2009 CAR NARRATIVE

1. **Implementation of State Leadership Activities**

Summary of PDE/BCTE State Improvement Activities
The focus of activities has been on ensuring CTE students are academically and technically ready for college and that postsecondary CTE graduates exit with appropriate skills and certification. The Agency provides technical assistance to low performing recipients.

The Bureau of Career and Technical Education's Program of Study (POS) initiative shortens students' college time and saves parents money when secondary CTE graduates enroll in the postsecondary portion of the POS. Secondary students in a PDE approved POS are prepared academically and occupationally to be college ready and to enter the workforce.

The Bureau has designed new components for the PA POS curriculum framework for schools to implement a seamless curriculum pathway for students and to encourage them to obtain advanced college credits at the postsecondary level. The Bureau has developed components for each of the POS career pathways which include:

- Aligning POS programs with High Priority Occupations (HPO),
- Validating competency performance tasks lists,
- Providing crosswalks to the 11th grade PA academic standards and related eligible content,
- Standardizing POS statewide articulation with postsecondary institutions;
- Aligning the secondary assessments to the POS performance task lists.

Applications for receiving career and technical program approvals, schools must submit online the following frameworks for POS approval that will show continuous improvement of Perkins program indicators.

1. **Contracting**: Every Perkins contract must state in their Perkins Plan how they will implement POS into their schools and consortiums.
2. **Approval:** BCTE now has an online POS Program Approval Process for local schools to receive CTE program approval to operate their POS at their local schools. Each program has criteria that it must follow in order to receive approval which includes the POS statewide validated task list, scope and sequences of courses, academic alignment, and state aligned assessment.
3. **Implementing**: Schools have been monitored to ensure that they are following their Perkins and T-P Plans. T-P Consortiums assist schools with implementing POS as part of their contracts.
4. **Statewide Articulation**: PDE has approved a process for all Perkins secondary and postsecondary recipients where students receive 9 college transfer credits. (See articulation section for additional information)
5. **Assessment:** Currently the Bureau is reviewing each assessment to ensure alignment with POS. (See assessment section for additional information)

The Bureau has been developing POS for all Pennsylvania defined high priority occupations (HPO). Below are the three phases of development.

Phase I – 2007-08
- Accounting Technology/Technician & Bookkeeping
- Agricultural Mechanization, General
- Carpentry/Carpenter
- Child Care & Support Services Management
- Dental Assisting/Assistant
- Health/Medical Assisting Services, Other
- Welding Technology/Welder

Phase II – 2008-09
- Administrative Assistant & Secretarial Science, General
- Auto body/Collision & Repair Technology/Technician
- Automobile/Automotive Mechanics Technology/Technician
- Commercial & Advertising Art
- Computer Systems Networking & Telecommunications
- Drafting & Design Technology/Technician, General
- Electrical & Power Transmission Installers, Other
- Electrical, Electronic & Communications Engineering Technology/Technician
- General Office Occupations & Clerical Services

- Graphic Communications, Other
- Health Professions & Related Clinical Sciences, Other
- Heating, Air Conditioning, Ventilation & Refrigeration Maintenance Technology/Technician
- Machine Tool Technology/Machinist
- Medical/Clinical Assistant
- Sales, Distribution & Marketing Operations, General

Phase III – 2009-10
- Institutional Food Worker
- Electromechanical Tech
- Computer Technology
- Biotechnology
- Homeland Security, Law Enforcement, Firefighting & Related Protective Services, Other
- Mason/Masonry
- Building/Property Maintenance
- Pipefitting/Steam Fitting
- Construction Trades, Other
- Diesel Mechanics Tech
- Vehicle Maintenance Tech, Other
- Cabinetmaking & Millwork
- Logistics, Materials & Supply Chain Management

Marketing Strategies to Implement POS

A marketing strategy is under development and is called SOAR—Students Occupationally and Academically Ready. The strategy reaches a number of audiences and includes students, parents, counselors, secondary educators, postsecondary faculty, business and community based organizations.

As of this date there have been 215 POS (103 schools) approved throughout the commonwealth.

In addition, a Technical Assistance Program (TAP) was fully implemented to provide sustained support to non-performing LEA's identified through data collected on the Department's unified

data collection system entitled the Pennsylvania Information Management System (PIMS). The TAP includes sustained professional development in the areas of guidance, literacy, numeracy, leadership and special education. Forty-two schools are participating in the TAP.

a. Required Use of Funds:

- **Conducting an assessment of the vocational and technical education programs funded under *Perkins IV*;**

The Program Standards and Quality Assurance Division continued in its' efforts to conduct approved program evaluations in career and technical centers and school districts throughout the commonwealth. During the 2008-2009 school year 30 schools offering approved CTE programs were visited. Schools provided reports that document progress on areas requiring corrective actions. The goal is to insure that all applicable regulations governing the offering of CTE, namely Title 22, Chapter 4 Academic Standards and Assessment, Chapter 339, Vocational Education Standards and Perkins IV are being implemented. Particular emphasis was directed toward insuring that end-of-program testing was being utilized and that instructional staff are insuring that academic skills as well as occupational expectations are being addressed. Plans are currently being developed to conduct program evaluations for all previously approved vocational education programs to insure that all CTE programs are re-approved at intervals of no more than five years as outlined in state regulation.

- **Developing, improving, or expanding the use of technology in career and technical education;**

For 2008-09, the Bureau of Career and Technical Education approved Equipment and Curriculum grants in excess of $1.3M. The funds expanded the use of technology in CTE programs. The focus of the grants was on increasing academic proficiency, technical skill attainment, and increased industry aligned certifications. Postsecondary programs utilize Perkins funds to purchase state-of-the-art equipment to support postsecondary CTE programs leading to a credential, certificate or degree in high skill/wage/demand occupation as defined by the Pennsylvania Department of Labor and Industry.

