SOUTH CAROLINA 2004–05 NARRATIVE REPORT

I. STATE ADMINISTRATION

A. Sole State Agency and Governance Structure

As the administrative entity for the State Board of Education (State Board), the South Carolina Department of Education (SDE) is the sole state agency responsible for the administration and supervision of vocational and technical education programs consistent with state laws and in accordance with the Carl D. Perkins Vocational and Technical Education Act of 1998 (Perkins III). The state superintendent of education serves as the chief administrative officer of the public education system as well as serving as the secretary and administrative officer for the State Board. The director of the SDE's Office of Career and Technology Education (OCTE) is the official representative of the state superintendent in all matters pertaining to career and technology education (CATE) and is responsible for the planning, administration, coordination, supervision, and promotion of all phases of the CATE program in South Carolina.

The State Board for Technical and Comprehensive Education (SBTCE) has the statutory responsibility for the approval and maintenance of high-quality instructional programs among the technical colleges under its authority. All programs of study that are two years or less are approved by the SBTCE. The SBTCE regulates the South Carolina Technical College System (SCTCS), a statewide system that includes the sixteen technical colleges and the state-level staff responsible for the coordination and supervision of these two-year technical colleges. The SDE collaborates with the SCTCS in developing and updating the Perkins III state plan and carries out the state administration and leadership activities required of each eligible agency under the federal law. The OCTE provides direction and assistance to the SCTCS in administering the Perkins III postsecondary funds and in implementing the postsecondary local application and performance accountability procedures.

Through the OCTE, the SDE conducts the state-level activities related to implementing the state plan, allocating and distributing resources to eligible recipients, monitoring and evaluating program effectiveness, ensuring compliance with all applicable federal laws, and providing technical assistance. The OCTE uses a comprehensive, computerized local plan/progress report process that links the uses of funds to program improvement. The OCTE coordinates the state performance accountability system and collects data from secondary schools to assess each school district and multidistrict career center for performance on the basis of the Perkins standards (i.e., secondary core indicators). Local educational agencies (LEAs) that fail to meet one or more of the state standards are required to initiate a local improvement-plan process based on a three-tiered approach for state technical assistance outlined in the state improvement plan.

B. Organization of Vocational and Technical Education Programs

The public education system in South Carolina is composed of eighty-five school districts that offer secondary CATE programs in high schools (grades nine through twelve), middle schools (grades six through eight), and career and technology centers that operate within most of the larger school districts. In addition, eleven independent, multidistrict career centers provide CATE programs to students from districts that do not have their own career centers. Two state correctional agencies, one for juveniles and one for adults, operate as special school districts

and provide secondary CATE programs. The OCTE provides policy guidance and technical assistance to these ninety-eight eligible recipients under Title I of Perkins III.

The SBTCE operates the SCTCS, which includes sixteen technical colleges, a center for accelerated technology training for industry-specific training, and the SBTCE staff. The SCTCS offers a wide range of postsecondary educational opportunities at the associate degree, diploma, and certificate levels. The SBTCE is responsible for the state-level development, implementation, and coordination of postsecondary career and technical training and education to support the economic development of the state. The state staff also provides policy guidance and technical assistance to the sixteen colleges that receive Title I funding for postsecondary programs under Perkins III.

South Carolina's Tech Prep initiative is administered through a sixteen-consortia partnership structure. The Tech Prep Consortia are aligned with the sixteen technical colleges. These consortia submit grant applications each year in order to secure funding for their activities in support of the Tech Prep initiative. The consortia directors are charged with the management of all aspects of grant activities, including any necessary grant amendments and all midyear and end-of-year progress reporting. The OCTE provides policy guidance and technical assistance to the sixteen consortia, which receive funds under Title II of Perkins III.

The South Carolina Education and Economic Development Act (EEDA), signed in May 2005, mandates the organization of high school curricula around clusters of study and addresses key elements that will impact how the state's high school curricula are structured and connected to postsecondary study. In recent years, schools in larger districts in the state have made the transition to the cluster model in response to the national movement, while smaller, typically rural, schools have made less progress toward offering career clusters. However, as a result of the EEDA, by July 1, 2007, all public school districts in South Carolina will be required to organize curricula around a minimum of three career clusters.

The EEDA also addresses the need for seamless transitions between secondary and postsecondary study. Currently, the dual enrollment agreements that exist within the state are primarily localized and are limited in the number of courses available. Typically, a local technical college will make arrangements to offer a few such courses in the school districts within their service areas. However, transfer of those credits between institutions in the state has remained problematic. The EEDA requires the South Carolina Commission on Higher Education to make recommendations by July 1, 2006, concerning course work acceptable for dual enrollment statewide, with the overarching goal of improving student options for seamless pathways of study that bridge their secondary studies with two- and four-year programs.

