

**Massachusetts**  
**Carl D. Perkins Vocational and Technical Education Act**  
**Narrative for Program Year 2006-2007**

**Introductory Overview**

In 2006-2007, the Massachusetts Career and Vocational Technical Education unit of the Massachusetts Department of Education (MADOE) worked in collaboration with other units in the MADOE and with school districts, colleges and consortia with career and technical education programs to improve data collection and analyses of program outcome data, in particular for students who are members of special populations. In 2006-2007, the Career/Vocational Technical Education unit also focused on the delivery of technical assistance and professional development for Massachusetts' educators implementing the Massachusetts Vocational Technical Education Frameworks, and piloted a statewide competency tracking system for documenting students' acquisition of framework-based knowledge and skills. Student assessments to be used for the award of the Massachusetts Certificate of Occupational Proficiency were also developed and piloted. These accomplishments as well as other initiatives carried out under the Carl D. Perkins Vocational and Technical Education Act in 2006-2007 are presented in greater detail below.

**I. State Administration [Section 121]**

**A. Sole State Agency and Governance Structure**

In 2006- 2007, the Massachusetts Department of Education continued to serve as the sole state agency responsible for administration of the Carl D. Perkins Vocational and Technical Education Act with the Career and Vocational Technical Education unit responsible for administration of the Perkins Act. The Career and Vocational Technical Education unit's organizational chart was emailed to *Perkins2007@ed.gov* on December 31, 2007.

To ensure non-duplication, the State Director of Career/Vocational Technical Education coordinated administration and oversight of Massachusetts' career and technical education programs with state directors of other federal programs within the MADOE and the Community Colleges Executive Office. The Massachusetts Board of Education and the MADOE value career and technical education and consult with the State Director of Career/Vocational Technical Education on policy decisions as appropriate.

The Career/Vocational Technical Education unit expanded its collaboration efforts within MADOE in 2006-2007 to promote improvement and positive outcomes for Massachusetts' career and technical education programs. Collaboration with MADOE units such as the newly established Student and Secondary Support Office as well as Educator Licensure, Student Assessment Services, Program Quality Assurance, and Information Services have allowed the Career/Vocational Technical Education unit to better support program improvement through improved coordination of program monitoring and data collection and analyses. In addition, the MADOE and the Massachusetts Board of Higher Education have worked together to support a seamless PreK-16 education system within the Commonwealth.

**B. Organization of Career and Technical Education Programs**

61,859 secondary students were enrolled in career and technical education programs supported with Perkins funding in 2006-2007. These programs are found in 34 vocational high schools, 4 agricultural high schools, 44 comprehensive high schools and one secondary educational collaborative. 46,506 postsecondary students were enrolled in the state's 17 postsecondary two-year colleges. In addition, 1,541 students were enrolled in Massachusetts' high schools with career and technical education programs that meet the Perkins Act definition but do not write a Perkins local plan. These students benefited primarily through tech-prep services and activities delivered through tech-prep consortia.

In Massachusetts, all career and technical education programs are designated as meeting one of two categorical definitions:

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 but are not approved pursuant to Chapter 74..

Massachusetts also has postsecondary career and 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 and technical education in Massachusetts is currently 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; Transportation). Career/vocational technical education programs in Massachusetts are guided by the state's Vocational Technical Frameworks. These frameworks have been developed to include career cluster knowledge and skills in order to provide instruction in broader, more durable and transferable knowledge and skills. The Career/Vocational Technical Education unit recently issued an RFP for the development of a Vocational Technical Education Framework and a MA Program of Study Grid for Criminal Justice in the proposed Law and Public Safety Career Cluster. Massachusetts hopes to soon issue an RFP for the development of a new Vocational Technical Education Framework in the occupation of Skilled Construction Laborer within the Construction Career Cluster.

The State Director of Career/Vocational Technical Education is responsible for administration of the Perkins Act and Chapter 74 of the Massachusetts General Laws governing vocational technical education. As in past years, outcomes with respect to implementation of the Perkins Act were realized through coordination and collaboration within MADOE and with Massachusetts' education and business communities that support implementation of the No Child Left Behind (NCLB) Act.

In 2006-2007, eleven school liaisons and four supervisors, carried out the work of the Career/Vocational Technical Education unit. The primary responsibilities of the Career/Vocational Technical Education unit staff remained the same in 2006-2007: (1) review/approval of Perkins Act Local Plan Updates and grant applications; (2) support for implementation of the Vocational Technical Education Frameworks; (3) onsite program monitoring via the Coordinated Program Review system, as well as individual onsite monitoring of Perkins, civil rights, teacher preparation, and teacher testing programs; (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.

