

Career/Vocational Technical Education
Massachusetts
Carl D. Perkins Vocational and Technical Education Act
Performance Report Narrative for Program Year 2005-2006

Introductory Overview

During program year 2005-2006, the Massachusetts Board of Education amended the Massachusetts Vocational Technical Education Regulations setting rigorous standards for career/vocational technical education programs of study and establishing standards for students to earn the Massachusetts Certificate of Occupational Proficiency. The Massachusetts Vocational Technical Education Frameworks that will provide the foundations for programs of study were completed in 2005-2006 after a rigorous development and validation process.

With funding provided by the Massachusetts Legislature, the Massachusetts Department of Education awarded a contract to develop a statewide competency tracking system for recording the knowledge and skills acquired by students enrolled in career/vocational technical education programs.

Massachusetts continued its strong emphasis on accountability for career/vocational technical education, with significant focus on Tech-Prep delivery, resulting in strengthened career/vocational technical education programs Massachusetts' high schools and public two-year colleges. The Massachusetts Student Information Management System (SIMS) continued to ensure not only accurate and timely data collection but also detailed analysis of Perkins' outcomes in planning for program improvement and monitoring progress. These accomplishments, and other 2005-2006 initiatives and improvement strategies carried out under the Carl D. Perkins Vocational and Technical Education Act are presented in greater detail below.

I. State Administration [Section 121]

A. Sole State Agency and Governance Structure

The Massachusetts Department of Education the sole state agency responsible for administration of the Carl D. Perkins Vocational and Technical Education Act. Within the Department, the Career Vocational Technical Education unit is responsible for administration of the Perkins Act. The unit's organizational chart was emailed to *Perkins2006@ed.gov* on December 31, 2006.

B. Organization of Vocational/Career and Technical Education Programs

Massachusetts has high school and postsecondary career/vocational technical education programs provided by public school districts and one collaborative. There are two categories of high school career/vocational technical education programs as follows:

1. Chapter 74 - approved vocational technical education programs - those programs that meet the definition of vocational technical education contained in Chapter 74 of the Massachusetts General Laws, and are approved by the Department of Education pursuant to Chapter 74 and the Vocational Technical Education Regulations. All Chapter 74-approved vocational technical education programs meet the Perkins Act definition of vocational technical education and therefore, they may also be known as career and technical education programs.

2. Non - Chapter 74 career and technical education - those programs that meet the definition of vocational technical education contained in the Carl D. Perkins Vocational and Technical Education Act of 1998.

In addition, Massachusetts has postsecondary career/vocational technical education programs provided by public two-year colleges. These programs meet the definition of vocational technical education contained

in the Carl D. Perkins Vocational and Technical Education Act of 1998. Correctional institutions also provide career/vocational technical education programs.

Career/vocational technical education in Massachusetts is organized around ten occupational clusters: Agriculture and Natural Resources; Arts and Communications Services; Business and Consumer Services; Construction; Education; Health Services; Hospitality and Tourism; Information Technology; Manufacturing, Engineering & Technology; and Transportation.

Administration of the Perkins Act and Chapter 74 of the Massachusetts General Laws governing vocational technical education) continues to be conducted under the leadership of the State Director of Career/Vocational Technical Education. Again in 2005-2006, there was a strong focus on coordination and collaboration within the Massachusetts Department of Education, with the Office of Vocational and Adult Education and with the education and business communities to provide the necessary support to implement the Perkins Act, No Child Left Behind (NCLB) Act, the Massachusetts Education Reform Act and Chapter 74 of the Massachusetts General Laws.

In 2005-2006, in addition to the State Director, fifteen (15) staff, including four supervisors, carried out the work of the Career/Vocational technical Education unit. Major responsibilities for the year included: (1) review/approval of Perkins Act Local Plan updates and grant applications; (2) development and implementation of the Vocational Technical Education Frameworks; (3) onsite program monitoring via the Coordinated Program Review system, as well as individual onsite Perkins, civil rights, teacher preparation, and teacher testing program monitoring; (4) technical assistance to secondary schools/districts, public two-year colleges, correctional institutions, Tech-Prep consortia, *High Schools That Work* sites, and several career/vocational technical education student organizations; (5) professional development; (6) student assessment development; (7) vocational technical educator licensure; collaboration with stakeholders; and (8) fiscal administration.

In program year 2005-2006, Perkins Act allocation funds were awarded to 70 school districts (29 of which were regional districts), 4 consortia (one of which was postsecondary) and 17 public two-year colleges.

II. State Leadership Activities [Section 124]

A. Required Use of Program Funds

• Assessment

In 2005-2006, the Career/Vocational Technical Education unit continued to collaborate with two key units at the Department of Education; one overseeing the Massachusetts Comprehensive Assessment System (MCAS) and the other the Student Information Management System (SIMS). This collaboration continues to enable the CVTE unit to gather quality data for analysis and use for career/vocational technical education program improvement.

Student Information Management System

The Student Information Management System (SIMS) is a student-level data collection system that allows the Massachusetts Department of Education to both collect and analyze accurate and comprehensive information and to inform policy and programmatic decisions relying on data elements specific to career/vocational technical education and Perkins Core Indicators of Performance. The SIMS system continues to be invaluable as an accountability tool that promotes accuracy while reducing duplications and error. For example, access to summary reports and ample opportunities for final editing before data are made public allow the career/vocational technical education unit staff and local school district administrators to note problems and make corrections.

Annual Perkins Local Plan Update

All school districts, consortia and public two-year colleges eligible to receive Perkins allocation funds in 2005-2006 completed an Annual Perkins Local Plan Update. (Visit www.doe.mass.edu/CVTE/perkins/ for a copy of the instruments.) Districts/consortia/public two-year colleges are directed to use their Perkins Core Indicator data to evaluate previous strategies and develop plans to improve career/vocational technical education programs in relation to core indicator outcomes. In 2005-2006, via the *Local Plan Update* districts, consortia and public two-year colleges were asked to report on such students outcomes as the awarding and use of articulated credits.