- **Offering professional development programs, including providing comprehensive professional development (including initial teacher preparation) for career and technical education teachers, faculty, administrators, and career guidance and academic counselors at the secondary and postsecondary levels;**

Professional Certifications

The Pennsylvania Department of Education's Bureau of Career and Technical Education developed and implemented a CTE teacher and administrator certification program through contractual agreements with three state universities. Each university formed a Professional Personnel Development Center. The Centers were established and approved by the Pennsylvania State Board of Education on July 1, 1978. The Centers are located at Indiana University of Pennsylvania, Pennsylvania State University and Temple University. The mission of each Center is to provide comprehensive regional personnel development opportunities that are specifically designed to prepare and update career and technical teachers, administrators and support personnel. During 2008-2009, the Centers provided pre-service and in-service

professional personnel development services for approximately 1,200 and 7,429 career and technical educators respectively.

Annual Conference
The Seventeenth Annual Conference on *INTEGRATED LEARNING: THE SCHOOL-TO-CAREER CONNECTION* was held November 12-14, 2008. This annual conference is conducted by the Pennsylvania Department of Education, Bureau of Career and Technical Education. This Conference is designed to share successful strategies that encourage the implementation of educational initiatives to enhance learning opportunities for all students. These initiatives focus on interdisciplinary approaches that include the identification of effective practices, business linkages, partnerships, career pathways, assessment, workforce development and instructional strategies for lifelong learning. Three pre-conference workshops were offered: *Engaging Learners in the 21st Century*, *Leveraging the HSTW Assessment: The Role of Data in School Improvement* and *Developing a Skilled Workforce by Embedding Math in Career and Technical Education Programs.*

Topics addressed at the conference included:
- Academic Rigor
- Academic Integration
- Best Practices
- Educational Leadership
- Improving Literacy
- Instructional Strategies
- Integrated Curricula
- Successful Partnerships

- World Class Workforce

Related Strands at the conference included:
- Program of Study
- Technical Center That Work
- Special Education
- Career Development
- Nontraditional

Indiana University of Pennsylvania– $26,000
The Center for Career and Technical Personnel Preparation at Indiana University of Pennsylvania was established in response to the stated objectives of the Pennsylvania Bureau of Career and Technical Education for a comprehensive program to prepare and upgrade teachers, support personnel and administrators of career and technical education in area technical schools and comprehensive high schools in western Pennsylvania.

Penn State University, Greater Allegheny – $181,000
PSU Greater Allegheny continues an initiative to design and implement a quality management system for career and technical schools. In this fourth year of this project, selected schools offering career and technical education programs in Pennsylvania will begin the process of developing a quality management system utilizing the International Standards for Quality (ISO 9000). The center promotes educational reform through the development of a quality performance system to ensure accountable and continuous improvement.

PSU Greater Allegheny provided leadership in promoting educational reform through statewide technical assistance and in-servicing to career and technical and academic instructors, administrators, support personnel and others so that they could acquire the knowledge and skills needed to ensure that all secondary and adult career and technical students, including special populations, become contributing members of the workforce and productive citizens .

Temple University – $26,000
Temple University used funds to ensure that the vocational teacher certification tests reflect current technical and workplace practices and meet Pennsylvania teacher certification requirements. The tests are scheduled for periodic review and verification by incumbent workers and teachers from the commonwealth who are employed in or teach the occupation. The review and verification includes an examination of a test's psychometric qualities and can include setting/resetting appropriate passing/cut scores.

Pennsylvania State University – $24,883
As part of Pennsylvania's certification of vocational teachers, candidates must successfully complete an evaluation of their occupational competence. PSU administers valid and reliable testing instruments that are available from NOCTI. Where such tests do not exist, a candidate's mastery of the occupational content is assessed by a panel of content experts. The university is responsible for assembling such panels.

Providing support for career and technical education programs that improve the academic and career and technical skills of students through the integration of academics with career and technical education;

Industry Certifications
In support of BCTE's strategic plan, the Adult and Postsecondary CTE Division continues to research and recommend those industry certifications that are appropriate for Career and Technical Education (CTE) students to earn as they prepare themselves for high-skill, high-wage, and high-demand occupations. Industry certifications earned by students are an indication that Career and Technical Education programs are aligned to 21st century requirements of a specific industry. New industry recognized student certifications were added to the list of reportable certifications for 23 CTE programs as the 2009-2010 school year began. In some cases, these new certifications are the first ones identified for a specific CTE program. The numbers of students earning certifications should increase as a result of providing more reporting opportunities for CTE programs. Updates to the certifications listing continue to be made as industry standards evolve and government regulations change.

One example of the BCTE commitment to certifications is the OSHA training which has been subsidized by the BCTE for the past 6 years. OSHA training provides CTE instructors with the knowledge, skills, and credentials needed to train their own students in workplace safety habits and practices. This year's class included members of the original group of instructors who first received OSHA training through this program in 2005. These individuals were re-taking the classes to be re-certified and updated on changes in regulations and procedures for safety in the workplace. Attendees represented all parts of the state. Six instructors from the State Correctional Institution system also participated.

Industry certifications involve a significant commitment in time, effort, and funding on the part of schools. As the Bureau works towards its goal of aligning all CTE programs with industry standards, these industry certifications are evidence of the efforts being made by CTE professionals across the state in support of that goal.

Technical Content of CTE Programs

PDE has been working on ensuring that the programs run by the career and technical centers are aligned with the CIP codes adopted by the Bureau of Career and Technical Education. In doing this, BCTE has been working with the CTC's in revising the CIP code descriptions and certifications required for instructors teaching the program. The following updates have been made:

- Added a Construction/Heavy Equipment/Earthmoving Equipment Operation CIP
- Added a Barbering CIP
- Mirrored instructor certification requirements for Cosmetology and Barbering to meet State Board of Cosmetology requirements
- Changed Pipefitting/Sprinkler Fitter CIP to Plumbing CIP
- Changed Diesel Engine CIP to Medium/Heavy Vehicle CIP
- Revised teacher certification requirements for the following CIPs
  o Veterinary/Animal Health Technology/Technician & Veterinary Assistant
  o Medical/Clinical Assistant
  o Health Professions & Related Clinical Sciences, Other
  o Health/Medical Assisting Services, Other

We are reviewing the upcoming CIP changes as set forth by the US Department of Education to be implemented in the 2010-2011 reporting year. Changes will include: CIP title changes, CIP number changes, CIP description changes and the addition/deletion of CIPS. There are approximately 10 PA CIPs which will be affected by these changes. We will be working with the appropriate groups to properly implement these changes for PA.

