Local Plan, an online local negotiation link, online Perkins report card that is incorporated with required components of NCLB, and online links to the adopted career clusters and program of studies.
- Perkins dollars
  - Developed MOU with post secondary to govern the distribution of Perkins dollars. Distributed Rural Reserve Grants. (1.78 million to 28 LEAs.) Distributed grants to Community Colleges and Tennessee Technology Centers.

Challenges:

- Technical Skill Assessments.
- State and Federal funding.
- Program of Study implementation.

Programs of Study:

- State's approach to developing, implementing, and approving POS
- The development was an 18 month process that included post secondary, SDE, LEA, DOL and business input.
- Implementation startup included nine regional roll out sessions and numerous webex sessions.
- Study council meetings, counselors conference, LEAD conference, Building Bridges Conference and numerous other meetings.
- Approval through presentation to the Commissioner of Education and the State Board of Education.

Professional development needs:

- Effective teaching skills.
- Effective academic integration.
- Effective use of data and technology.

TEXAS

Accomplishments:

- Completion of State Plan – including 6 Public Hearings and SBOE approval
- Perkins eGrant system for local application and accountability
- New CTE State Leadership Projects:
    - CTE State Recruitment and Retention Conference.
    - CTE Leadership Academy for Local Administrators, Counselors and Federal Grant Administrators.

Challenges:

- Technical Skill Attainment performance measure.
- Revision of secondary state standards for CTE based on the 16 career clusters and integrating the new Texas College Readiness Standards.
- Vertical alignment of secondary and postsecondary technical programs and developing and implementing quality Programs of Study.

Professional development needs:

- Developing rigorous, relevant CTE courses, state standards, and curriculum - based on the National Career Clusters.
- The effective use of data to improve student performance and drive funding priorities.
- Moving CTE to the 21st Century!

UTAH

Accomplishments:

- Career Pathways (Programs of Study) development, implementation, and awareness activities.
- CTE Technical Assessment/Skill Certification available for all courses and pathways in an on-line delivery format.
- Perkins Plan development, state and regional planning, and initial implementation.

Challenges:

- Increased graduation requirements in math, science, language arts, computer technology, and personal financial literacy decrease ability for student participation in CTE programs.
- Guidance counselors to student ratios are extremely high making it difficult to provide quality student career and education planning.
- Post-secondary education's role and mission in providing CTE programs within two similar and competing entities (the applied technology college campuses and Utah's other community colleges).

Programs of Study:

- Utah began with the national 16 career clusters and pathways and developed a crosswalk to existing CTE pathways in Utah. Secondary pathways were identified, developed and then articulated to every post-secondary institution in the state. A High School to College and Career Pathways Educators Guide was developed and staff development activities have occurred to begin the implementation process.

  The Tech Prep regions have shifted to Pathway Regions with a pathway coordinator hired in each region with responsibility for building articulated pathway maps to post-secondary programs and to provide training and awareness. Over 7,000 educator guides have been distributed to counselors, teachers, administrators, and policy makers through planned staff development activities. The Pathway information is accessible on line for students and parents.

  Utah Pathways (Programs of Study) Overview:

  - 8 Areas of Study, with 62 Pathways
  - 190 articulated pathways to post-secondary CTE programs within 9 post-secondary institutions
  - 57,000 credits of concurrent enrollment generated by high school students annually with approximately 30,000 of those credits in CTE
  - Nine regional pathway consortia
  - Developed crosswalk of national clusters
  - Developed High School to College and Career Pathways Educators Guide http://www.schools.utah.gov/cte/pathways_publications.html
  - Pathways available on the web http://www.schools.utah.gov/cte/pathways.html
  - Pathway DVD and print materials developed

    http://www.schools.utah.gov/cte/pathways_development.html
  - Staff development activities for over 5,000 counselors, CTE teachers, and academic teachers
  - Presentations to school boards, chamber of commerce, post-secondary institutional councils, industry advisory committees, Utah Legislature, State School Board, Board of Regents, etc.
  - Parent and Student Guide to Pathways- June 2008
  - Post-secondary Guide to Pathways - May 2008
  - Integrated Career Information Delivery System (Choices) available for all schools and all citizens in Utah at www.careers.utah.gov
  - All 7th graders take "CTE Introduction" which introduces Pathways
  - All 8th graders are required to develop a Student Education Occupation Plan for high school

- While in high school students are required to update and maintain and a Student Education Occupation Plan which integrates the High School to College and Career Pathways

Professional development needs:

- Fostering Workforce Development initiatives with CTE as a major player.
- Providing effective leadership in the many political arenas in which we are involved.
- Resources and tools in print, media, and web formats that inform others and promote CTE.