## **II. State Leadership Activities [Section 124]**

### **A. Required Use of Program Funds**

#### **Assessment of Career and Technical Education Programs**

In 2006-2007, with each of the 43 Massachusetts Vocational Technical Education Frameworks validated by constituencies in career and technical education, including industry based advisory committees, MADOE turned its attention to the development of the written assessments to be used in determining program and student outcomes.

For assessment and accountability purposes, the MADOE continues to issue guidance to school districts via the *Student Information Management System (SIMS) Handbook* found at <http://www.doe.mass.edu/infoservices/data/sims/DataHandbook.doc>. The handbook details the 52 data elements to be submitted by districts including data reporting requirements for each student enrolled in a career and technical education program (e.g., technical competency attainment and type of career and technical education program). Other data elements such as race and limited English proficiency are also collected and used at the state, district and local level in assessing career and technical education program outcomes and planning for improvement.

In 2006- 2007, a data specialist was hired to work full-time in the Career/Vocational Technical Education unit with the full benefit of all information technology resources of the MADOE. This staff member has refined certain data collection tools and processes to ensure that the data submitted is valid and reliable. Reviews of discrepancies in reports from school districts and public two-year colleges were conducted and improvements were made in 2006-2007 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.

In order to ensure that data used for program assessment, as reported to the MADOE from eligible recipients, are complete, accurate, and reliable, the Career/Vocational Technical Education unit liaisons also perform system verifications and checks as well as desk reviews. Liaisons also conducted regular program monitoring in 2006-2007 through the MADOE review process known as the Coordinated Program Review. Through this process, the MADOE ensures that career/vocational and technical education programs and activities are implemented in compliance with 41 criteria pertaining to the Carl D. Perkins Vocational and Technical Education Act. Additionally, the Career/Vocational Technical Education unit liaisons participated in the monitoring of unexplained disproportionate enrollments of special populations and protected groups (such as racial and ethnic minorities) through MADOE's Coordinated Program Review process.

New to Massachusetts' assessments efforts this year was the release of the first set of graduation rates for the 2006 cohort. (Prior to 2006, Massachusetts' graduation rates could only be estimated from annual dropout data or from grade level enrollment information.) MADOE is now able to track an individual cohort, or group of students, from the initial entrance into grade nine through to graduation with student-level data from the MADOE-Student Information Management System (SIMS).

In 2006-2007, as described in the Introductory Overview, the MADOE paid particular attention to program outcomes and improvement plans to better support students who are members of special populations. Thus, **Career/Vocational Technical Education staff** reviewed each Perkins IV One-Year Transition Local Plan to ensure that adequate descriptions were given of how individuals who are members of special populations would be: (1) provided with equal access to activities assisted under the Perkins IV; (2) would not be discriminated against on the basis of their status as members of special populations and (3) would be provided with services designed to enable the special population to meet or exceed each core indicator of performance. MADOE also required each eligible Perkins recipient to annually file a signed Statement of Assurances certifying compliance with state and federal education laws and regulations (e.g., NCLB, IDEA, Title VI).

Massachusetts again used Perkins Leadership funds to contract with a certified public accountant to review the Perkins financial and data records of eight school districts. Civil rights reviews under the Methods of Administration with the United States Department of Education – Office for Civil Rights were

also conducted at four public two-year colleges and two school districts. The Career/Vocational Technical Education unit will continue to review a similar number of Perkins allocation grant recipients in 2007-2008 per the Office of Civil Rights - approved targeting plan to ensure compliance.

Technical assistance safety reviews were also performed in 2006-2007 through an interagency service agreement with the Massachusetts Division of Occupational Safety. A Division of Occupational Safety specialist provided expert onsite technical assistance regarding the requirements of the United States Occupational Safety and Health Administration (OSHA) Requirements in 10 schools in 2006-2007. Career/Vocational Technical education unit staff also worked with districts to address safety findings. In cases where safety reviews revealed serious findings, districts were directed to take immediate action to address the findings and provide the MADOE with evidence of corrective action. The Career/Vocational Technical Education unit is proud of the work that has been done around the aspect of the industry known as safety in that teachers learned a great deal about occupational safety and have refined the curriculum based on this initiative.

### **Developing, Improving or Expanding the Use of Technology**

The Career/Vocational Technical Education unit continued to promote the use of technology in a variety of ways in 2006-2007, including the use of competency tracking software and discussion boards, lesson planning and communication tools available through the MADOE. Moreover, each of the 43 MA Vocational Technical Education Frameworks includes a major strand for technology intended to expand the use of and instruction in appropriate technologies in career and technical education programs. The MADOE also dedicated significant resources to the development of the technological state-of-the-art web-based online competency tracking system to be used by eligible secondary recipients and secured through MADOE's Security Portal.