Academic Alignment through the Standards Aligned System

Standards Aligned System is being developed in the state of Pennsylvania because research supports the notion that great schools and school systems tend to have the same six common elements. Those elements are: (a) clear standards, (b) fair assessments, (c) curriculum framework, (d) instruction, (e) resources and (f) interventions. Pennsylvania standards describe what students should know and be able to do and reflect the increasing complexity and sophistication that students are expected to achieve as they progress through school. The Assessment Anchors clarify the standards assessed on the state mandated academic assessment and can be used by educators to help prepare their students for the PSSA. We use the metaphor of an "anchor" because we want to signal that the Assessment Anchors anchor both the state assessment system and the curriculum/instructional practices in schools. A curriculum framework specifies what topics are to be taught at which grade levels for each subject in the curriculum. At any given grade level, the topics that are taught are those-and only those-that are needed to provide the foundation for what comes next. In Pennsylvania, we are developing curricular frameworks that are built by identifying standards, anchors, big ideas, concepts, competencies, essential questions, academic vocabulary, and exemplars. The Commonwealth of Pennsylvania has provided the following guidance to districts and schools when selecting research validated instructional materials: evaluated in comparison to a randomly assigned or matched control group; in studies of at least one semester, involving

multiple schools; found to improve achievement significantly better than the control treatment; and published in a peer-reviewed journal.

Academic Best Practices
BCTE's Best Practices website annually highlights: integration of academics into technical program content and special education practices to assist CTE staff with student IEP's to improve student academic achievement. The Conference on Integrated Learning the School to Career Connection (ILC) has concurrent sessions that are applicable to secondary and postsecondary Perkins recipients. The sessions are focused on academic/technical integration, career education, Tech Prep, Programs of Study, special education and nontraditional. See the earlier section for details on the ILC.

Math Council
The Bureau has established a Mathematics Council to develop academic and technical instructor resources that align eligible Pennsylvania academic content in mathematics to career and technical education program competencies. The committee is a statewide committee comprised of mathematic and technical instructors.

The committee used Pennsylvania 11th grade Math eligible content to align to the 10 program of study tasks. The alignment of eligible content to the CTE tasks provided the opportunity for mathematics and CTE teachers to work together to identify where math intersects with CTE concepts and applications. To reinforce PSSA test taking strategies, the instructional resources were aligned to PSSA test format and vocabulary. Students benefit from this team process by having math concepts and vocabulary taught in the CTE program and mathematics instructors benefit by learning and utilizing technical language in the mathematics classroom. Research shows that this model has significant impact on student learning in mathematics.

Resources developed by the committee include:
T-Charts
T-charts continue to be developed to "bridge the gap" between CTE and math and can be used by both math and CTE teachers. This resource consists of three components: a T-chart, a script, and practice problems. Each T-chart demonstrates how a CTE teacher teaches the concept covered by the eligible content and how a math teacher teaches the same concept. The T-chart compares the two and identifies the vocabulary associated with the concept. The script that accompanies the T-chart will assist the teacher in bridging the gap between the two by comparing similarities and differences between the two approaches and identifying common mistakes made by students. The practice problems will be set up so that three problems are in context, three are generic applications, and three are in plain math language. The current POS have been aligned to the 11th grade math eligible content standards. An additional 5 program areas are being developed.

Vocabulary Lists
Because we know that pitch (in a math class) means slope and slope (in a CTE class) means pitch, vocabulary lists are being developed for career and technical programs that show the connection between the math language and the CTE language.

Word Problems
Worksheets have been developed which are aligned to the eligible content items and consist of 10 multiple choice questions with one open-ended math prompt. The model gives students the opportunity to practice the math skill in the PSSA format.

Mini-Lessons
These "mini-lessons" have been designed to teach each of the 57 eligible content items related to the 11th grade PSSA. The mini-lessons demonstrate what the eligible content means and how a math teacher would explain the concept to students. These mini-lessons are generic across any career and technical program.

All resources can be found on the Pennsylvania Department of Education website:
http://www.education.state.pa.us

Career Education and Work (CEW) Standards on the Standards Aligned System (SAS)
The Bureau continues to offer training sessions to all schools relative to the Academic Standards. This includes training on the Career Education and Work (CEW) standards. There are 4 major strands to the CEW Standards: (a) Career Awareness, (b) Career Acquisition, (c) Career Retention and Advancement, and (d) Entrepreneurship. The standards are very comprehensive covering all students grades preK-12. The Standards Aligned System (SAS) has a framework to assist teachers to implement the Career Education and Works Standards into the classroom curriculum. The benefits of SAS are to:
- Support the backward design curriculum development model.
- Provide links among all academic standards.
- Provide teachers specific resources to help individual children achieve PA academic skills including the CEW standards.

There are two website that supports this effort:
1. Standards Aligned Systems www.education.state.pa.us
2. Career Education and Work Standards online toolkit www.pacareerstandards.com

- **Providing preparation for nontraditional fields in current and emerging professions, and other activities that expose students, including special populations, to high skill, high wage occupations, except that one-day or short-term workshops or conferences are not allowable;**

The Bureau designed technical assistance specific to nontraditional enrollments. The technical assistance provided to Perkins recipients includes:

- Conduct a one-day STEM workshop at a community college. Presentations were given by a food scientist, 4-H staff on making a windmill and an engineering professor spoke about her profession.
- Update the Perkins/Nontraditional website to provide a compilation of strategies to recruit and retain individuals in nontraditional training programs.
- Present strategies to recruit and retain individuals in nontraditional careers were given at three statewide conferences.

- Citations are made on Civil Rights reviews when there is an under-representation of nontraditional students in high-priority occupations.
- Staff continues to update the Nontraditional Strategic Plan that began via a NASDCTE initiative in June 2008. Members meet quarterly.
- The annual conference for the PA Association of Career and Technical Education Special Populations (PACTESP) offers workshops on nontraditional recruitment and retention.
- The bureau continually renews its membership in the National Alliance for Partnerships in Equity (NAPE) and works closely with the organization.
- Work with individual schools requesting assistance.