VERMONT

Accomplishments:

- Established a State-wide CTE/Perkins Advisory Board comprised of secondary, postsecondary educators, VT DOE and business/industry representatives.
- Developed "high skill, high demand, high wage and emerging occupations" methodology and State listings of pathways.
- New high school transformation project, collaboration with Maine, NH, RI and VT.

Challenges:

- School finance formula to encourage CTE participation.
- Establish clear role for CTE in high school transformation.
- Provide professional development for teachers/administrators to facilitate high quality teaching and assessments.

Programs of Study:

- Vermont established a State-wide Perkins Advisory Board consisting of educators from secondary regional centers, postsecondary eligible recipients and Department of Education representatives. We intend to add business and industry representatives and students to this board. The board will serve as an advisory body to inform VT DOE regarding various aspects of Perkins IV implementation, including Program of Study development. A collaborative team of VT DOE, Community College of Vermont and Vermont Technical College staff attended the Program of Study workshops last summer, providing a good common understanding for this process. It is our intention to utilize input from State-wide Skill Standards Councils in aspects of this development project.

Professional development needs:

- Providing professional development to fully implement CTE strategic plan.

VIRGINIA

Accomplishments:

- Establishment of criteria for Governor's Career and Technical Academies and awarding of National Governor's Association Stem Grant to implement STEM through Career and Technical Education.
- Resolution passed by the Virginia Parent Teacher Association to support CTE, career clusters, career pathways, and career assessments. Collaboration with state officers for the development of "tool kits" for elementary and middle school parents/students. Working with state PTA Education Committee to assure that Career and Technical Education information is a strong component of their proposed parent orientation for students entering school.
- Addition of Industry Credentials and CTE Completer information to the State, Division, and School Report Card.

Challenges:

- Technical Skills Assessments.
- Program of Study implementation.
- Secondary and Postsecondary Collaboration.

Programs of Study:

- The process began 18 months ago as a collaborative effort between the Virginia Department of Education, Virginia Community College, and business/industry representatives to form committees to develop sample programs of study for each cluster area.
- Initial process was halted by the Virginia Community College system and resulted in the development of only two state-wide samples in Information Technology and Manufacturing.
- Process was incorporated into Perkins Local Plan Application giving local school divisions the ability to locally develop programs of study to submit to the Virginia Department of Education for approval and the Virginia Community College system also implemented a similar process with community colleges.
- Program of study templates are being revised as we progress to assure we meet the needs of students, Virginia regulations/guidelines and Perkins law.
- Virginia Community College system held a training conference for Career Pathway teams that represented all 23 community colleges.
- Virginia Department of Education held a "Train-the-Trainer" workshop with Gene and Ann Benson as coordinators to train state staff, Virginia Community College representatives, and the CTE Curriculum Resource Center staff in the development and implementation of programs of study.
- Regional training for local administrators and counselors on the development and implementation of programs of study is in the planning stage.
- Governor Kaine requested that the following requirement be included in the proposed Regulations Establishing Standards for Accrediting Public Schools in Virginia. (portions underlined)
- 8 VAC 20-131-140. College and career preparation programs and opportunities for postsecondary credit.

Beginning with the 2008-2009 academic year, all middle schools must develop and maintain a personal Academic and Career Plan for each seventh- and eighth-grade student that includes specific components established by the Board. Beginning with the 2010-2011 academic year, students who transfer into a Virginia school after their eighth grade year must have an Academic and Career Plan developed upon enrollment. The components of the Plan shall include, but not be limited to, the student's educational goals and program of study for high school graduation and a postsecondary career pathway based on the student's academic and career interests. The Academic and Career plan must be developed and signed by the student, student's parent or guardian, and school official(s) designated by the principal. The Plan will be included in the student's record and must be reviewed and updated, if necessary, before the student enters the ninth and eleventh grades. The school will have met its obligation for parental involvement if it makes a good faith effort to notify the parent or guardian of the responsibility for the development and approval of the Plan.