MADOE continued to enhance *MassONE*, MADOE's web-based system for communication, collaboration, and curriculum planning, designed to support PreK-12 standards-based teaching and learning. *MassONE* provides tools that enable all students, including students enrolled in career and technical education programs, to expand their learning experience beyond the classroom. *MassONE* offers resources that will help teachers enrich their teaching and increase their productivity. *MassONE* offers curriculum and communication tools for the school or district administrator. Educational organizations can use *MassONE's* tools to create online groups for courses, workshops, or collaborative projects. Through *MassONE*, teachers, students, administrators, and other interested parties were able to participate in discussion boards, search through standards in the MA Curriculum Frameworks in the core academic subjects and the MA Vocational Technical Education Frameworks, create and share lesson plans and teaching resources, and offer support for student learning. MADOE intends to create discussion forums in *MassONE* for teachers who teach in career and technical education programs.

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.

MADOE also enhanced the library operated by MADOE for career/vocational technical education through the use of state-of-the art technology so that educators could access the collection online. Users can request and receive technical assistance regarding locating professional development resources online as well.

### **Comprehensive Professional Development Programs**

In 2006- 2007, the Career/Vocational Technical Education unit collaborated with professional associations to provide professional development for educators in career/vocational technical education programs. The following are a representative sampling:

*The Chapter 74 Implementation Academy* included seven full days of professional development for representatives from Massachusetts' high schools with Chapter 74-approved vocational-technical education programs. The participants were administrators, coordinators and/or teacher leaders selected by their school principals to lead each school's implementation efforts. The year- long project required schools to develop an implementation plan using a standard template.

*Conferences Gender Equity and Sexual Orientation in Career/Vocational Technical Education* were held in three regions across the state. These sessions supported schools' successful implementation of interventions and programs to support students enrolled in career/vocational and technical education programs that prepare them for careers nontraditional for their gender. Three regional sessions were designed to help staff and students in career/vocational technical education programs create school environments where students would not be limited by traditional gender roles. The goals were to: (1) support educators in assisting students to make career decisions not limited by gender, sexual orientation, or perceived sexual orientation, (2) promote an understanding that gender should not limit career choices and career success, and (3) equip schools with ideas and access to resources to improve the school climate for gay, lesbian, bisexual, and transgender students. Consultants who conducted the sessions also provided technical assistance (onsite, virtual, telephone, as applicable) in Massachusetts' schools assisted with Carl D. Perkins Career and Technical Education Improvement Act funds. As follow-up to the sessions, school districts received onsite assistance upon request through June 2007.

*The Massachusetts Vocational Technical Teacher Competency Testing Program*, funded in part with Perkins Leadership funds, administered five written tests to 394 candidates and performance tests to 222 candidates. *Test Development Workshops* were held in 2006- 2007 to align the process of written tests with the Massachusetts Vocational Technical Education Frameworks and to review test design procedures. Eighteen Test Development Workshops were conducted from July 1, 2006 through June 30, 2007. 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. A supervisor in the Career/Vocational Technical Education unit provided oversight and collaborated with the program contractor and advisors on program operations. The Test Appeals Subcommittee reviewed challenges to the written tests and performance tests. Alignment and revisions were completed on written and performance tests in the following nine areas: Cosmetology, Dental Assisting, Design & Visual Communications, Electronics, Horticulture, Mason & Tile Setting, Metal Fabrication & Joining Technologies, Plumbing and Practical Nursing (LPN), which has been aligned to the National Council Licensure Examination for Registered Nurses (NCLEX). Alignment revisions continue in the following ten areas: Biotechnology, Engineering Technology, Environmental Science and Technology, Facilities Management, Graphic Communications, Machine Tool Technology, Programming and Web Development, Office Technology, Painting & Design Technologies and Radio & Television Broadcasting. In program year 2006-2007, test development activities were initiated for Early Education and Care.

A statewide professional development seminar was also offered by the Southern Regional Education Board's *High Schools That Work* on "Getting to Proficiency by Looking at Assignments, Assessments and Student Work."

### **Support for Career and Technical Education Programs through Integration of Academics with Technical Education**

Support for appropriate integration of academic and technical knowledge and skills continued to be a major goal in 2006-2007. Each of Massachusetts' Vocational Technical Education Frameworks

specifically highlights relevant academic standards from the Massachusetts Curriculum Frameworks used in teaching core academic courses. Consequently, each Vocational Technical Education Framework includes standards in English language arts, mathematics, and science & technology/engineering that are appropriate for its curriculum. In addition to the Chapter 74 *Implementation Academy* referenced under Professional Development, several workshops were also offered in 2006-2007 on such topics as lesson planning and curriculum alignment to the Vocational Technical Education Frameworks. Teachers attending such workshops were given 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 2006-2007, Massachusetts' continued involvement with the Southern Regional Education Board's (SREB) *High Schools That Work (HSTW)* initiative to improve the academic and technical achievement of students enrolled in secondary career and technical education programs. Twenty-two schools participated in professional development, networking meetings and data analyses to assist them in implementing the ten key practices of *High Schools That Work*, two of which are: "encouraging the application of academic content and skills to real world problems and projects" and an "emphasis on the development of higher-level mathematics, science, literacy and problem-solving skills needed in the workplace and in further education." Each school conducted local professional development related to these key practices. Teams of educators from each site also met to analyze results of the 2008 *HSTW* assessment, student survey and teacher survey, plan future professional development events and share strategies.