Academic rigor is another key aspect of curriculum design that is addressed through the EEDA. By the 2009–10 school year, every high school in South Carolina will be required to implement *High Schools That Work* (*HSTW*) or another approved model of whole school reform. Among the *HSTW* initiative's ten key practices are the following: motivating more students to meet high expectations by integrating high expectations into classroom practices and giving students frequent feedback; requiring each student to complete an upgraded academic core and a concentration; teaching more students the essential concepts of the college-preparatory curriculum by encouraging them to apply academic content and skills to real-world problems and projects; and providing more students access to intellectually challenging career/technical

studies in high-demand fields that emphasize the higher-level mathematics, science, literacy, and problem-solving skills needed in the workplace and in further education. Any model that is selected in lieu of *HSTW* must address the *HSTW* key practices, include career and technology education components, demonstrate a focus on whole school reform, possess data-driven characteristics or components, and include an accountability component.

II. STATE LEADERSHIP ACTIVITIES

A. Required Uses of Funds

Assessment of Career and Technology Programs Funded under the Act

The South Carolina state plan for career and technology education is based on the 2020 Vision for Career and Technology Education in South Carolina. This strategic plan reflects statewide priorities for CATE programs and initiatives expressed through ten vision themes: accountability, business relationships, curriculum, funding, leadership, marketing, professional development, recruitment, structural change, and technology. The OCTE provides leadership and support to assist local administrators in assessing program needs through the quality review measures, which are aligned with the 2020 Vision themes and are designed to provide guidance and direction to LEAs in establishing, maintaining, and evaluating CATE programs. State and local advisory councils and committees provide the program-specific business and industry input used to assess individual programs.

The OCTE also provides leadership to LEAs in assessing and meeting the needs of students who are identified as special populations. The local applications and progress reports detail the LEAs' efforts to provide equal access to CATE programs, assess students' needs, support accountability standards, and evaluate the progress of the special populations. OCTE staff members review these annual plans and reports to ensure that the LEAs are assisting special populations in meeting standards and in preparing for further learning and high-wage careers.

Developing, Improving, or Expanding the Use of Technology in Programs

The Digital Input Technologies course provides instruction in voice recognition, handwritten input through PC and Graphire tablets, digital files, text and graphic input through scanners, and the operation of PDAs (personal digital assistants). The South Carolina Virtual Enterprises Network has expanded to forty-four virtual firms in over thirty schools. Through a partnership with the Oracle Corporation, students were enrolled in the Oracle Internet Academy's database design and management courses, which can lead to industry certification. Currently thirty-nine South Carolina schools are teaching the Oracle Academy curriculum. Nine of these schools have expanded the curriculum to include Oracle Java, which prepares students to take the Computer Science exams under the Advanced Placement Program.

Project Lead the Way (PLTW), which combines a sequence of state-of-the-art technical courses with college preparatory courses in mathematics and science, was expanded to provide additional secondary students with a rigorous pre-engineering program. The *FIRST* LEGO® League competition held at the University of South Carolina (USC) involved one hundred teams of students who designed and constructed LEGO robots, thereby integrating mathematics, science, and technology into their problem-solving activities. Students from South Carolina and across the United States also displayed their high-level skills in

mathematics, science, and engineering technologies as they competed in the *FIRST* Robotics Palmetto Regional competition, using robots they had designed and constructed with the assistance of business and industry partners.

Eleven automotive technology programs have become NATEF/ASE (National Automotive Technicians Education Foundation/Automotive Service Excellence) certified and are meeting industry standards both in the facilities and in the curriculum, which allows students the opportunity to obtain industry certification. Three automotive technology programs are certified by the Automotive Youth Educational Systems (AYES) and are given industry support through internship programs in local dealerships. The BMW Corporation hosted the Automotive Collision Repair student competition at its facility, giving students the opportunity to use state-of-the-art equipment in their problem-solving activities.

Professional Development Programs

The OCTE sponsored the 2005 Education and Business Summit in June for approximately fourteen hundred teachers, administrators, counselors, and business and industry representatives associated with the state's CATE, Tech Prep, and School-to-Work (STW) initiatives. Representatives from the South Carolina Association for Career and Technical Education, the SCTCS, and the South Carolina Occupational Information System provided planning assistance and speakers for the Summit. National and state presenters conducted workshops specific to contextual, academic, and CATE instruction, along with staff development for statewide career counseling efforts associated with PLTW and the South Carolina career guidance model. Over four hundred Summit attendees received units toward the renewal of their state teaching credentials.

Thirty-three participants completed the requirements of the sixth institute for new CATE administrators in 2004–05. The institutes are designed to prepare new and prospective administrators to handle the primary responsibilities of administering CATE programs, supervising teachers, developing budgets, and much more. Participants attend five full-day sessions during a school year, mentor two days with a veteran CATE administrator outside of their own school districts, and attend the annual Education and Business Summit. Twenty-five participants began the seventh institute at the June 2005 Summit.