The Virginia State Board of Education approved this request and the regulations are moving forward in the approval process.

Professional development needs:

- Effective academic and CTE integration.

- Effective use of data and technology, follow-up of students beyond one year out of secondary.
- Effective ways to enhance/develop collaboration between secondary and postsecondary institutions/agencies.

WASHINGTON

Accomplishments:

- At the 2007 Washington Association of Career and Technical Education conference, a panel of educational leaders discussed the desire and merits of comprehensive secondary CTE legislation. The panel consisted of the Superintendent of Public Instruction, the Executive Director of the Workforce Training and Education Coordinating Board, and key legislators from the Senate and House Education Committees. These leaders agreed to move forward with comprehensive legislation for secondary career and technical education. 2SHB 2826 and 2SSB 6377 (Comprehensive CTE Programs) passed unanimously out of each body and will go to conference committee in the next few weeks. Highlights of these bills include the following: Requires the development of a schedule for CTE plan re-approval; Requires the development of a list of statewide high demand programs for secondary CTE; Requires specified minimum criteria for all secondary preparatory CTE programs; Requires state-established performance measures and targets and the monitoring of such; Provides grants to middle and high schools and skill centers to develop or upgrade high demand CTE programs; Requires the development of model CTE programs of study; Requires community and technical colleges to create articulation agreements with high schools and skill centers to offer dual high school and college credit for secondary CTE courses; Creates the secondary integrated basic education and skills training (I-BEST) pilot project to integrate CTE, core academic and basic skills, and English as a Second Language for secondary students; Creates the In Demand Scholars Program to attract high school students into high demand fields; and Directs the Superintendent to conduct a feasibility study to create technical high schools.
- The State Board for Community and Technical Colleges sponsored Pathway meetings last year and again this year to link the colleges to secondary CTE. This effort recognizes the movement towards Programs of Study and the connections with workforce training, Adult Basic Education, and English as a Second Language.
- The Workforce Training Board, in preparing the Perkins Five Year Plan, has successfully brought together secondary and postsecondary state and local CTE and workforce education and guidance representatives. Committees for Programs of Study and accountability were formed. The state's Interagency Committee, with representation from business and labor, higher education, workforce training and services (including Worksource and the Workforce Development Councils), economic development, private career colleges, agencies serving the blind, people with disabilities, and needing vocational rehabilitation, and the apprenticeship community, is also weighing in on Perkins IV.

Challenges:

- A continued challenge is ensuring that CTE exploratory and preparatory courses remain a viable option to all secondary students, in light of the increased emphasis on the state's academic performance requirements. Many secondary students are losing the opportunity to pursue CTE because they are required to take additional academic coursework in order to pass the required proficiency exams and CTE programs at many high schools are increasingly closing. Related to this is the movement of many high schools to focus more on AP and baccalaureate preparation.
- Teacher recruitment and retention remains a big challenge for us. Many teacher education programs have terminated their offerings for CTE instructors and we continue to lose instructors in key CTE areas to private industry.

Professional development needs:

- We are interested in bringing together our secondary and postsecondary CTE and workforce education administrators to identify mutual needs and to work together to eliminate the barriers that students encounter as they transition between the two systems. Alignment between the two is more critical than ever, especially with dwindling resources. We hope to facilitate an opportunity to connect the two existing associations (WA ACTE and WAOE) that address either secondary or postsecondary CTE issues and conduct a single session that includes both.
- We need to increase the knowledge, understanding, and utility of accountability and performance measurement and target-setting at the local level.
- We need to continue to emphasize the role and contributions of comprehensive guidance and counseling that includes information on labor market trends and opportunities and assistance in course selection to assist with career planning and preparation.
- We need additional professional development opportunities that focus on getting the message of the value and necessity of CTE to building administrators, principals, and superintendents.

West Virginia

Accomplishments:

- Revised all of the CTE Content Standards and Objectives to reflect increased rigor and 21st Century Skills.
- Aligned the CTE concentrations with the National career pathways, including provisions for college credit for core CTE courses.
- Acquired a new on-line testing platform for administering the end-of-course tests for core CTE courses, including an on-line accountability and data profiling system for all LEAs.