- **Supporting partnerships among local educational agencies, institutions of higher education, adult education providers, and, as appropriate, other entities, such as employers, labor organizations, intermediaries, parents, and local partnerships, to enable students to achieve state academic standards, and career and technical skills, or complete career and technical programs of study.**

The Agency supports partnerships in a number of ways and includes partnerships with business and industry and between secondary and postsecondary providers. The focus of the partnerships is on improving student academic and technical skill attainment levels.

Associated Pennsylvania Constructors – The Associated Pennsylvania Constructors Organization is supported by PDE/BCTE to assist with three Pennsylvanian Construction Career Day/Job Fair Events for secondary CTE students. These three events occur in selected locations across the western, central and eastern regions of the state. CTE students who attend these events explore career opportunities in highway design, construction, and maintenance. The students gain information about the highway, bridge design, construction, and maintenance programs, apprenticeship programs, University Level Construction and Engineering Programs in addition to the hands-on activities. Planned hands-on activities include operating heavy equipment, testing materials, surveying, welding, designing a bridge, use of safety equipment, concrete finishing, drilling, rebar tying, estimating a job, use of GPS/GIS information technology, and much more. Small groups of students are escorted by construction industry volunteers who serve as a source of information about the business as well as guides to the activities. Last year, over 1,000 secondary school CTE students attended the Pennsylvanian Construction Career Day/Job Fair Events statewide.

PA Hospitality and Tourism Foundation – The PA Hospitality and Tourism Foundation is supported by PDE/BCTE to assist with the development and distribution of curriculum materials in the Lodging Management Programs in secondary career and technical schools statewide. One of the PA Hospitality and Tourism Foundation events is Culinary Career Days. The Culinary Career Days events are intended to educate and motivate high school level and postsecondary students of the culinary arts. At these events, students can learn of the career path and meet and greet some of the area's finest chefs. Students participate in and observe cooking and dessert demonstrations. Job skills seminars like: Resume Writing Skills - Interviewing Techniques – Your Professional Image- are offered. Also, students can meet with postsecondary schools which offer outstanding Culinary Programs.

PA Automotive Association Foundation – The Bureau supports the Pennsylvania Automotive Association Foundation. They support an annual student competition. The event committee designs five (5) workstations that can include: Automotive Alignment, Electrical Systems, Brake Systems, Waveform Measurement, and Information Systems, additionally, processing a new car delivery with troubleshooting for vehicle faults is typically part of the competition. The ten highest scoring schools in the PAA western and central region areas are determined and select a school team based on the written test scores of the two top students in each school. The top ten schools in the western and central region participate in the PAA Automotive Competition event. The top school team in the PAA Foundation state event attends the National Automotive Technology Competition, which is the auto industry's largest school-to-work initiative, and has the nation's best high school automotive students compete for the title of "America's Top Technician."

The Pennsylvania Partners Organization is supported by PDE/BCTE. PA Partners is the association that represents the regional workforce investment boards. The Bureau supports the annual Employment, Training and Education Conference and has worked with the PA Partners to survey the CTCs and local workforce investment boards (WIB) to gather best practices. The best practices are related to working relationships between the CTC and local WIBs.

POS Development
Development of the Programs of Study has led to increased relations between secondary teachers, postsecondary faculty and occupational advisory committee members. Through this ongoing effort, these representatives have been able to review and discuss sequencing of coursework and alignment of technical course content that is rigorous.

- **Serving individuals in state institutions;**

Annually, 1% of the Perkins program allocation is provided to the state corrections facilities in order to serve youth in Pennsylvania's detention/corrections facilities. The funds support instructional staff at four state correctional institutions (SCI) and Carbon-Lehigh Intermediate Unit. The SCIs and the IU provide career and technical training leading to trade-based certifications in programs that offer employment opportunities in high demand occupational clusters throughout Pennsylvania. The IU provides occupational training, applied academics, employability training, and assessment with the goal of improving the youths' chances of finding employment upon release.

- **Providing support for programs for special populations that lead to high skill, high wage and high demand occupations; and**

At the onset of Perkins IV, BCTE formed a select committee to work in cooperation with the Bureau of Special Education and the Pennsylvania Technical Assistance and Training Network (PaTTAN) to develop and maintain ongoing professional development, technical assistance and the dissemination of strategies to improve academic achievement on websites and presentation venues for all CTE stakeholders.

BCTE continues to maintain sustained collaboration with the Bureau of Special Education to establish bi-lateral CTE/Special Education expectations for both CTE and sending district personnel using state Chapter 339 and Chapter 14 regulations, and reference the federal IDEIA

and Perkins IV regulations, to help students achieve in school and pursue career goals post high-school. Therefore, in order to promote and establish a broader statewide impact on joint BCTE/Special Education initiatives, PaTTAN developed two brochures in hard copy and posted on-line: "Understanding Career and Technical Education: What Special Educators Need to Know" and "Career and Technical Education Staff: What You Need to Know About Students with Disabilities." The brochures are available on-line and have been mailed to each school and distributed during conferences.

In an effort to further collaborate and share resources at the state level, BCTE/Special Education have established IDEIA Indicator 13 – Transition Planning training. The training is provided by PaTTAN and includes a cohort of comprehensive career and technical centers. The training requires participating school districts to attend the training with the CTC. The goal is to establish stronger ties with sending school districts in order to write and implement appropriate transition planning into each CTC student's IEP.

BCTE supports the PA Association of Career and Technical Education Special Populations (PACTESP) and the PA Training and Technical Assistance Network (PaTTAN) to provide professional development to CTE and regular education personnel to increase and align support and services to special education/populations students. PACTESP holds an annual conference on Perkins IV special populations issues and includes sessions on special education. PaTTAN's focus is on special education.

The Agency is currently working with the Pennsylvania Association of Career and Technical Administrators to develop and offer technical assistance that is focused on improving the performance indicators associated with special populations, specifically nontraditional and special education.