Massachusetts Certificate of Occupational Proficiency Project

In program year 2005-2006, the *Massachusetts Certificate of Occupational Proficiency Project* funded by the Massachusetts Legislature with assistance from Perkins Leadership funds, focused on developing and implementing the Vocational Technical Education Frameworks, which can be found at <http://www.cvtepd.org/frameworks/>. Career/Vocational Technical Education unit staff, including a project director support this project. Staff coordinate assessment development and test design. And assist schools in implementing the Frameworks, particularly in the area of academic integration. Various professional development workshops and seminars were held in 2005-2006. Statewide institutes, seminars and workshops were well attended and received. Additional professional development is planned for 2006-2007 including a *Certificate of Occupational Proficiency Implementation Academy*. The seven-day Academy will provides schools with a unique opportunity to obtain information, collaborate, and work towards the goal of implementing the Frameworks and preparing for the student assessments.

Massachusetts Vocational Technical Teacher Preparation Program

In program year 2005-2006, new professional education courses that are required for professional licensure as vocational technical education teachers were implemented. These courses were developed over the previous two years by the three institutions of higher education working with Department of Education staff. The new courses are:

Professional Education Courses Provided at Fitchburg & Westfield State Colleges & the University of Massachusetts - Boston
Seminar for the Beginning Vocational Technical Education Teacher – three credits
Developing and Implementing a Standards-Based Curriculum in Vocational Technical Education – three credits
Teaching Methods for Vocational Technical Education - Instructional Strategies – three credits
Teaching Methods for Vocational Technical Education - Educating and Assessing the Vocational Technical Education Learner – three credits
Addressing the Needs of Students with Disabilities in Vocational Technical Education – three credits
Managing Student Behavior in a Healthy and Safe Environment – three credits
Teaching Methods for Vocational Technical Education – Using Research-based Practices to Develop Effective Instructional Strategies – three credits

Massachusetts Vocational Technical Teacher Competency Testing Program

In program year 2005-2006, *The Massachusetts Vocational Technical Teacher Competency Testing Program*, funded in part with Perkins Leadership funds, administered five written tests to 251 candidates and performance tests to 160 candidates. *Test Development Workshops* were held in 2005- 2006 to align the process of written tests with the Massachusetts Vocational Technical

Education Frameworks and to review test design procedures. Four Test Development Workshops were conducted (December 2005, February 2006, April 2006, and June 2006). All test development activities and revisions focused upon the alignment of written and performance tests with the Massachusetts Vocational Technical Education Frameworks. Currently five-percent of each revised test comprises mathematics questions that are aligned with the grade 10 Mathematics Curriculum Frameworks standards.

Alignment and revisions were completed on written and performance exams in the following ten areas: Automotive Technology, Baking, Cabinetmaking, Culinary Arts, Drafting, Electricity, Hospitality Management, Information Support Services and Networking, Medical Assisting and Health Assisting.

Alignment revisions continue in the following eleven areas: Programming and Web Development, Design and Visual Communications, Electronics, Graphic Communications, Machine Tool Technology, Office Technology, Plumbing, Radio & Television Broadcasting, Dental Assisting and Horticulture. Additionally, development continues in the area of License Practical Nursing, which is being aligned to the National Council Licensure Examination for Registered Nurses (NCLEX). Test development activities were initiated in the Biotechnology, Engineering Technology and Environmental Science and Technology licensure areas.

Oversight of the *Vocational Technical Teacher Competency Testing Program* was improved in 2005-2006. The program contractor now collaborates with a supervisor in the Career/Vocational Technical Education unit on such issues as program operations. A *Test Appeals Subcommittee* was formed to review and vote on challenges to the written tests and to review performance tests. A *Candidate Handbook* was also updated to include information regarding test accommodations for individuals with disabilities and test appeal policies.

Tech-Prep and the Accuplacer

In 2005-2006, all twelve Tech-Prep consortia implemented “early” ACCUPLACER (i.e., College Placement testing) for high school students in their junior and senior years. The number of students, registered in Tech-Prep that took advantage of the opportunity to “practice” and acquaint them with the test increased by 22% in 2005-2006 going from 1762 in 2004-2005 to 2154 in 2005-2006. Students (and their parents, counselors and teachers) in all 12 consortia were not only provided with information regarding college placement testing requirements but also apprised of the need for developmental coursework with sufficient time to make gains through remediation interventions and programs (e.g., online and summer developmental courses, tutoring.)

Financial, Data and Safety Reviews

In 2005-2006 several initiative resulted in improved data quality.

Aggressive follow-up on data discrepancies in reports from school districts and public two-year colleges was instituted in 2005-2006.

Massachusetts used Perkins Leadership funds to contract with a certified public accountant to review the Perkins financial and data records of eight (8) school districts and two (2) public two-year colleges. The review reports revealed that the school districts were compliant. Modest variances noted between actual versus reported numbers are expected to diminish with improved SIMS data collection at the secondary level. There was one public two-year college with discrepancies with financial accounting requirements, which generated an internal review of program expenditures made by the college. This college is required to submit a detailed financial summary on a monthly basis in 2006-2007.

Improvements were made in 2005-2006 regarding the quality of the instructions for the Public Two Year College Career/Vocational Technical Education Report and the Career/Vocational Technical Education Graduate One-Year Follow-up Report.

The Career/Vocational Technical Education unit will continue to review a similar number of Perkins allocation grant recipients in 2006-2007 ensure compliance and identify financial and data issues.

Safety reviews were performed in 2005-2006 through an interagency service agreement with the Massachusetts Division of Occupational Safety as part of the career/vocational technical education monitoring system. Two districts scheduled voluntary safety reviews with the Division of Occupational Safety outside of the scheduled monitoring sessions, and these safety reviews were evaluated by staff as part of the monitoring process. Safety review reports called for both immediate attention to address serious safety concerns and planned strategies to address other safety issues. In 2005-2006, Career/Vocational Technical education unit staff worked with the districts to address safety findings and assist districts with inadequate safety plans.

- **Developing, Improving and Expanding Technology**

In 2005-2006, the Career/Vocational Technical Education unit supported a number of initiatives designed to develop, improve and expand the use of technology in career/vocational technical education programs. For example, during the 2005-2006 school year, the unit contracted with a software development company to provide an analysis for a potential statewide vocational technical education competency tracking system. The system will be developed during 2006-2007 and 2007-2008 and will be web-based and accessible from anywhere in the state. It will provide the opportunity for school to track student progress, as well as generate reports and use data collection and analysis to improve career/vocational technical education programs.