Challenges:

- Finding the right balance of academic rigor, soft skills and technical competencies within CTE programs of study that would allow a student to successfully transition to postsecondary education or the workforce.
- The availability of postsecondary technical offerings within the community and technical colleges that would allow a secondary CTE completer to acquire advanced training related to their career concentration.
- Dispelling the mindset that all jobs or careers that offer meaningful employment and a comfortable standard of living require a college degree, particularly when there is a critical shortage of skilled workers needed in the economy.

Professional development needs:

- Project Based Learning.
- Technology Integration.
- Assessments for Learning.

Wisconsin

Accomplishments:

- Shifting Gears Initiative/RISE: In partnership with the Wisconsin Department of Workforce Development, the WTCS was awarded a two-year grant of $1 million as part of the Joyce Foundation's "Shifting Gears" project. The focus of this employment policy initiative is to build a better educated,

more competitive workforce through an emphasis on achieving cross-cutting systematic policy improvements. In Wisconsin, the Joyce Foundation award is funding a project called "Regional Industry Skills Education" or RISE, which began in January 2007, and is now beginning its second year. RISE project goals are continuing to focus on creating and strengthening postsecondary adult career pathways and transitions from adult basic education to postsecondary career pathways. Because the focus of the Joyce Foundation is systematic policy and process change, RISE is tackling challenges such as: coordination at the local, regional, and state level; engaging employers; narrow policies and program rules; innovative formats for delivering services; and scarce resources for new program planning and operation. While the WTCS and Wisconsin Department of Workforce Development (DWD) are the lead agencies for RISE, other state partners include the Wisconsin Department of Public Instruction (DPI) and the Center on Wisconsin Strategies housed at the University of Wisconsin-Madison. Regional and local partners include technical colleges, workforce development boards, employers and labor, community-based organizations and social service agencies.

- Workforce Advancement Training Grants: Through workforce training, Wisconsin's technical colleges provide the state's workers and employers with the competitive edge they need to be successful in today's global economy. Wisconsin's Workforce Advancement Training Grants promote increased investment in the development of incumbent workers and expand technical college training services to help businesses and industry meet their training needs.

  Funding available through this program enables technical colleges to offer targeted job training for the current workforce. This training is designed to upgrade the skills and productivity of employees of established, for-profit businesses and industries operating in Wisconsin to support regional workforce and economic development efforts. During the first two years of operations, the Workforce Advancement Training Grant program has provided $2 million for more than 90 employers to train nearly 12,000 incumbent workers across the state.
  When asked about their experience with the program in its first year of operations, 100% of the employers who participated in the program indicated that the customized training improved employee skills. On other key indicators, these employers reported:
  - Employer satisfaction with the program (97%);
  - Improved work environment (89%);
  - Cost savings to their operations (74%);
  - Reductions in employee turnover (48%); and
  - Planning to return to the technical college to meet future training needs (97%).

  WTCS received additional funding in the state's 2007-09 biennial budgets to continue to support this program.

- Completion of new Perkins IV State Plan: The Perkins plan is in the final stages of development. The plan more closely integrates secondary and postsecondary projects and ties funding categories to needs for improvement in core Perkins indicators of performance.
  - The plan identifies four priorities for the use of postsecondary Perkins funding:
  - Strengthening Career and Technical Education Programs;
  - Achieving Student Success;
  - Assuring Access and Participation in Nontraditional Training Occupational Employment; and
  - Promoting and Supporting High School to College Transitions for Career and Technical Education Students.

- Implementation of Prepared Learner Initiative: During the past five years in the WTCS, there have been over 115,000 student enrollments – 22,000 or more per year – in remedial and developmental coursework. Most two-year colleges across the nation require placement in remediation as indicated by assessments, but in Wisconsin technical colleges, the practice is very limited. These enrollment figures represent only a fraction of the students who need remediation.

  The initiative represents a rethinking of the open enrollment philosophy under which the technical colleges have always operated. The WTCS is committed to continuing to offer broad access to postsecondary education and training to Wisconsin residents. However, under this initiative, we are redefining our obligations to the students who take advantage of this access. This initiative expands our concerns as open enrollment institutions beyond simply making our programs readily available to students to also include creating the conditions for all our students, including those who face academic barriers, to experience success in technical college programs. A key component of the plan is to review current practice regarding placement scores and their relationship to course completion.