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

In 2006-2007, through basic allocation grants Massachusetts supported programs and interventions designed to assist students in exploring or pursuing careers nontraditional for their gender. Programs and interventions included innovative exploratory programs, establishing student support groups as well as mentorship programs and guest speakers.

As described under Comprehensive Professional Development Programs conferences gender equity and sexual orientation in career/vocational technical education were held in three regions across the state. These sessions supported schools' successful implementation of interventions and programs to support students enrolled in career/vocational and technical education programs that prepare them for careers nontraditional for their gender. Three regional sessions were designed to help staff and students in career/vocational technical education programs create school environments where students would not be limited by traditional gender roles. The goals were to: (1) support educators in assisting students to make career decisions not limited by gender, sexual orientation, or perceived sexual orientation, (2) promote an understanding that gender should not limit career choices and career success, and (3) equip schools with ideas and access to resources to improve the school climate for gay, lesbian, bisexual, and transgender students. Consultants who conducted the sessions also provided technical assistance (onsite, virtual, telephone, as applicable) in Massachusetts' schools assisted with Carl D. Perkins Career and Technical Education Improvement Act funds. As follow-up to the sessions, school districts received onsite assistance upon request through June 2007.

Massachusetts continues to place equal emphasis on both males and females in assisting schools to support and evaluate nontraditional participation and completion. Disaggregated data continues to reveal that even in those schools/districts that meet both core indicators for nontraditional enrollment and completion, there is still a significant disparity between performance levels for males and females.

In June 2007, at the annual Connecting for Success Conference sponsored by the Massachusetts Association of Vocational Administrators, staff from the Career/Vocational Technical Education unit provided technical assistance to schools via a workshop that supplemented the technical assistance efforts summarized earlier. In April of 2007, a staff person from the Career/Vocational Technical Education unit

was also selected to serve as a Member-at-Large on the National Alliance for Partnerships in Equity (NAPE) Executive Committee thus providing Massachusetts with additional resources and strategies that can be shared with schools.

### **Supporting Partnerships To Meet Academic/Technical Standards**

In 2006-2007, the Career/Vocational Technical Education unit continued to work collaboratively with numerous partners outside of MADOE. 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 academics, and 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, University of Massachusetts, Massachusetts School Counselor's Association and the Massachusetts Department of Labor and Workforce Development numerous business and labor partners at the state, regional, and local level.

For example, in 2006-2007 six high schools received funding from the *Massachusetts BioEd Foundation* to implement the *Life Science Career Development Initiative* and were supported through a partnership between the Foundation, the MADOE, the Massachusetts School Counselor's Association, the University of Massachusetts, and local area WIBs. The goal of the initiative was to develop a school-based, collaborative model in which school counselors coordinated efforts to identify and support students interested in pursuing careers in the life sciences and biotechnology fields. Emphasis was placed on integrating the development of the requisite academic/technical, personal/social and workplace-readiness skills, and knowledge for success in these fields.

Also in 2006-2007, partnerships with Massachusetts' 16 Local Workforce Investment Boards (WIBS) and the Massachusetts Department of Education's *Connecting Activities Initiative* again provided high school students with structured internship opportunities in their career and technical education programs. In addition to the Vocational Technical Education Frameworks, the Massachusetts Work-Based Learning Plan was used to structure student learning and productivity in these internships. 1,500 students and 350 adults participated in the 5th annual Construction Career Days at the New England Laborers Training Academy in Hopkinton. This event was carried out in partnership with the MADOE, the Massachusetts Laborers Training Academy and tech-prep consortia. As in previous years, the goal of this work-based experiential event was to support the career development of students enrolled in programs in the construction cluster.

For the second consecutive year, Massachusetts qualified to receive a Workforce Investment Act (WIA) Title V incentive grant. To qualify for an incentive grant, a state must exceed its agreed-upon performance levels for WIA Title I, the Adult Education and Family Literacy Act (AEFLA), and the Carl D. Perkins Vocational and Technical Education Act of 1998 (Perkins III). In partnership with the Department of Education's CVTE and Adult Education units and the MA Workforce Development Office, Massachusetts submitted a proposal for a grant that would link the WIA Title V incentive grant funds with the State's *Pathways to Success by 21* (P21) Project to serve older at-risk youth. The proposal was recently funded. More information can be found in section VI and at [www.P21.us](http://www.P21.us).