- **Offering technical assistance for eligible recipients**

The Pennsylvania Department of Education (PDE), in conjunction with the Southern Regional Education Board (SREB), the Education Trust and the Pennsylvania Association of Career and Technical Administrators (PACTA), have developed professional development and technical assistance opportunities specifically designed to assist Pennsylvania's CTCs with raising student performance on the PSSA and technical end of program assessments. Under the direction of PDE's Bureau of Career and Technical Education, 7 Career and Technical Distinguished School Leaders will provide direct technical assistance to participating CTCs.

The purpose of the technical assistance is to significantly raise the academic and technical achievement of all students at the CTCs which take advantage of this opportunity. Through this technical assistance project, PDE will assist career and technical centers with raising student performance on the PSSA and technical end of program assessments. Each participating CTC agrees to develop an improvement plan for increasing student achievement, work with the Career and Technical Distinguished School Leader and participate in all professional development activities provided by BCTE.

During the 2008-09 year the Technical Assistance Program (TAP) provided services to 20 career and technical centers and school districts. Each CTC has agreed to evidence levels of progress.

Progress is defined as 13% increase over the baseline in students achieving proficiency on the *end of program occupational* assessment, and 11% increase in students achieving proficiency on *reading* PSSA baseline and 13% increase in students achieving proficiency on *math* PSSA baseline.

The CTCs involved in TAP last year, 2008-2009, evidenced a 13.8% increase in student achievement on the end-of-program occupational assessment.

Perkins requires annually, that 20% of the underperforming Perkins funded recipients be selected for on-site compliance technical assistance visits based on the following criteria: most recent validated performance data putting the program at risk of non-compliance with Perkins performance measures as identified in the FAUPL; mismanagement of the plan as evidenced by guideline violations in regards to timely submission of the annual application, performance assessment, program data and fiscal reporting. The consortia selected for technical assistance during the 2009-2010 fiscal year are listed.

1. Harrisburg School District
2. Milton Area School District
3. Northumberland Career and Technical Center
4. Tussey Mountain Area School District
5. Selingsgrove School District
6. Western Center for Technical Studies
7. Western Wayne School District

b. Permissible Use of Funds

Improving career guidance and academic counseling programs;
As of 2008-2009 PDE/BCTE has funded three million dollars in College and Career Counseling grants to eligible school districts. The College and Career Counseling (CCC) state grants are one of many school initiatives offered as part of the Governor's overall education reform agenda. Competitive grants were awarded to school districts to support systemic enhancement to career and counseling efforts. The grants represent an effort to upgrade career counseling services in grades 8-12. The grant recipients capitalize on the collaboration and leadership skills of school administrators, teachers, and counselors to create a vibrant career exploration, career planning and goal setting process for each and every student in grades 8-12. Successful applicants were expected to create a student-centered career development system that will ensure increasingly more students each year are prepared for college and career success upon graduation.

The BCTE negotiated with the Southern Regional Education Board to provide technical assistance related guidance. The technical assistance is planned for the 2009-2010 year and requires teams of administrators and guidance personnel from the career technical centers in helping them to development an effective and comprehensive guidance and advisement system. Teams from the tech centers will work with guidance counselors from the sending high schools to develop plans to provide services to those students attending the tech centers for a portion of their school day.

Additionally, the Education Trust provided in 2008-2009 an embedded technical assistance package for the schools. The technical assistance required teams consisting of a minimum of four members: the CTC principal/director, CTC school counselor, CTC teacher, and a school counselor from a sending school. The assistance taught the teams a data-driven decision-making model that facilitates a thoughtful review of the policies, practices, attitudes, and structure that lead to an effective action plan designed to raise student achievement. The assistance taught participants how to analyze the existing multitude of data that exists. Additionally, the teams learned how to analyze student transcripts and the master schedule to uncover choke points and environmental barriers to high academic achievement for all students.

Career Counseling Leadership Committee
The Bureau supports and maintains a statewide Career Counseling Leadership Committee to advise the Bureau in the area of career guidance. The committee meets quarterly and is made up of professionals from around the state in the areas of higher education, secondary, middle, elementary, business, and workforce development. The committee members conduct workshops at state conferences and provide on-site workshops at school districts' requests. They also are responsible for maintaining and up-dating the CEW standards toolkit website, which is www.pacareerstandards.com.

PA CareerZone Website
The Bureau continues to support the PACareerZone website to assist teachers, students, parents and the public. This website is a career exploration resource for use in the classroom by students and job seekers interested in finding information on careers. PACareerZone is a web-based career exploration and planning system. It is a user-friendly, interactive tool to find information on 900 high priority occupations in Pennsylvania. This site is for anyone who is interested in learning more about Pennsylvania careers, such as students, teachers, guidance counselors, after school and workforce development staffs, and career planners. Students complete a self-assessment to determine their likes and dislikes that relate to job tasks and personality traits. Once the assessment is completed, the software will align those likes to job clusters. The students can further research the cluster to find a job title that they are interested in and continue their research to learn more about the job tasks, job labor market in PA, salary, and educational needs. The website is: www.pacareerzone.com

- **Establishing agreements, including articulation agreements, between secondary school and postsecondary career and technical education programs to provide postsecondary education and training opportunities for students;**

The BCTE "Programs of Study" (POS) ensure that the secondary planned academic and technical courses are aligned to the postsecondary general education and technical courses, bound by a PDE approved statewide articulation agreement. A BCTE Perkins Program of Study Statewide Articulation Agreement (Agreement) was released by the Agency on July 7, 2009. By developing statewide technical standards aligned to industry expectations and aligning to 11th grade academic standards, students are able to earn college credit for the secondary career and technical education coursework. Students can earn a minimum of 9 college credits to a maximum of 25 college credits due to the Perkins statewide articulation agreement.

To date, the Agency has 55 Perkins statewide articulation agreements reported across 20 POS along with the course/credit alignment reported on website located at www.collegetransfer.net. To date, 28 postsecondary institutions have reported credit alignment in various PDE developed POS(s). The number of postsecondary credits aligned ranges from a minimum of 9 credits to as much as 25 credits, depending upon the related CTE POS to which credit is being aligned. Some postsecondary institutions have aligned credit opportunities with as many as ten different POS(s).

- **Supporting initiatives to facilitate the transition of sub baccalaureate career and technical education students into baccalaureate programs;**

The state is exploring this connection through current Tech Prep efforts and Department of Community and Economic Development supported 2+2+2 pipeline initiatives.