The Career/Vocational Technical Education unit continued to promote the use of technology in a variety of ways in 2005-2006, including the creation of discussion boards, lesson planning and communication tools available through the Career/Vocational Technical Education by using the competency tracking software system and at the Massachusetts Career/Vocational Technical Education Professional Development Center, which is Perkins funded.

The “written” assessment for the Certificate of Occupational Proficiency is being developed for online administration.

The *Educator Licensure and Recruitment System (ELAR)* was fully utilized for career/vocational technical education. The online system provides for online educator licensure, license renewal, and job and resume posting and allows districts to enter their staff information online, facilitating the Department’s monitoring of licensure status to ensure that educators are working in appropriately licensed areas.

The Career/Vocational Technical Education unit is working directly with the team developing and supporting the *Massachusetts Online Network for Education (MassONE)*. Through MassONE, teachers, students, administrators, and other interested parties will be able to participate in discussion boards, search through Massachusetts Curriculum Frameworks and the Vocational Technical Education Frameworks standards, create and share lesson plans and teaching resources, and offer support for student learning. The Vocational Technical Education Frameworks are searchable in MassONE and teachers can create, store, and share online lesson plans. The Career/Vocational technical education unit intends to create discussion forums for teachers, grant recipients, coordinators and interested parties in each career/vocational technical education program area.

In 2005-2006, the *Massachusetts Career/Vocational Technical Education Professional Development Center* completed the online listing of its entire resource collection cross-walked to the Vocational Technical Education Frameworks.

- **Professional Development**

In 2005-2006, the Career/Vocational Technical Education unit sponsored and collaborated with professional associations to provide numerous professional development offerings for educators involved in career/vocational technical education. The unit was also able to provide trainings on the Vocational Technical Education Frameworks. The following list of professional development activities provide a representative sampling of the conferences and workshops held in Massachusetts in 2005-2006:

10/22 – 12/6 *Developing Curriculum Grounded in the Frameworks* – various regional locations in MA

11/1 – *Understanding the Model, MA School Counselors Assoc (MASCA) Conference* - Sturbridge, Ma

1/17 & 1/25 *Respirator Training 2* regional locations in MA

1/26 – *Leadership Academy, MA Association of Vocational Administrators* - Marlboro, Ma

1/31 - *Success With the Frameworks* - Shrewsbury, Ma

3/2 - *Safety Alliance Training*- Fitchburg, Ma

3/14 – *Future Farmers of America State Conference* - Sturbridge, Ma

3/31 - 4/2 *MA Association of Vocational Educators Conference*- Hyannis, Ma

4/11 - *Gender Equity Conference*- Marlboro, Ma

4/27-29 *SkillsUSA State Conference*, Marlboro, Ma

5/9 *Implementing the MA Model, MASCA's Annual Conference* - Barnstable MA

6/27 - 6/28 *Connecting for Success (Annual State Conference for CVTE)* Fitchburg, Ma

8/2 - *MVOTEC Tech Prep Summer Institute* - Haverhill, MA

In 2005-2006, the Career/Vocational technical Education unit also continued to facilitate committees comprised of educators charged with developing standards for student assessments for the award of the Certificate of Occupational Proficiency. Regional and local Tech-Prep coordinators convened regularly to provide guidance in Tech-Prep delivery utilizing a (new) Massachusetts Tech-Prep Manual for Consortia and Site Coordinators. This Manual was developed during 2005-2006 to ensure accountability as well as consistent and equitable program delivery. Professional development was also provided to staff in the Career/Vocational technical Education unit at regular staff meetings.

High Schools That Work continued to play a strong role in Massachusetts during 2005-2006. Through the support of Perkins funding, more than 200 Massachusetts educators also attended the 20th annual *High Schools That Work* professional development conference. In addition, teams of

educators from ten (10) schools attended professional development events on topics such as leadership development and engaging teaching strategies. Massachusetts-based professional development events included a site development workshop for the new *High Schools That Work* sites, a site development workshop for veteran sites, and a secondary reading improvement workshop led by Massachusetts Department of Education staff, focused on assessment of student reading levels, targeted assistance for the most challenged readers and reading in the content areas for all high school students. Workshops led by staff from the Southern Regional Education Board, covered key practices of *High Schools That Work* including use of school-based data to develop action plans for raising student achievement in both academic and technical courses.

- **Support for Career/Vocational Technical Education Programs through Integration of Academics with Technical Education**

Appropriate integration of academic and technical knowledge and skills continued to be a major goal in Massachusetts in 2005-2006. For example, each of the Vocational Technical Education Frameworks was revised to specifically highlight relevant academic standards from the Massachusetts Curriculum Frameworks used in teaching core academic courses. Consequently, each Vocational Technical Education Frameworks includes standards in English language arts, mathematics, and science & technology/engineering that are appropriate to its curriculum. Curricula implemented in Massachusetts' Chapter 74-approved vocational technical education programs must be align with the academic frameworks, while staff in non-chapter 74 career and technical education programs are encouraged to select appropriate standards when developing their curricula. In addition, workshops were offered in 2005-2006 on such topics as lesson planning and curriculum alignment to the Vocational Technical Education Frameworks. Teachers attending such workshops were given both the time to explore and discuss opportunities for the integration of technical and academic knowledge and skills and to create lesson plans that specified both vocational and academic knowledge and skills.

In 2005-2006, Perkins Leadership funds were used to support the state's involvement in the Southern Regional Education Board's (SREB) *High Schools That Work* initiative to improve secondary career/vocational technical education.

High Schools That Work sites participated in the biannual grade 12 assessments in reading, mathematics and science including both student and teacher surveys and a transcript study. Sites received data analyses of student performance on the assessment compared with courses completed, classroom practices as reported by both students and teachers, and student and teacher perceptions about the importance of their education.

During 2005-2006, three technical review visits were conducted under the direction of the state *High Schools That Work* coordinator. Technical review visits are conducted at schools that have been involved in *High Schools That Work* for several years and previously hosted at least one three-day technical assistance visit. Schools receive a report summarizing current student achievement data, the status of the school's *High Schools That Work* effort and suggested action steps and resources to help the school further address challenges.