### **Serving Individuals in State Institutions**

In 2006-2007, the Career/Vocational Technical Education unit continued to collaborate with the Massachusetts Department of Correction to advance career/vocational technical education programming in 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 2006-2007, the programs in the following institutions were supported:

Massachusetts Department of Correction  
Berkshire County House of Correction  
Franklin County House of Correction  
Hampshire County House of Correction  
Middlesex County House of Correction  
Worcester County House of Correction

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 fourth year in a row, the Office of Special Education Planning and Policy (SEPP) of the Department has funded a staff position in the Career/Vocational and Technical Education unit to provide guidance within the unit around programs, interventions and services for special populations.

- A Career/Vocational and Technical Education unit staff person served as the primary contact for technical assistance to recipients of Perkins funding regarding programs, interventions and services for students who are members of special populations.
- Collaboratively, MADOE staff met to evaluate and resolve complaints filed by parents/guardians, applicants and/or school officials pertaining to members of special populations regarding admissions to career and technical education programs.
- Career and technical education was represented on the *Special Education State Performance Plan Indicator Interest Groups for Secondary Transition Planning and Post School Outcomes*. Interest groups were developed to evaluate the state's efforts to implement the requirements and purposes of the federal special education law (IDEA-2004) and outline how Massachusetts will improve over time.
- Guidance in district monitoring was provided to ensure that individuals who are members of special populations are provided with equal access to programs and activities supported with Perkins funding and are not discriminated against on the basis of their status as members of special populations. This included civil rights reviews of public two-year colleges through a separate onsite monitoring process.
- Reviews were done of recruitment materials made available to students and their families to ensure equal access to career and technical education programs, included translation of materials.
- Reviews of Perkins Act One-Year Transition Local Plans and related technical assistance were conducted to ensure that members of special populations are provided necessary supports and services to be prepared for postsecondary education and for success in high-skill, high-wage and high-demand careers.
- Career/vocational technical student organizations and tech-prep grants require the collection and analysis of data regarding special populations' participation in programs, services and interventions to ensure equity in access as well as proximal and distal program outcomes as they related to the grant priorities.

- Technical assistance was provided on the Guidelines for Eliminating Discrimination and Denial of Services on the Basis of Race, Color National Origin, Sex and Handicap in Vocational Education Programs - 34 CFR, Part 100, Appendix B (Guidelines).

## **B. Permissible Activities and Major Initiatives**

### Tech-Prep

In 2006-2007, under the leadership of the State Director for Career/Vocational Technical Education and Massachusetts' tech-prep leader significant improvements in accuracy, reliability and completeness of tech-prep outcome data were noted in 2006-2007. Massachusetts' twelve consortia coordinators under the governance of their consortia boards provided guidance and oversight in the delivery of programs, services and interventions to support positive postsecondary transitions for students enrolled in career and technical education programs. Consortia efforts in 2006-2007 maintained the same foci established in 2005-2006: (1) the development of career pathway grids as career planning tools; (2) early (practice) college placement tests (e.g., Accuplacer) to inform students as well as their parents and teachers of the possible need for remediation; (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 and technical education programs.

A steady increase has been noted in the number of students enrolled in career and technical programs seeking to "pre-assess" their need for college remediation by taking the Accuplacer placement test, used by Massachusetts two and four year colleges. In 2004-2005, in their junior year or first semester of the senior year, 1,762 students took the Accuplacer pre-test, followed by 2,154 in 2005- 2006 and 2,781 in 2006-2007. These results suggest a continuous and upward trend in the number of CTE students' planning to attend Massachusetts' colleges.

In 2006-2007, each consortia established relationships between schools and registered apprenticeship programs and a number of formal apprenticeship agreements were established.

### Massachusetts Career Resource Network

The primary deliverable of the Massachusetts Career Resource Network (MCRN) in its last project year was *The MA Model Implementation Guide*. The final draft of this companion "how-to" guide to the *MA Model for Comprehensive School Counseling Programs* was revised in 2007 based on feedback from the field following its first release in May 2007. The Guide can be found at [www.masca.org](http://www.masca.org). The Implementation Guide was grounded in the experiences of eight MA pilot schools implementing the *Massachusetts Model* from 2006 –2007. Pilot sites were representative of the diversity of Massachusetts public schools: rural and urban settings; small and large districts; and elementary, middle, and high schools and included both comprehensive and vocational/technical high schools.