- **Supporting career and technical student organizations;**

In 2007-2008 BCTE committed $58,000 in grant funding to support CTSO programs. Through this support, the Bureau gives assistance to career and technical student organizations (CTSO) by providing for curricular activities that enhance the quality of student leadership training at secondary and collegiate levels.

- Conduct workshops among the eight CTSOs to assist students in acquiring leadership skills; prepare students for competitive events, participation in judging events; assist with statewide conferences, and prepare for national conferences.
- Provide for consultants to develop new and update tests for competitions at the regional and state levels.
- Provide resource materials, supplies and software to assist with the eight CTSOs annual statewide conferences.
- Assist CTSOs advisors to develop programs of work and students' activities for their local chapters.

- **Supporting family and consumer sciences programs;**

Major initiatives and activities that support the Family and Consumer Sciences (FCS) Programs are the development of the Curriculum Framework for the Standards Aligned System and the development of Program of Studies for the third phase which includes Institutional Food Worker. Training and professional development is continuing to prepare students to sit for the Child Development Associate (CDA) READY certification and Serve Safe Certification. The Agency is continuing in the development of Standards Aligned System that is based on the K-12 State Board of Education approved Family and Consumer Sciences academic standards

- **Developing or enhancing data systems to collect and analyze data on secondary and postsecondary academic and employment outcomes;**

In 2008-2009 the Pennsylvania Department of Education fully implemented a unified data collection system known as the Pennsylvania Information Management System, (PIMS) This system uses a unique student identifier called PASecureID to obtain all student level data. This allows for reporting of accurate, valid and reliable data to all funding sources, as well as, helps PDE and BCTE target resources where technical assistance is needed.

Technical skill attainment data from outside PDE is imported into PIMS. This data provided by NOCTI and the National Institute of Metalworking Skills (NIMS) are anchored on the PASecureID to ensure accuracy and completeness.

PIMS is evolving further into a robust longitudinal data system that will include postsecondary data collection previously accomplished through the Pennsylvania Adult and Postsecondary Student Attainment (PAAPSA). This way PIMS will help to: (a) meet the current PDE reporting requirements; (b) improve education decision-making through the use of high quality data and decision support tools; (c) provide longitudinal tracking of particular individual and subgroup education progress over time, and (d) report timely and accurate data through standardized and ad hoc reporting capabilities.

2. Progress in Developing and Implementing Technical Skill Assessments;
At the secondary level, Pennsylvania has identified all but 23 CIP codes that have been aligned with skill attainment end-of-program tests. These tests are provided by the NOCTI and the National Institute of Metalworking Skills (NIMS). This match enables Pennsylvania to assess **nearly 90% of program concentrators** and report their technical skill attainment. The 2008-2009 Secondary **CIP/Test Crosswalk** can be viewed in an attached document under the Additional Measures tab.

Pennsylvania has also revised criteria for approving other third party end-of-program assessments. These criteria include the following elements:
- o Documentation of test development and validation, including setting cut scores;
- o A written and performance-based components;
- o Capacity to include the PASecureID on answer sheets;
- o Providing each LEA with individualized test results with interpretation guidelines;
- o Providing PDE with statewide end-of-year individual student skill attainment; and
- o Documentation of test administration security.

Implementation of this review will give high priority to those CIP codes for which there are no assessments presently approved.

Currently the Department is considering approval and adoption of assessments for use by postsecondary recipients in conjunction with the Program of Study effort. Pennsylvania is reviewing the work of the National Research Center for Career and Technical Education as a guide.

The goal is to have a secondary and postsecondary aligned assessment for each program of study. Currently there are 7 programs of study that have been completed. Thus there will be 7 end of program assessments aligned to the Programs of Study for implementation in 2011. An additional 15 Programs of Study will be developed and ready for implementation with the assessment ready for implementation after 2011.

3. Implementation of State Program Improvement Plans for those not meeting 90%.

A review of the data submitted for the 2009 Consolidated Annual Report for the 2008-2009 reporting year indicate that Pennsylvania did not meet 90% of the performance levels for 1S1, Academic Achievement Reading (90% of 63 AYP target or 58.5), and 1S2 Academic Achievement Mathematics (90% of 56 AYP target or 50.4). Pennsylvania met the 90% threshold on each of the other accountability indicators. On 1S1 Language Arts: Blacks and Hispanics performed below the state target as a whole. Also Students with a Disability, Disability Status, Economically Disadvantaged, Single Parents and Limited English Proficient students performed below the state target. The same disparity was manifest on 1S2 Mathematics.

2009 CAR Data

2008 PSSA Results for 2009 CTE Concentrators	Reading			Math		
	Total Students	Number Proficient and Above	% Proficient and Above	Total Students	Number Proficient and Above	% Proficient and Above
All Students	**15375**	**6667**	**43.4**	**15396**	**5393**	**35**
Female	6151	2867	46.6	6160	1916	31.1
Male	9224	3800	41.2	9236	3477	37.6
American Indian	30	14	46.6	30	10	33.3
Asian	142	81	57	141	79	56
Black	1415	435	30.7	1419	319	22.5
Hispanic	863	269	31.2	866	199	23
Multi-Racial	40	19	47.5	41	15	36.6
White	12885	5849	45.4	12899	4771	37
Individuals With Disabilities	125	53	42.4	125	40	32
Disability Status (IEP)	3964	586	14.8	3968	492	12.4
Economically Disadvantaged	5180	1846	35.6	5192	1463	28.2
Single Parent	229	76	33.2	231	54	23.4
Displaced Homemaker	1	1	100	1	1	100
LEP	114	9	7.9	118	16	13.6
Migrant	7	3	42.9	7	3	42.9
Nontraditional	1428	764	53.5	1432	553	38.6
Gifted	109	90	82.6	109	88	80.7
Tech Prep	4062	2038	50.2	4070	1680	41.28

Pennsylvania State Perkins IV Improvement Plan

The state continues into a second year as underperforming on two indicators, 1S1, academic achievement-reading and 1S2, academic achievement-mathematics. It is critical to realize that the academic indicators are based on the previous year testing for the graduating concentrators. In other words, though the 2008 and 2009 CAR evidence that Pennsylvania did not meet the academic indicators, the testing years were 2007 and 2008.