Performance Improvement Mapping was conducted with low-performing vocational technical schools between March 2005 and September 2006. The School and District Improvement Planning unit and the state *High Schools That Work* coordinator conducted a series of retreats for teams of teachers and administrators from four regional vocational technical schools in which student performance on the Massachusetts Comprehensive Assessment System (MCAS) tests was among the lowest in the state. The teams were trained to analyze student performance on released MCAS test items to determine the knowledge and skills needed to answer the question correctly and to assess whether the required knowledge and skills were acquired. The teams included both academic and technical teachers so that teams could evaluate both curricula and plan to reinforce of the

knowledge and skills that students lacked. Student performance was also analyzed by special population, gender and race to determine if all populations were being exposed to curriculum aligned with the Massachusetts Curriculum Frameworks. Teams worked with other staff at their schools and were supported by Department of Education facilitators. After the final retreat, each team was required to submit a performance improvement plan to the Department of Education.

- **Preparation for Nontraditional by Gender Training and Employment**

In 2005-2006, Massachusetts used Perkins State Leadership funds for standards-based programs and interventions to support students preparing for nontraditional by gender employment and training. Three regional vocational technical schools and two comprehensive high schools received grant money to establish new and/or support existing groups in breaking down gender stereotyping in order to increase enrollment in and completion of programs that would prepare students for careers that would be nontraditional for their gender. Four of these schools shared the results of their efforts with colleagues at the annual Connecting For Success conference on career/vocational technical education in June 2006.

In 2005-2006, while the State exceeded its aggregate nontraditional enrollment performance goal of 10.85% (11.37%) it did not meet its nontraditional completion goal of 11.00 (10.14%). In addition, marked disparities were again noted between enrollment and completion rates for males and female (i.e., male enrollment 2.14% vs. females 28.77%; male completion 5.73% vs. female 11.82%.)

In 2005-2006, informed by data analysis of 2004-2005 Perkins Core Indicator IV results and in response to school districts' request for assistance, in particular with completion rates for males, the Career/Vocational technical Education unit held a groundbreaking statewide Gender Equity Conference focused on perception-based barriers around sexual orientation and gender as well as civil rights guidelines and Massachusetts anti-discrimination laws. Schools/districts that had not met one or either of the Core Indicator IV benchmarks were targeted for attendance. Written evaluations of the conference, which was well attended were enormously positive.

- **Supporting Partnerships To Meet Academic And Technical Standards**

In 2005-2006, the Career/Vocational Technical Education unit continued to work collaboratively with numerous partners outside of the Massachusetts Department of Education. Such partnerships enabled the Career/Vocational Technical Education unit to offer professional development and technical assistance to schools and public two-year colleges focused on program rigor, seamless postsecondary transitions, integration of academic, and the knowledge and skills in all aspects of the industry. Collaborations included the Massachusetts Division of Apprentice Training, Massachusetts Division of Professional Licensure, Massachusetts Executive Office of Community Colleges, Massachusetts Board of Higher Education, Massachusetts Association of Vocational Administrators, Massachusetts Vocational Association, Massachusetts Association of School Counselors, Department of Workforce Development, Massachusetts Division of Career Services and numerous business and labor partners at the state, regional, and local level.

During 2005-2006, the Career/Vocational technical Education unit worked with the Massachusetts Executive Office of Community Colleges to validate the Vocational Technical Education Frameworks, and support and promote the use of articulated credit and apprenticeship agreements with business, community colleges and secondary programs.

In 2005-2006, partnerships with Massachusetts' 16 Local Workforce Investment Boards, the Massachusetts Department of Education's Connecting Activities Initiative and the twelve Tech-Prep consortia again provided high school students with structured internship opportunities in their career pathway programs. In 2005-2006, in addition to the Massachusetts Work-Based Learning

Plan, the Vocational Technical Education Frameworks were used to structure student learning and productivity in these internships.

- **Serving Individuals in State Institutions**

In 2005-2006, the Career/Vocational Technical Education unit continued to collaborate with the Massachusetts Department of Correction to advance career/vocational technical education programming in fifteen correctional institutions. Programs served approximately 1000 inmates in both male and female facilities. As in prior years, a number of correctional institutions contracted with regional vocational technical schools to offer inmates a number of career/vocational technical education programs.

In 2005-2006, the following programs were supported:

- Auto Maintenance Program - South Middlesex Correctional Center (this program includes an offering nontraditional for women)
- Barber Program - Essex County Sheriff's Department
- Basic Electrical Program- Hampshire County House of Correction
- Career Counseling- provided as part of the vocational technical program at Pondville Correctional Center & Hampden County Sheriff's Office
- Carpentry Program - Barnstable County House of Correction and Suffolk County Sheriff's Office
- Computer Application Program - Plymouth County House of Correction and Norfolk County House of Correction
- Electronics Program - Worcester County House of Correction
- Food Service/Culinary Arts Program - Bristol County Sheriff's Office
- Graphic/Printing Program - Berkshire County Sheriffs Office and Franklin County Sheriffs Office
- Horticulture Program - South Middlesex Correctional Center and Baystate Correctional Center
- Small Engine Repair - Pondville Correctional Center

All student-inmates were involved in reintegration programs at their individual facilities. As part of those programs, a vocational assessment (SAGE) and in some cases, the Myers Brigg were made available to student-inmates preparing for reintegration into the community as well as those requiring assistance with general career and educational planning.

- **Support for Programs for Special Populations**

For the third consecutive year, the Massachusetts Department of Education's Office of Special Education Planning and Policy funded a staff person based in the Career/Vocational technical Education unit to promote equal access and positive outcomes for special population students, in particular, students with Individualized Education Programs (IEPs). In 2005-2006, this staff person provided technical assistance and professional development to school districts on local and state performance measures for members of special populations.

In 2005-2006, the focus was on monitoring and expanded technical assistance to those Perkins Act allocation grant recipients who had not met all Perkins core indicators ensuring that services, facilities and programs provided equal access to students who were member of special populations and that these populations are held to the same standards as are other students.

In addition to Perkins Act Local Plan reviews and monitoring, activities and services for students in all designated special population groups are monitored by Career/Vocational Technical Education unit staff through the Massachusetts Department of Education's Coordinated Program Review system. During these reviews, programs are monitored to ensure equal access, appropriate support and the least restrictive environment for students with disabilities. The needs of students enrolled in

programs that would prepare them for careers that are nontraditional for their gender, as well as those with economic disadvantages and limited English proficiency are monitored through data reviews, classroom observations and interviews with students, parents and staff.