### Cooperative Education

In 2006-2007, the Chapter 74 Manual for Vocational Technical Cooperative Education, available at [http://www.doe.mass.edu/cte/programs/coop\\_ed/manual.doc](http://www.doe.mass.edu/cte/programs/coop_ed/manual.doc), was updated, distributed and widely used by Massachusetts' cooperative education coordinators and teachers. This manual contains guidelines, forms, assessment instruments and procedures for setting up a cooperative education component of a career and technical education program. Initially distributed in 2004, the manual was revised and updated 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 offender records information) policy.

As part of the MADOE's coordinated program reviews of school districts in 2006- 2007, each school districts' cooperative education program components were monitored by staff from the Career/Vocational Technical Education unit. Corrective action plans were developed by schools when findings were made. As a consequence of guidance and monitoring, staff from the Career/Vocational and Technical Education unit has noted reductions in the number of findings due to increased awareness and thus compliance with cooperative education laws and regulations.

To strengthen the connection between school-based and work-based learning, the Career/Vocational Technical Education unit provided grants to school districts in 2005-2006 to develop knowledge and skill based models for cooperative education. These models were implemented in 2006-2007. As a result, six models are now available for developing competency assessments for students participating in cooperative education. Several schools also piloted the use of competency tracking software to gauge and document student progress during cooperative education.

### Career/Vocational Technical Education Student Organizations

In 2006-2007, grants were awarded with Perkins Leadership funds through a Request for Proposals to support the following career and technical education student organizations: *Business Professionals of America* (BPA), *Distributive Education Clubs of America* (DECA), *Family, Career and Community Leaders of America* (FCCLA), *FFA* – a CVTSO for Students Studying Agriculture, and *SkillsUSA*. The following highlights from 2006-2007 are representative of Massachusetts' CVTSO activities designed to enhance students' career and technical education and provide instruction in workplace, leadership, and communication skills.

Massachusetts DECA served 3,100 students in 53 chapters. Two Chapters received Gold Level Recognition Awards from National *DECA*, the highest recognition level for an operating chapter. One DECA Advisor received the prestigious Marriott Hospitality Advisor Award and completed a two-week training with Marriott hotels in Boston. Massachusetts *DECA* also received forty-two awards at the 2007 International Conference; among them first place in team decision making. Fifteen MADECA members ranked in the top ten overall. Approximately \$10,000 in scholarship money was awarded to Massachusetts *DECA* students this year.

In the 2006-2007, Massachusetts *FFA* served 1,174 students in 16 chapters (15 secondary, one post-secondary). *FFA* makes as positive difference in the lives of students by developing their potential for leadership, personal growth and career success through agricultural education. Massachusetts *FFA* hosted 36 Career Development Events this year. In these events, *FFA* members put classroom knowledge to the test in real life situations. In addition to skill-based events, leadership development programs were offered. At the National *FFA* competition, 9 students earned National Team Awards (1 Silver, 8 Bronze) and 37 received Individual Student Awards (1 Gold, 14 Silver, 22 Bronze).

Massachusetts *SkillsUSA* served 17,935 students and 724 educators this year and continued to emphasize the integration of the *SkillsUSA* employability skills program (Professional Development Program) as part of the curriculum in participating Chapters. Twenty-two high schools joined as total participation chapters and thirteen individual training programs joined as total participation classrooms. Major activities of *SkillsUSA* included 6 leadership & skills development conferences attended by 7,500 members and over 40 training workshops with 2,200 members in attendance.

### **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 2006-2007, 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. Perkins Act One-Year Transition Local Plan**

All school districts, consortia and public two-year colleges eligible to receive Perkins allocation funds in 2007-2008 completed a Perkins Act One-Year Transition Local Plan in the spring of 2007.

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 and technical education programs in relation to core indicator outcomes.

A copy of the Perkins One-Year Transition Local Plan Update Package for Secondary Schools - Spring 2007 is available at [http://www.doe.mass.edu/cte/perkins/loaclplanpack\\_secsch.doc](http://www.doe.mass.edu/cte/perkins/loaclplanpack_secsch.doc)

A copy of the Perkins Local Plan Update Package for Public Two Year Colleges - Spring 2007 is available at [http://www.doe.mass.edu/cte/perkins/loaclplanpack\\_2yrcol.doc](http://www.doe.mass.edu/cte/perkins/loaclplanpack_2yrcol.doc)

## **IV. Accountability [Section 113] -**

### **A. State's Overall Performance Results**

**Secondary Data Analysis:** In 2006-2007, a total of 61,859 high school students were enrolled in career and technical programs in Massachusetts public high schools. A total of 52,859 high school students were identified by their district in the Massachusetts Student Information Management Systems (SIMS) as members of special populations (e.g., students with disabilities, students with limited proficiency in English) and have been reported accordingly in the Consolidated Annual Report's enrollment and accountability reports, although it should be noted that a significant number of students appear in the count for two or more special populations. As reported, 12,434 students were identified as individuals with disabilities, 2,286 identified as students with limited English proficiency and 22,254 identified as students with economic disadvantages.