- Committee on Baccalaureate Expansion: In 2004, the WTCS and the University of Wisconsin (UW) System embarked on a multi-year effort to increase the number of baccalaureate degree holders in Wisconsin. In January 2005, the inter-system committee identified 13 strategies ranging from implementation of new programming and degree options to improvements in advising, counseling, and career guidance and greater state funding for financial aid. Seed money appropriated by the Legislature and the Governor has helped to fund projects to encourage implementation of these strategies and the two Systems are currently in the process of evaluating the next round of projects.

- Agriculture-Science Credit Equivalency Option: This recently completed initiative provides local districts with a method for reviewing the rigor of science content in certain agriculture classes and allows them to request WDPI approval to use certain agriculture courses to meet science requirements beginning with the 2008-09 school year. State Superintendent Burmaster announced this effort February 25, 2008 and further indicated this is just the first in a series of such comparative course content reviews and will be followed by technology education courses next. Additional information regarding this effort can be found at: http://dpi.wi.gov/eis/pdf/dpi2008_30.pdf.

- Business Friends of Education: State Superintendent Elizabeth Burmaster announced nine Business Friends of Education Awards in conjunction with the 72nd annual Wisconsin Association of Career and Technical Education Conference held February 28-29 in Stevens Point. See http://dpi.wi.gov/eis/pdf/dpi2008_41.pdf.

- Secondary Perkins Implementation Work Group: This statewide team of secondary and postsecondary was established for the purpose of providing feedback to the WDPI CTE Team on the implementation of Perkins IV at the secondary level. Key issues identified to work on include data collection; application improvement; WDPI communications and information sharing process, implementation of Programs of Study, Technical Assistance design and professional development plans.

- Career Interest Assessment for All School Districts: The WDPI is continuing its financial and professional development support of the Wisconsin Career Assessment (WCA) to all school districts. The WCA is a career interest assessment available free to all 8th and 10th graders in participating schools. See http://dpi.wi.gov/oea/pdf/wca_admin.pdf

- STEM Initiatives:
  - The State Superintendent has received funding for a STEM initiative through the state biennial budget. Local district applications have been received and reviewed with 13 of 36 applications being recommended for funding. Projects were to address achievement and participation gaps in science, technology, engineering, and math (STEM) and in career pursuits regarding these fields.
  - Great Lakes Girls Collaborative Project: Wisconsin will continue as a proud partner of the Puget Sound Research Center in implementing a STEM related, NSF supported project called the National Girls Collaborative Project.
  - Project Lead the Way Evaluation Project: The DPI, the Kern Family Foundation, Project Lead the Way (PLTW), and the Center on Education and Work at UW-Madison have been collaboratively designing an evaluation system for PLTW projects in Wisconsin that could be adopted or adapted by PLTW projects in other states.
  - Wisconsin is one of five states to be in the first cohort of the STEM Equity Pipeline Project, developed by the National Alliance for Partnerships in Education Foundation and funded by the National Science Foundation.
- Secondary CTE Data Portal Pilot Project: Career and Technical Education staff and Longitudinal Data Systems staff within the department have been creating a data portal that will eventually be used by local programs and their partners to make data-based decisions about career and technical education program quality and focus on improvement efforts.

Challenges:

- Future state funding: The WTCS is funded through a combination of federal, state, local, and user fees. Despite increases in the number of students served, flat state funding for the last eight years, coupled with strong growth in FTEs and increased costs, has caused the technical college districts to rely on increased property tax levies and student fees. Revenue from student program and material fees now exceeds the state's investment in postsecondary career and technical education. The increased reliance on property tax revenues has brought increased calls for levy caps and freezes, as well as governance challenges.
- Staffing**:** The technical colleges rely on experienced faculty to deliver world class career and technical education. As Baby Boom retirements near, almost half of the technical college faculty is eligible for retirement, creating potential difficulties as the colleges compete with business and industry for skilled workers to fill the teaching ranks. At the same time, recruitment of administrators is made difficult because the increased responsibility comes with few monetary rewards and less job satisfaction for those who chose two-year college teaching careers.
- Looming challenges in recruiting new faculty and administrators: Aging baby boomers are creating a growing number of retirements in the WTCS, both among instructors and administrators. These retirements provide opportunities to renew the workforce and develop a new generation of leaders, but also represent a loss of institutional memory and the accumulated skills and knowledge of the System's world-class workforce.
- Future alignment of data systems across education systems: In order to meet accountability requirements of Perkins IV and evaluate education reform efforts, a continuing need to align data systems will be necessary. The influence of employment and training perspectives on national accountability systems may complicate the development of accountability systems that work best for educational purposes.