Activity highlights during 2005-2006:

- The staff person funded by Massachusetts Department of Education's Office of Special Education Planning and Policy served as the primary contact for recipients of Carl D. Perkins funding regarding program monitoring and implementation of policies and regulations related to students who are members of special populations.
- Regular monitoring of the educational outcomes for students who are members of special populations enrolled in career/vocational technical education programs was completed through desk reviews of improvement plans and onsite monitoring via the statewide Coordinated Program Review system, and civil rights monitoring of targeted public two-year colleges.
- An informal review of substantially separate career/vocational technical education programs was conducted in targeted districts that both report students as enrolled in non-Chapter 74 career and technical education programs and receive Carl D. Perkins funding. The purpose of the informal review was to assess equal access and opportunity for this population to enroll in the district's career/vocational technical education programs/courses and to evaluate whether services, facilities and programs are comparable to those offered to the general population.
- The staff person funded by Massachusetts Department of Education's Office of Special Education Planning and Policy attended state level training on the Massachusetts English Learner Education laws and regulations (Chapter 71A) and later convened MADOE unit supervisors and administrators to discuss concerns and issues facing students with limited English proficiency enrolled in career/vocational technical education courses and programs. Access to Student Information Management data regarding this special population has allowed for analysis, better local planning and onsite monitoring to ensure better access to career/vocational technical education programs for students with limited English proficiency.
- The Career/Vocational technical Education unit was represented on a newly formed Transition Task Force created as part of the state's six-year strategic special education State Performance Plan (SPP). The staff person funded by Massachusetts Department of Education's Office of Special Education Planning and Policy represented the needs of students with disabilities enrolled in career/vocational technical education programs to ensure a continuum of transition services. The staff person will continue to be a full participant in the discussions, data collection efforts, conferences and planning sessions of the Transition Task Force through 2006-2007.
- Coordination efforts were increased among Career/Vocational technical education unit staff in the review of Perkins Act Local Plan Updates. Budget requests were evaluated to ensure that schools with populations not meeting Perkins Act core indicators had adequately and appropriately dedicated Perkins Act funds to program improvement.
- The staff person funded by Massachusetts Department of Education's Office of Special Education Planning and Policy provided in-house professional development to Career/Vocational Technical Education unit staff on the Individuals with Disabilities Education Act 2004, as well as the FERPA and state confidentiality laws/regulations.

B. Permissible Activities [Section 124]

Tech-Prep – In 2005-2006, Massachusetts' twelve Tech-Prep consortia continue to provide guidance and oversight in the delivery of programs, services and interventions to support positive postsecondary transitions for students enrolled in career/vocational technical education programs. Consortia efforts focused on: (1) the development of career pathway grids as a career planning tool; (2) early (practice) college placement tests (e.g., Accuplacer) to inform students enrolled in career/vocational technical education programs on career planning and decision-making; (3) updating articulation agreements and monitoring the use of articulated credits; and (4) the promotion of registered apprenticeships as a postsecondary option for students enrolled in career/vocational technical education programs. All consortia established relationships between schools and registered apprenticeship programs and a number of formal apprenticeship agreements were established.

MA Career Resource Network - In 2005-2006 the Massachusetts Department of Education and the Massachusetts School Counselor's Association collaborated with the University of Massachusetts at Amherst to document replicable systems for school and district data based decision making regarding implementation of career development education via comprehensive school counseling programs. To that end, development of a research-based draft Guide to the Massachusetts Model for Comprehensive School Counseling Programs was initiated in 2005-2006. This Guide documents processes, challenges and outcomes regarding the development, implementation and evaluation of career development education interventions and their impact on student achievement outcomes. With *MA Career Resource Network* funding, seven (7) Massachusetts public schools were selected and supported as pilot sites for research-based implementation. The pilot schools were provided with technical assistance from the University of Massachusetts at Amherst in the collection and eventual publication, in the Guide, of both quantitative and qualitative outcomes regarding program implementation.

The draft Guide to the Massachusetts Model for Comprehensive School Counseling Programs is scheduled for release in 2006-2007. The Guide will serve as a "how-to" manual for Massachusetts school counselors in implementing the Massachusetts Model for Comprehensive School Counseling Programs. Whereas the MA CDE Benchmarks were integrated into the MA Model as the content that counselors are responsible for, this Guide encourages equitable delivery of CDE by providing all school counselors with much needed guidance, support and resources for incorporating CDE into all aspects of program delivery, in particular via individualized career planning and postsecondary advising.

Cooperative Education- Building upon the progress made in 2004-2005 to strengthen the connection between school-based and work-based learning, the Career/Vocational Technical Education unit assisted local school districts in implementing a knowledge and skill attainment model for cooperative education. The model is designed to provide employer feedback on students' technical competencies and work maturity to their schools. The Massachusetts Department of Education also issued a Request for Proposals to develop an educational framework for cooperative education aligned with the Vocational Technical Education Frameworks. Six (6) districts were awarded grants to set the foundation for a uniform competency assessment model for students enrolled in cooperative education.

In 2005-2006, several Cooperative Education components of career/vocational technical education programs piloted use of the *Skills Plus* competency tracking software to gauge student progress outside the classroom. Registered apprenticeship opportunities and linkages with postsecondary education were also developed for students participating in cooperative education. Efforts to expand and improve cooperative education placement continued to be done through state monitoring.

In 2005-2006, the Chapter 74 Manual for Vocational Technical Cooperative Education, available at <http://www.doe.mass.edu/CVTE/programs>, was distributed and was widely used by cooperative education coordinators and teachers. This manual includes guidelines, forms, assessment instruments and procedures for setting up cooperative education. Initially distributed in 2004, the manual was revised and updated this past year to include new materials based on feedback from the field. Information was added on such topics as services to special populations in cooperative education, safety, workers' compensation

coverage, child labor laws, technical and academic competency attainment, and guidance on Massachusetts' mandated CORI (criminal offenders records information) policy.

Cooperative education was monitored during 2005-2006. Corrective action plans were instituted for schools that needed improvement. Monitored districts have shown improvement in complying with all of the cooperative education requirements.