**1S1-Academic Achievement:** With the exception of students with limited proficiency in English, and students with disabilities, students enrolled in Massachusetts career and technical education programs overall, including their performance disaggregated by gender, race and other special populations, exceeded the state goal of 67.03% by significant margins. While only 44.54% of students identified as limited English proficient and 64.18% of students with disabilities passed the MCAS on the first try in FY 2007, the performance rates for both of these populations show a trend toward improvement when compared to last year (FY 2006): 41.65% for students identified as limited English proficient and 57.645% for students with disabilities.

**1S2 Technical Achievement and 2S1 Completion and 2S2 Diploma/Credential:** The MADOE uses graduation data for each of these core indicators. Both gender and special population data are based on three-year average while ethnicity is based on a two-year average. In 2006-2007, the adjusted performance levels for these core indicators (93.15%, 93.15% and 91.77% respectively) were not met overall or for any special populations. However, modest gains for all Massachusetts students enrolled in career and technical education programs were noted from one year to the next: 88.44% in 2007 compared to 87.41% in 2005-2006. In 2006-2007, these goals were not met for any special population or group based upon the two or three year averages used; however, data analysis by individual performance years shows marked improvement for the total population overall as well as for Blacks, students with disabilities and students with economic disadvantages.

**3S1-Placement:** The MADOE uses follow-up survey data as reported by the districts for this core indicator. Both gender and special population data are based on three-year average. The overall

performance of 95.16% exceeded the state's adjusted performance level of 95% in 2006-2007 with 47.02% of graduates going onto postsecondary education/training and 48.15% going into the workplace or the military.

**4S1 -Nontraditional Participation:** In 2006-2007, Massachusetts' performance level for 2006-2007 enrollment was 11.21%, whereas the enrollment goal for students in career and technical education programs that prepare them for careers nontraditional for their gender was 10.85%. While Massachusetts exceeded its performance goal, an analysis of the data reveals continued disparity between male and female enrollment. However, it should be noted that an increase in enrollment was seen in 2006-2007 for males, 5.37%, as compared with 2.14% in FY 06. Although enrollment for females was 13.44% this year, exceeding the goal, a marked decrease (15.33%) was noted from the previous year (28.77%).

**4S2-Nontraditional Completion:** The state goal for students' completion of programs that prepare them for careers nontraditional for their gender was 11.00%. While Massachusetts' performance level was only 10.33% for 2006-2007, this was an increase over last year's performance of 10.14%. Analysis of completion data by genders mirrors the male/female disparity noted for enrollment. In 2006-2007, the male completion rate was 5.50% and for females, 12.19% both slight increases in last year's performance (5.73% males, 11.82% female.)

**Postsecondary Data Analysis:** In 2006-2007, 46,506 Massachusetts students were enrolled in postsecondary career and technical education programs. The numbers and percentages (including all special population subgroups) achieving or exceeding the state's goals for the Perkins core indicators are as follows:

**1P1 and 1P2 Postsecondary Academic and Skill Attainment:** Data for both are measured by analyzing the number of courses completed as a percent of courses attempted for postsecondary students in career/vocational technical education programs. In 2006-2007, Massachusetts did not meet its adjusted performance level goal of 78.37%. The overall percent of courses completed by all students was 76.51%. However, females and students with limited English proficiency exceeded the state's goal (78.61% and 78.90% respectively.)

**2P1 Completion:** This performance measure is derived 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. 51.59% of these students in 2006-2007 met those completion benchmarks exceeding the state goal of 48.90%.

**3P1 Placement and 3P2 Retention:** These postsecondary core indicators are based on self-reporting via follow-up surveys with graduates. For program year 2006-2007, the percent of graduates of career/vocational technical education programs with a positive placement (military, employed, or additional education) was 95.73%, exceeding the state's goal of 95%. Of these, 23.58% pursued advanced training with 72.14% employed or in the military.

**4P1 Nontraditional Participation:** This core indicator is based on the number of students enrolled in programs that prepare them for careers nontraditional for their gender as a percentage of total enrollment in the programs. In program year 2006-2007, overall, nontraditional by gender enrollment was 13.6%, consistent with last year's performance of 13.8% but again missing the state's goal of 15.82%. However, as with performance results for this core indicator at the secondary level, an analysis of the data reveals continued and consistent disparity between male and female participation levels (21% for females in PY 07 and 06 and 10.5% for males in both years).

**4P2 Nontraditional Completion:** This core indicator is based on the number of students completing programs that prepare them for careers nontraditional for their gender as a percentage of total completers in the programs. While the overall performance results for nontraditional by gender completion of

12.57%, in 2006-2007 missed the state goal of 13.0 %.(by less than 0.5%) the results are an improvement over the previous year (11.74%) and again reflect continued and consistent disparities between males and females.