- Meeting the changing needs of business and industry: Rapid changes in technology must be matched with changes in the career and technical education services the colleges provide. Business is pressing for new programs in new and emerging fields and for the more efficient delivery of career and technical education and training. Colleges must make choices about what new programs to develop, how to deliver these programs to meet the needs of students and employers, and where to find instructors who can provide cutting edge competencies needed by business and industry.

Programs of Study:

- Perkins IV requires the state to identify programs of study that may be adopted by local education agencies and postsecondary institutions to be offered as an option to students (and their parents as appropriate) when planning and completing future coursework, for career and technical content areas. As a framework for its identification of programs of study, Wisconsin has adopted the 18 career clusters and 81 pathways identified as part of the national Career Clusters Framework funded by the U.S. Department of Education.

  The programs of study adopted by Wisconsin incorporate secondary and postsecondary education elements by classifying each postsecondary technical college program into one of the 16 career clusters and the pathway within the cluster. The development of a complete program of study requires cooperation between the secondary recipients and technical college district or 2- or 4-year university partner to incorporate both secondary and postsecondary educational elements as described in the model.

  Career Pathway Program of Study developed as part of the national Career Clusters Initiative. By adopting the model Career Pathway Program of Study framework, the state will ensure the secondary recipients work collaboratively with appropriate postsecondary partners to adequately prepare students to succeed in postsecondary education.

Professional development needs:

- Adult education and career pathways.
- Technical skills assessment.
- Accountability.

WYOMING

Accomplishments:

- Over the past year we have experienced resounding support for New Directions for High School Career and Technical Education in Wyoming—a Strategic Plan, the study completed by MPR Associates. It has been introduced into the 2008 Wyoming legislative session as a Joint Education Interim Committee bill and we expect to receive funding for the first two years of implementation.
- A single-sign on solution and identity management system or portal, "Wyoming Education Fusion" is being launched and will house the Lifelong Career Guidance model. This model is a collaborative vision of Wyoming higher education, K-12 education and others. It is premised on the career clusters and offers four components: 1) Exploring Career Options, 2) Career Training, 3) Online Career Options, and 4) Planning for Careers. Eventually, all citizens will be able to create their own Individual Learning Plans and career guidance scenarios via this website.
- Wyoming's P-16 Education Council was created and has made notable advances to include the State Scholars' Initiative.

Challenges:

- Implementing the Perkins IV Five-Year Plan in lock step with the above mentioned CTE legislation recognizing the climb the CTE technical skills assessment component will be.
- Modernizing the CTE teacher certification process with our state's Professional Teaching Standards Board.
- Providing the leadership, expertise and professional development necessary to make integration of CTE and other courses a common practice.

Programs of Study:

- Wyoming has identified each career cluster as a program of study area. Multiple career pathways can be created within each program of study area. For the past five years, the state legislature has financially rewarded school districts for establishing course sequences of three courses or more within a career cluster or program area that lead the students to the workforce or high level skills attainment.

  The course sequences in the state program must be approved by the Wyoming Department of Education to receive the additional funding which is awarded through the school funding model.

  Our Perkins IV plan requires that secondary and postsecondary institutions to develop programs of study via courses that are sequenced [like in our state program] and lead the student to the workforce of higher level skills attainment. The only difference between the state's program and the federal program is Perkins IV allows a core course to be one of the three courses in a sequence.

  The Perkins team at WDE will approve district and postsecondary programs of study via our consolidated grant approach and a newly established e-grant system.

Professional development needs:

- How to provide top notch technical assistance and monitoring of Perkins IV in the school districts and community colleges.
- Present ways of developing and providing statewide scholarships in CTE to high school students that are both merit and needs based. These could be both legislated and private, non-profit organizational concepts.
- Continue to invite successful corporate types to the annual meetings to present their beliefs and expectations of employee performance. We are very interested in learning about successful "externships" for teachers that are truly meaningful and not shallow like job shadowing for high school students.

If you have questions about the 2-Minute Roundup entries, please contact Ramona Schescke at rschescke@careertech.org or call the NASDCTEc office at 202-737-0303.