Career/Vocational Technical Education Student Organizations: In 2005-2006, grant opportunities were made through a Request for Proposals with Perkins Leadership funds to support career/vocational technical education student organizations. Grants were awarded for *Business Professionals of America (BPA)*, *Distributive Education Clubs of America (DECA)*, *Family, Career and Community Leaders of America (FCCLA)*, *FFA – An organization for Students Studying Agriculture*, and *SkillsUSA* to support activities designed to enhance students' career/vocational technical education and provide instruction in workplace, leadership, and communication skills. The following sample highlights are representative of 2005-2006 activity levels:

DECA – In 2005-06 Massachusetts' *Distributive Education Clubs of America* served 2,600 students in 50 chapters. DECA efforts continue to promote the application of marketing skills that students are learning through competitions at the local, district, state and international level. All activities emphasize leadership and team skills. One Massachusetts DECA Chapter received a Gold Level Recognition Award from National DECA, the highest recognition level for an operating chapter. Massachusetts DECA also received twenty-nine awards at the 2006 International Conference; among them three first place winners in the Virtual Business Challenge and eleven members ranking in the top ten overall. Approximately \$15,000 in scholarship money was awarded to Massachusetts DECA students in the 2005-2006 school year.

FCCLA- In 2005-2006, *Family, Career and Community Leaders of America* continued to support students career development through family and consumer sciences education, emphasizing the importance of personal, work and societal issues. Four thousand high school students in six chapters were involved in member activities such as volunteering at homeless shelters and hosting community service events. Involvement in FCCLA also offered Massachusetts students the opportunity to expand their leadership skills by participating in state leadership seminars, national leadership academies and regional cluster meetings.

FFA - In the 2005-2006 school year, Massachusetts *FFA* served 1,163 students in 15 chapters. *FFA* continues to develop student leadership, personal growth and career success through agricultural education. To accomplish this, Massachusetts *FFA* hosts 36 career development events over the course of the school year. FFA members put classroom knowledge to the test while competing with their peers from across the State. In addition to skill-based events, leadership development programs are offered. Training programs provide opportunities for students to learn, develop and refine their leadership knowledge and skills.

SkillsUSA - In 2005-2006, *SkillsUSA* served a membership of 15,586 consisting of 14,924 students and 662 teachers and administrators of career and technical education. During the year, SkillsUSA Massachusetts continued to place major emphasis on the integration of an employability skills development program (Professional Development Program, PDP) as part of the school-wide curriculum of participating Chapters. Nineteen high schools joined as total participation chapters, nine individual training programs also joined as total participation classrooms. Major activities of *SkillsUSA* included: 6 leadership & skills development conferences serving 6,500 members and over 30 training workshops serving 1,700 members.

III. Distribution of Funds and the Local Plan for Vocational and Technical Education Programs [Sections 131 and 134]

A. Summary of the state's eligible Perkins recipients

In program year 2005-2006, Perkins Act allocation funds were awarded to 70 school districts (29 of which were regional districts), 4 consortia (one of which was postsecondary) and 17 public two-year colleges.

B. 2005-2006 Perkins Act Local Plan Update

All school districts, consortia and public two-year colleges eligible to receive Perkins allocation funds in 2005-2006 completed an Annual Perkins Local Plan Update. Districts/consortia/public two-year colleges are directed to use their Perkins Core Indicator data to evaluate previous strategies and develop plans to improve career/vocational technical education programs in relation to core indicator outcomes. In 2005-2006, via the *Local Plan Update* districts, consortia and public two-year colleges were asked to report on such students outcomes as the awarding and use of articulated credits.

A copy of the Perkins Local Plan Update Package for Secondary Schools - Spring 2006 is at http://www.doe.mass.edu/cte/perkins/localplanupd_tsecsch.doc.

A copy of the Perkins Local Plan Update Package for Public Two Year Colleges - Spring 2006 is at http://www.doe.mass.edu/cte/perkins/localplanupd_2yrcol.doc

IV. Accountability [Section 113] -

A. State's Overall Performance Results

Secondary

In 2005-2006, the percentage of high school first-time test takers enrolled in career/vocational technical education programs that passed both the mathematics and English language arts tests on the MCAS was 81.07%. Not only did this performance level exceed the previous year's level (75.57%) but it surpassed the State's target performance level of 51.44% by a significant margin.

Students did not meet the target statewide goal of 93.15% for *core indicator 1S2 (Attainment of Vocational Skills)* with 87.41% of the student population meeting the benchmark. So too were results for *core indicator 2S1*, reported as a three-year average graduation rate. However, for the class of 2005 alone, the rate was 89.63%. It is important, to note that these results are tied to the new requirement that students pass the MCAS tests in order to earn a Competency Determination and graduate. Although core indicator 1S1 is based on first-time test takers, core indicator 2S1 depends on the number of students who ultimately earn the Competency Determination and graduate. Students have two opportunities per year to re-take the tests. Individuals who have completed high school but have not yet passed the tests also have opportunities to re-take the tests. Those who have not passed receive support including MCAS remediation programs funded by MADOE as provided by their schools, public two-year colleges and One-Stop Career Centers.

Core Indicator 3S1, again reported as a three-year average of *the positive placement rate* was 95.26% coming extremely close to the State's goal of 95.96%. 44.43% of these graduates went onto postsecondary education/training with 50.84% of the graduates going into the workplace or the military.

The performance results for *core indicators 4S1 and 4S2 for nontraditional participation* can be found in great detail below in Section B. under State's Performance Results for Special Populations.

Postsecondary

Although postsecondary outcome data is not collected by the Student Information Management System, Perkins assisted public two-year colleges and one Perkins Postsecondary Consortium continue to improve their collection methods and use of data via technical assistance, monitoring and professional development provided by the Career/Vocational Technical Education unit. For example, in 2005-2006,

through the Perkins Act Local Plan Update, data was collected regarding the award and use of articulated credit at the colleges. This data was then compared to similar data collected at the high school level. The results were disseminated to Tech-Prep consortia, largely responsible for oversight of articulation agreements, for regional dissemination, professional development, planning and accountability within the public two-year colleges and the Perkins Postsecondary Consortium.

In 2005-2006, staff from the Career/Vocational Technical Education unit worked with postsecondary educators on the validation of the Vocational Technical Education Frameworks. The educators most of whom were college faculty provided critical input and validation of the standards in Frameworks.

Postsecondary *Core Indicator Data for both 1P1 and 1P2* are measured by analyzing the number of courses completed as a percent of courses attempted for postsecondary students in career/vocational technical education programs. For 2005-2006, the percent of courses completed was 77.26%, exceeding the state goal of 76.24%. Most notably among special populations, students with limited English proficiency and students completing programs that would prepare them for careers that are nontraditional for their gender exceed the performance goal respectively, 78.60% and 76.64%.