## **B. State's Performance Results for Special Populations**

Of the number of secondary students enrolled in career and technical education programs reported in the Consolidated Annual Report's enrollment data, 36,443 are member of one or more special populations without duplication. That is, 59% of Massachusetts' secondary students enrolled in career and technical education programs are members of a special population. For postsecondary the number is 22,230 or 48% without duplication. Thus, Massachusetts' *Overall Performance Results* significantly reflect the performance results for special populations at the secondary and postsecondary levels as summarized above.

## **C. Definitions 2006-2007**

- *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 2006-2007**

In 2006-2007, using data from SIMS and related MCAS test result files, the Career/Vocational Technical Education unit was able to measure the following student outcomes with increasing fidelity:

- Career and 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 2006-2007 measure is based on 10<sup>th</sup> grade students in the class of 2009 who took the tests in spring 2007.

**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.

**Education Graduate Follow-up Report database.** Submission of the graduate follow-up data is submitted through MADOE's Security Portal. The Microsoft Access database provided by the Career/Vocational Technical Education unit is uploaded into the security portal for districts to access more quickly and to ensure confidentiality. Information collected on the Graduate Follow-up Report includes:

- 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 and technical education reporting is automated using a PC format (Microsoft Excel). Postsecondary and 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 Career/Vocational Technical Education unit shares summary data with the public two-year colleges and the Perkins Postsecondary Consortium through a number of different forums.

#### **E. Improvement Strategies to Improve the Accuracy, Reliability, and Completeness of Data**

The following changes are planned for 2007-2008 to improve the overall accuracy, reliability, and completeness of Massachusetts' Perkins' accountability data:

MADOE is developing technical skill assessments for its career and technical education programs. Technical assessments may be implemented during the 2009-2010 school year for the high school class of 2010. It is estimated that approximately 5 % of career and technical education concentrators will be reported in Massachusetts' calculation of career and technical concentrators who were assessed. MADOE anticipates that the percentage in each ensuing year will increase as a result of efforts to gain necessary funding and efforts to show the value of the assessments to students, business, industry and ultimately the economy.

MADOE has begun compiling results from its Statewide Longitudinal Data System grant to complete the data/technology foundation for a comprehensive and broadly accessible Massachusetts Education Data System for Improving Student Success (MA-EDSISS). The new system will allow MADOE to engage in a more rigorous data driven policy-making process once the individual components are linked together. The MA-EDSISS initiative contains five main components and each component will be implemented between the 2007-2008 and 2009-2010 program years. Major features include linking students in SIMS to their assigned classes to determine if students in Massachusetts are taking the necessary courses to receive a diploma and proceed on to and succeed in higher education and determining the correlation between course taking and performance on both local and statewide assessments.

MADOE and the Massachusetts Board of Higher Education have as a high priority the establishment of a seamless education system PreK-16. To that end, a student-level data sharing system is under development in Massachusetts that will include student-level career and technical education data elements. The MADOE is working in collaboration with the Massachusetts Board of Higher Education to develop a School-to-College Database linking information on public high school graduates as they enroll in, and ultimately graduate from, the State's public two and 4-year colleges. Massachusetts is one of only a handful of states to successfully implement such a database. The state will be releasing the first statewide and school-by-school results in 2008.

Specific accountability requirements have been added as grant priorities related to equity in access and support of special populations including tech-prep activities and services as well as Massachusetts Career and Technical Student Organizations supported with Perkins funds.

Massachusetts plans to maintain tech-prep under a consortia model and consequently strengthen accountability for implementation of tech prep, in particular data regarding CVTE students' transition to college remediation free and college completion rates.

## **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 in 2006-2007 and were used to support the Massachusetts Pathways to Success by 21 (P21) initiative that began with Massachusetts Department of Workforce Development planning grants to the state's 16 regional workforce areas in 2005-2006. Each region developed a plan to coordinate its educational and employment resources and efforts to improve outcomes for at-risk youth.

In 2006-2007, the Massachusetts Department of Education and the Massachusetts Executive Office of Labor and Workforce Development collaborated in the development of an RFP to provide additional WIA Incentive Grant funds for the implementation of strategies planned in 2005-2006. All 16 regional workforce areas in Massachusetts received funding.

Representatives from Massachusetts public two-year colleges/school districts with Perkins Act Postsecondary Local Plans partnered with adult basic education providers, workforce investment

boards/youth councils, and one-stop career centers to strengthen coordination of program services for out-of-school youth aged 18-24, providing intensive case management, academic instruction including basic skills and GED preparation, career and technical skill development, career counseling and job placement and post-employment support.