Thus the strategic improvement efforts underway in 2008 and 2009 will not provide evidence of effectiveness until the testing years of 2009 and 2010 are compared.

Improvement Plan
To address the root causes, the Bureau met with representatives from the career and technical centers to develop a strategic plan that addresses the following goal.

Goal 1: Increase Academic Achievement and Success for all CTE Students, including Special Education (IEP) Students

- By July 2014, the percentage of CTE students scoring proficient or advanced on the state-approved assessment in math and reading will be 100%.
- By July 2011, the percentage of CTE students scoring proficient or advanced on the state-approved assessment in math and reading will increase, reflecting a 13% increase in reading and a 12% increase in math.
- By July 2011, 60% of stakeholders will be better equipped to use state-approved assessment scores and other data sources to make instructional decisions.

Root Cause	Activity	Staff Assignment	Due Date
Grade Level Preparation	Examine Pennsylvania Standards Aligned System to determine how career and technical education (CTE) will use this system to ensure students are at grade level.	Simchock	2013
	Provide workshops that assist career and technical centers (CTCs) to establish a culture of high expectations for all their students.	Simchock	2013
	Develop CTE and school district publications to assist CTE instructors in understanding special education and special education personnel to understand career and technical education.	DiNatale	2013
	Work with PaTTAN regional offices to design professional development for special education and CTE instructors. This would include conferences, webinars and other venues as identified by PaTTAN staff.	DiNatale	2013
	Adopt Response to Instruction and Intervention (RtII) framework at select pilot career and technical centers.	DiNatale	2013
Coursework	Work with Bureau of Teaching and Learning to ensure CTCs understand how to use the Standards Aligned System within the CTE content areas.	Simchock	2013
	Develop programs of study (academic and technical scope and sequence) that ensure students will exit	Simchock	2013

	prepared for college and careers.		
	Identify grade level academic eligible content for each program of study.	Simchock	2013
	Develop model curriculum development process utilizing SAS (sample lesson plans, learning guides and assessments).	Simchock	2013
	Establish and publish "how to" model for urban reform efforts in 3 CTCs.	Simchock	2013
	Establish statewide articulation agreement that provides students college credit for secondary technical coursework.	Hess	2013
	Establish academic connection to Career and Technical Student Organizations (CTSOs). Annual state and regional Leadership Events for each of the 8 CTSOs will evidence alignment of leadership activities to the 11th grade academics.	Simchock	2013
Guidance	Provide professional development for CTCs on how to develop a model of career guidance and advisement (grades 9-12).	Simchock	2013
	Develop model guidance plan for use by school districts (grades K -12).	Simchock	2013
	Review course taking patterns at 42 Technical Assistance Program (TAP) CTCs and their sending districts to determine alignment to state-approved assessments. The review will lead to policy considerations.	Simchock	2013
Joint Planning	Develop model resources describing roles and responsibilities of school district personnel in the	Hess	2013

	management of the CTC.		
	Provide professional development on the role of superintendents in CTE and leadership in CTE for CTC administrators.	Hess	2013
	Develop models of running a Professional Advisory Committee meeting.	Hess	2013
	Continue to interact with relevant state professional organizations to stress the need for school districts and CTC administration to jointly plan the CTE student's educational program.	Hess	2013
Administrator / Teacher / Counselor Preparation	Provide statewide leadership training related to transcript analysis. The training will assist administrators, guidance personnel and instructors to identify those students who do not receive appropriate academic coursework preparation. This serves as a course audit for each individual student.	Simchock	2013
	Professional development centers will integrate leadership training into existing CTE administrator certification programs. One goal of the training is to assist CTE administrators in developing quality relationships with school district administration.	Simchock	2013
	Provide professional development to guidance staff on individualized counseling strategies to ensure proficiency on all academic and occupational assessments.	Simchock	2013
	Provide professional development on coaching strategies for instructional coaches.	Simchock	2013
	Provide professional development through the	Simchock	2013

	PDE annual Integrated Learning Conference focused on curriculum development and instructional processes and the secondary and postsecondary Perkins indicators. Strands will be developed for each of these areas.		
	Provide leadership training for CTE administrators that assist them to ensure all CTE programs are industry relevant and processes are followed to ensure quality programs.	Simchock	2013
	Provide professional development on instructional leadership for CTE administrators to enable instructors to incorporate appropriate instructional practices.	Simchock	2013
	Provide opportunities for joint professional development for school district and CTC administrators.	Hess	2013

The improvement plan has been uploaded as a file in the CAR report.

4. Implementation of Local Program Improvement Plans

At the conclusion of the 2009 CAR submission, all fiscal agents were measured against statewide Final Agreed Upon Performance Levels (FAUPL). Those consortia that did not meet at least 90% of the state targets were required to prepare a corrective action plan. This year consortia will be able to demonstrate adequate yearly progress if they (a) meet the 90% threshold on state target, or (b) meet the locally negotiated targets in their local plans, or (c) demonstrate an acceptable improvement over the previous year. The improvement plan has been incorporated into the Perkins Local Plan and is to be submitted through the e-Grant system. Eight adult, 21 postsecondary and 104 secondary educating LEA received program improvement letters June 5, 2009.

The improvement plan's action plan requires local recipients to review data, determine root cause and develop actions to address the root cause. The local plan directs the use of federal funds and establishes the foundation for program and fiscal accountability. In the local plan

recipients list the measurable activities to be performed in order to achieve each performance objective. The objectives are based on the most current data provided by PDE. A root cause that directly relates to the underperforming indicators has to be identified in this section of the local plan.

The negotiations will be based on the most current valid data provided by PDE. A two year negotiation table with most current validated data has been built-into the Perkins Local Plan and completed through the e-Grant system.

A comparison of the 2007-2008 transition year data and the 2008-2009 year data will be reviewed along with the final agreed upon performance levels as negotiated with each local entity. The data will be reviewed for trends.