The performance measures for *postsecondary completion rates, Core Indicator 2P1*, is measured by tracking the progress of several different cohorts of students. This core indicator is based on the percentage of each cohort that received a degree, certificate, transferred to another college/institution or is still enrolled. 52.06% of these students in 2005-2006 met those completion benchmarks exceeding the state goal of 48.72%.

Postsecondary Core Indicators 3P1 and 3P2 are determined based on self-reporting via follow-up surveys with graduates. For program year 2005-2006, the percent of graduates of career/vocational technical education programs with a positive placement (military, employed, or additional education) was 94.88%, exceeding the goal of 95.05%. Of these, 22.20% pursued advanced training with 72.55% employed or in the military.

Postsecondary Core Indicator 4P1 measures nontraditional by gender participation, based on the number of students enrolled in nontraditional by gender programs as a percentage of total enrollment in those programs. In program year 2005-2006, nontraditional by gender enrollment was 13.80%, which did not meet the new goal set in 2004-2005 of 15.82%.

Postsecondary Core Indicator 4P2 measures nontraditional by gender completion, based on the number of nontraditional by gender students completing specified programs, as a percentage of total completers in those programs. Nontraditional by gender completion was 11.74% in 2005-2006, missing the benchmark goal set in 2004-2005 of 13.0 %.

B. State's Performance Results for Special Populations

Data Analysis: In FY 2005-06, a total of 108,016 high school students were enrolled in career/vocational technical programs, with 51,801 high school students identified in SIMS as members of special populations (i.e., students with disabilities, students with limited proficiency in English, students with economic disadvantages, students who identified as single parents, students with other educational barriers and students enrolled in programs that would prepare them for careers that are nontraditional for their gender). 12,780 students were identified as individuals with disabilities, 2,315 identified as students with limited English proficiency and 21,863 identified as students with economic disadvantages.

While the number and percentage of *students with disabilities* enrolled in career/vocational technical education programs has remained fairly constant over the years, the number of *students with economic disadvantages* in career/vocational technical education programs continues to increase. (2002-2003, 15,839; 2003-2004, 18,038; 2004-2005, 20,925). By sharp contrast, however, the number of *students with limited English proficiency* enrolled in career/vocational technical education programs remains

consistently low and well below the state average (3.7 % of all career/vocational technical education programs as compared with the state enrollment average of 5.1%).

1S1-Academic Achievement:

For the second year in a row, with the exception of students with limited proficiency in English, students, all special populations exceeded the state goal of 51.44% for this indicator. Although 290 (41.65%) out of 497 students identified as limited English proficient did not pass the MCAS on the first try, this performance rate is a marked improvement over last year's outcome for this special population (i.e., 28.77%).

1S2-Technical Achievement: In 2005-2006, the goal for technical skill achievement (93.15%) was not met for any of the special populations groups.

2S1-High School Completion and 3S1-Placement: No special populations met these negotiated performance levels in 2005-2006 (93.15% and 95.96% respectively).

4S1-Nontraditional Enrollment: As a special population, based on a three-year average reported in SIMS for 2005-2006, 11.37% of students in career/vocational technical education programs are pursuing careers that are nontraditional for their gender, exceeding the state goal of 10.85%. Disaggregating of special population data within this special population reveals similar performance patterns for students with economically disadvantages (14.02%) as well as for students with limited English proficiency (13.03%) and students who identified as single parents (11.57%). However, students with disabilities continue to enroll well below the target level (8.10%) suggesting the need for strategic databased improvement planning for this population. It should be noted that when examined on an annual basis, using SIMS data, special population trends for this core indicator have remained consistent.

4S2-Nontraditional Completion: As a special population, based on a two-year average reported in SIMS for 2005-2006, only 10.14% of students enrolled in career/vocational technical education programs that would prepare them for careers that are nontraditional for their gender are completing these programs, compared the state goal of 11%. Similarly, students with disabilities and students with limited proficiency in English fell below the state goal with completion rates of 6.48%, and 10.16% respectively. It should be noted that students the completion rates for students with limited proficiency in English increased significantly from last year (7.89%) while students with economically disadvantages and single parents exceeded the performance goal at rates of 12.02% and 19.27%, respectively.

C. Definitions

- *Vocational Participant/Concentrator* - Is enrolled in a Chapter 74-approved vocational technical education program that also meets the Perkins Act definition of vocational and technical education or is enrolled in a non-Chapter 74 career and technical education program that meets the Perkins Act definition of vocational and technical education.
- *Vocational Completer:* (Added based on federal definition) Attains the academic and technical knowledge/skills/ proficiencies within a program/sequence of courses that provides a student with the academic and technical knowledge/skills/proficiencies to prepare for employment and/or further/advanced education and registered apprenticeships.
- *Tech-Prep student* - is a student who is enrolled in a Chapter 74-approved vocational technical education program or a non-Chapter 74 career and technical education program and has a Career Plan that articulates a program of study using appropriate Pathway Grids and is linked to approved articulation agreement(s) or developing articulation agreements with colleges or registered apprenticeship programs, and has fully completed with his/her parent(s)/guardian(s), a Tech-Prep student registration form.

D. Measurement Approaches

In 2005-2006, using data from SIMS and related MCAS test result files, the career/Vocational Technical Education unit is able to measure the following student outcomes with increasing fidelity:

- Career/vocational technical education program enrollment by CIP code, race, gender, special population, grade, and other characteristics (including any combination of characteristics);
- Academic attainment (MCAS test results);
- Technical attainment (industry-recognized certificates and licenses);
- Career/vocational technical education program retention and completion;
- Nontraditional by gender program enrollment and completion.

All Perkins Act core indicator data except for follow-up survey outcomes are collected in SIMS as follows:

Core Indicator 1S1: Academic Attainment is measured by the percent of students who pass the statewide Massachusetts Comprehensive Assessment System (MCAS) tests in English language arts and mathematics on the first attempt. The program year 2005-2006 measure is based on 10th grade students in the class of 2008 who took the tests in spring 2006.

Core Indicator 2S1 and 2S2: The career/vocational technical education program completion rate is based on the percentage of students who are enrolled two years in a career/vocational technical education program who then complete the program and graduate.

Core Indicator 3S1 is based on the follow-up survey with career/vocational technical education program graduates.

Core Indicator 4S1 is based on nontraditional by gender enrollment in career/vocational technical education programs as a percentage of all students in those nontraditional by gender programs.

Core Indicator 4S2 is based on the number of nontraditional by gender graduates of career/vocational technical education programs as a percentage of all graduates of those nontraditional by gender programs.

As described in section A. *Assessment* of this report, the Career/Vocational Technical Education unit worked collaboratively with the Massachusetts Department of Education's Information Services and Technology unit to set up a portal through which districts may upload their Career/Vocational Technical Education Graduate One Year Follow-up Report database. Beginning in program year 2006-2007, submission of the graduate one-year follow up data will only be accepted through use of the Department's security portal. The Microsoft Access database provided by the Career/Vocational Technical Education unit can now be uploaded into the security portal for districts to access more quickly, ensuring confidentiality and removing additional time delays, which will continue to streamline and improve, the reporting process.

Information collected on the Career/Vocational Technical Education Graduate One-Year Follow-up Report includes:

- The Classification of Instructional Program (CIP code)
- Type of program (Tech-Prep, Cooperative Education)
- In college, training or registered apprenticeship? (Yes/No)
- If yes, type of college (two-year, four-year, technical school or apprenticeship)
- Full-time versus part-time
- Name of college
- Major or program of study

- Is the college program related to the high school program of study?
- Employment status (Employed, Military, Seeking Work or Not in Labor Force)
- Job title
- Company
- Wage
- Hours per week
- Is the job related to the high school program of study?
- Military branch
- Military specialty (MOS)

At the public two-year college level, career/vocational technical education reporting is automated using a PC format (Microsoft Excel and/or Microsoft Access). Postsecondary/postgraduate students at secondary schools are reported through a similar format. Data submitted is compiled into a statewide database and is available to the Career/Vocational Technical Education unit for analysis and reporting. The unit shares summary data with the public two-year colleges and the Perkins Postsecondary Consortium through a number of different forums.

E. Improvement Strategies

The following strategies are planned for 2006-2007 to improve the overall accuracy, reliability and completeness of the state's Perkins accountability data:

- *The Career/Vocational Technical Education unit will develop a one-year transition plan to include common data elements based upon reauthorization of the Perkins Act.*
- *The bi-monthly Massachusetts State Director of Career/Vocational Technical Education Updates, regular advisories and data reporting manuals will be employed to both document and communicate expectations and guideline to the field.*
- *A dedicated data specialist in the Career/Vocational Technical Education unit will be a resource to the Career/Vocational Technical Education unit and to the schools/colleges/consortia.*
- *Revisions will be made to the Career/Vocational Technical Education Graduate Follow-up Report data collection instrument and process.*
- *The State Tech-Prep Leader will communicate and collaborate with Tech-Prep consortia and the Executive Office for Community Colleges to improve accuracy, reliability and completeness of Tech-Prep outcome data.*

The following strategies are planned for 2006-2007 to improve outcomes for students enrolled in career/vocational technical education programs in all Perkins Act core indicators:

- *The Career/Vocational Technical Education unit will continue to provide accurate and timely data and technical assistance to schools to support the implementation of the Vocational Technical Education Frameworks and the Certificate of Occupational Proficiency.*
- *There will be increased focus on validating the Frameworks and training teachers in the field on using and implementing the Frameworks.*
- *Collaboration will continue with constituencies in career/vocational technical education, including all program advisory committees for validation of the VTEF's and implementation plans.*
- *Additional safety reviews have been scheduled for 2006-2007. School safety plans and enforcement will continue to be an important focus, both in the school districts and in the workplace (e.g., cooperative education.)*
- *Career/Vocational Technical Education unit staff will continue to collaborate with Special Education staff and the Program Quality Assurance unit that leads compliance monitoring to analyze data,*

- *Monitoring of substantially separate career/vocational technical education programs for students with disabilities will be done outside the Program Quality Assurance monitoring schedule for the purpose of ensuring equity in access, identifying the need for technical assistance and documenting and sharing best practices.*
- *The Career/Vocational Technical Education unit will continue to verify that teachers are appropriately licensed in all career/vocational technical education programs.*
- *At the postsecondary level, increased focus will be placed on follow-up and monitoring of students in career/vocational technical education programs regarding successful transitions to colleges. This includes accountability of Tech-Prep and school counseling programs and interventions at the secondary and postsecondary levels.*
- *Statewide professional development on and monitoring of the use of Career Plans will be done at the secondary and postsecondary level.*
- *Statewide professional development on and monitoring of early Accuplacer testing and remediation will be done at the secondary and postsecondary level.*
- *Tech-Prep consortia will continue to take the lead in creating partnerships with high schools and registered apprenticeship programs to increase the number of students who are able to take advantage of registered apprenticeships.*

V. Monitoring Follow Up

N/A

VI. WIA VI. Workforce Investment Act (WIA) Incentive Grant Award Results

Workforce Investment Act Incentive Grant funds awarded to Massachusetts are being used to distribute additional resources to the Massachusetts *Pathways to Success by 21 (P21)* initiative that initially began with planning grants from the Massachusetts Department of Workforce Development to the state's 16 regional workforce areas to support the development of regional Strategic Action Plans. The goal of each Strategic Action Plan was to bring together representatives of the relevant youth serving agencies in the region to define three to five strategies to increase the region's capacity to meet the needs of at-risk youth.

In 2005-2006, the Massachusetts Department of Education and the Massachusetts Department of Workforce Development brought together Workforce Investment Act Incentive funds to support regional implementation grants as a follow-up to the development of the Strategic Action Plans. The partners of P21 invited one grant application from each of the 16 regional workforce areas in Massachusetts, to undertake implementation activities under the umbrella of the *Pathways to Success by 21 (P21)* initiative.

Representatives from the Massachusetts Department of Education funded adult basic education providers, public two-year colleges/school districts with Perkins Act Postsecondary Local Plans, workforce investment boards/youth councils, and one-stop career centers, are partners in designing the use of these funds. Funds would be used to strengthen program linkages/services to provide intensive case management combined with academic education including basic skills and GED attainment, employment skill development through career/vocational technical education programming, job placement and post-employment support needs of out-of-school youth aged 18-24.