Based on methodology associated with meeting Adequate Yearly Progress, eight (8) of the 60 part-time career and technical centers have met AYP for 2009 through the Safe Harbor or Safe Harbor with Confidence Interval. Greater Johnstown CTC, Seneca Highlands CTC, and Lycoming CTC all met AYP using the Safe Harbor calculations. Northern Westmoreland CTC, Berks CTC—West Campus, Lehigh Career and Technical Institute, Mon Valley CTC, and SUN Area CTC met AYP using the Safe Harbor with Confidence Intervals. One of 14 comprehensive CTCs made AYP. Bok CTC, a comprehensive CTC, made AYP with Safe Harbor for reading and Confidence Interval for math.

Based on guidance from USDE/OVAE, BCTE has not provided the list of consortia not meeting levels of performance. PDE is not altering the requirement to achieve the negotiated performance targets, but by describing efforts to improve and identifying how those improvements will work to overcome shortfalls we are meeting this section of the narrative.

5. Tech Prep Grant Award Information

State support for each Tech-Prep consortium was maintained at the same amounts as the previous year to ensure continuation of the Tech Prep Regional Consortia. Twelve Tech-Prep consortia were funded. Each eligible agency that received Tech Prep funds prepared and submitted annual reports to the Department on the effectiveness of the tech prep programs. Grants were awarded to consortia comprised of educational secondary and postsecondary institutions that have previously implemented Tech Prep programs into their local region schools. The Tech Prep consortia assisted PDE in developing programs of Study (POS) that meet Perkins IV requirements. The consortia support the local schools and postsecondary institutions in their consortium for implementing Programs of Study.

PDE required the following of Tech Prep consortia –

- Support the implementation of Tech Prep Programs of Study within the state defined regions, as recognized by the Pennsylvania Department of Education (PDE).
- Encourage and support the statewide articulations for all Career and Technical Education Programs of Study (POS) programs in their region.

- Facilitate the alignment of academic and technical curriculum between secondary and postsecondary levels that meets industry standards related to an approved Tech Prep Program of Study.
- Facilitate the alignment of curriculum between secondary and postsecondary levels that meets PA Academic Standards related to the approved Tech Prep Programs of Study.
- Facilitate the alignment of academic and technical curriculum between secondary and postsecondary levels to eliminate the need for remediation at the postsecondary level.
- Assess, plan, develop, organize and implement Tech Prep Program of Study activities within the state defined regions, as recognized by the Pennsylvania Department of Education (PDE).
- Maintain communication with all consortium schools that have PDE approved Career and Technical Education Tech Prep Programs of Study.
- Assist all consortium schools in the identification and reporting of Tech Prep students within PDE approved Career and Technical Education Tech Prep Programs of Study.

During the 2008-2009 year, PA has 12 Tech-Prep Consortia and maintained level funding.

Allegheny County Tech Prep Consortium	$384,759
Central PA Tech Prep Consortium	$178,805
Lehigh Valley Tech Prep Consortium	$180,941
Northeast PA Tech Prep Consortium	$317,597
North Central Tech Prep Consortium	$85,538
Northern Tier Tech Prep Consortium	$85,000
Northwest PA Tech Prep Consortium	$288,846
Philadelphia Tech Prep Consortium	$989,601
South Central Tech Prep Consortium	$364,595
Southern Alleghenies Tech Prep Consortium	$160,946
Southeast Regional Tech Prep Consortium	$857,604
Southwest Tech Prep Consortium	$394,808

This is the second year data have been collected and analyzed. The data for 2007-2008 served as the baseline year. A comparison of the 2008-2009 transition year data and the 2008-2009 year data will be reviewed along with the final agreed upon performance levels as negotiated with each local entity. The data will be reviewed for trends.

Based on guidance from USDE/OVAE, BCTE has not provided the list of Tech Prep consortia not meeting levels of performance. PDE is not altering the requirement to achieve the negotiated performance targets, but by describing efforts to improve and identifying how those improvements will work to overcome shortfalls we are meeting this section of the narrative.

There are several significant changes in measurement approaches reflected in the CAR. These changes render data collected previously under Perkins III incompatible with current data submitted under Perkins IV. Therefore this year's data established baselines on all indicators.

- Use of Concentrators for the first time on the CAR resulted in numbers drastically different from those of previous years when all career and technical education enrollees

were included. This move has allowed Pennsylvania to more accurately report the impact of career and technical education, on all indicators.

- For the 2008 CAR the graduation rate will be based upon 12th grade concentrators only. The 2009 CAR will include 11th grade concentrators who dropped out in 2008 along with 12th grade concentrators who dropped out in 2009. As the PIMS system matures, so does the calculation of the graduation rate and by 2011 the two calculations will be identical.

- At the postsecondary level Pennsylvania has yet to identify any end-of-program tests. Pennsylvania decided to address this issue through their Programs of Study (POS). This is an identification of core competencies to be adopted by all secondary and postsecondary career and technical education institutions to be used as a basis for statewide articulation. These lists of competencies are also nationally aligned with industry and with high priority occupations. In addition to the list of competencies, Pennsylvania is creating test specifications blueprints as the next step towards developing valid and reliable assessments at both secondary and postsecondary levels. Actual assembling of items into assessments will be accomplished through established assessment providers who will also perform all validation. It is anticipated that the initial 15 of these assessments will be in place for the 2011 CAR.

- In order to increase student tracking, Pennsylvania is formalizing a contractual arrangement with the National Student Clearinghouse. Through this arrangement we shall be able to report on items such as retention and transfer (3P1), placement (5S1 and 4P1), and postsecondary Tech Prep indicators. Until the contractual arrangement is in place, Pennsylvania will partner with the Local Education Agencies and eligible recipients to track their students. Data collected through this system will be merged with current collection formats using the PASecureID. For postsecondary and Tech Prep indicators, Pennsylvania will continue to utilize the PAAPSA data collection system.

- Nontraditional indicators previously showed minimal statewide performance because of an inherent flaw in the measurement approach. After receiving enrollment data PDE identified nontraditional programs as those with less that 25% of one gender. Calculation of performance on the indicators based on such fluid populations and non-constant programs invariably led to poor numbers. Now Pennsylvania is using a standard fixed list of nontraditional programs as identified nationally. During the transition year, nontraditional participation and completion baseline data is being established.