DIRECT (Developing Instructional Readiness for Educators of Career and Technology) is the OCTE's newly revised teacher training initiative. The tagline is "Taking experts from the workplace to the classroom." The program includes a combination of preservice and in-service institutes, master teacher observations, and college course work. DIRECT addresses the needs of new CATE teachers completing the initial professional education requirements for work-based teacher certification. During 2004–05, 137 first- and second-year CATE teachers participated in the program, which combines training provided by master teachers, OCTE staff, and national presenters.

Support for the Integration of Academic and Career and Technology Education

Fourteen "South Carolina Algebra Classroom" workshops were conducted. Over four hundred mathematics teachers experienced cooperative, hands-on investigational strategies designed to help students develop an understanding of algebraic concepts. Career cluster guides were distributed at the South Carolina Council of Teachers of Mathematics conference, and training

sessions were conducted on Algebra 1 readiness for middle school students. The CATE Web site was updated to include new resource materials, and the electronic newsletter *Applied Mathematics and Science Notes* kept teachers informed about relevant issues and initiatives.

The career cluster mathematics course enabled secondary mathematics and CATE teachers to work together to support mathematics achievement through contextual problem solving. This course enabled CATE teachers to incorporate additional mathematics concepts into classroom instruction and to align career and technology mathematics requirements with the state mathematics standards. Career cluster mathematics problems were developed and disseminated to participants, who received three hours of credit toward recertification.

Participants in seven professional development sessions at three state/national conferences received training in the standards-based Chemistry for the Technologies laboratory modules that are based on actual business and industry applications of chemistry. A state-level committee, convened by the SDE and composed of Physics for the Technologies master teachers from around the state and SDE consultants, reviewed and revised the current Physics for the Technologies 1 and 2 syllabi, making appropriate changes in course objectives and identifying resources for the teachers to use in successfully teaching the courses. These revised materials were disseminated at professional development sessions for teachers.

The six modules developed in 2003–04 for *Framing Best Practice: English 1 Curriculum and Instruction*, a resource designed to help teachers infuse contextual teaching methods into the traditional English class, were so successful that two modules were added in 2004–05, and teachers received additional professional development. The curriculum resource was also extended to include English 2, and over one hundred seventy-five English 2 teachers received training in the use of three new modules in June 2005. Five additional modules will be developed next year.

Preparation for Nontraditional Training and Employment

The OCTE staff specialist in gender equity presented information on best practices for recruiting and retaining students in nontraditional programs during the February 2005 Carolina Careers career guidance workshop broadcast on the South Carolina Educational Television Network (SCETV). Information concerning nontraditional students was also disseminated through the OCTE Web site and during training conferences for CATE administrators. During 2004–05, the OCTE used $60,000 in set-aside funds to promote awareness of nontraditional careers for males and females. Ten school districts received competitive minigrants totaling $30,000 to develop programs in support of nontraditional recruitment and retention. Funds were also used to assist in securing the site licenses for nine Rosie's Girls® summer camps that introduced middle and high school girls to the nontraditional areas of welding, carpentry, electricity, and automotive technology. The OCTE also provided financial support to South Carolina Women Work! in conducting its annual gender equity conference.

Supporting Partnerships to Enable Students to Achieve Academic and CATE Standards

The OCTE partners with the South Carolina Chamber of Commerce and businesses statewide to support Business Week, an initiative that contributes to the preparation of young adults for the business environment. Partnerships were also developed with the USC College of Engineering, BellSouth, and other South Carolina–based companies to enhance the pre-

engineering initiative, which includes PLTW, Gateway to Technology, and the *FIRST* Robotics regional competition. The OCTE also continued to foster collaborative relationships among members of the health care industry. The South Carolina Hospital Association—along with other key health care providers—promoted health care workforce development through more than $11,000 in scholarship awards, internships for students and teachers, and education symposia.

Serving Individuals in State Correctional Institutions

The South Carolina Department of Juvenile Justice (SCDJJ) and the South Carolina Department of Corrections (SCDC) received Perkins Title I funds on the basis of their designation as special school districts. At the SCDJJ, 1,144 secondary students participated in CATE courses. The federal funds were used to provide the services of a career guidance counselor, career development materials, staff development, and equipment and materials to expand and improve CATE programs. The SCDC purchased instructional materials, supplies, and equipment to expand and improve CATE programs in the Palmetto Unified School District, which served 1,049 inmate students aged seventeen through twenty-one years in 2004–05. Funds were also used to support professional development for the staff in nine schools. The student enrollment and accountability reports for 2004–05 include the secondary students served by the SCDJJ and the SCDC; however, the accountability data are limited, due to the unique nature and special circumstances of serving students who are incarcerated.

Support for Programs for Special Populations

The equity coordinator for the OCTE serves on the advisory board for the South Carolina Vocational Rehabilitation Department (SCVRD) as a collaborative partner, providing input and serving as the liaison between the OCTE, the SCVRD, and the LEAs. The OCTE staff also serves on the SDE's methods of administration (MOA) evaluation team to ensure that members of special populations are not discriminated against, that career and guidance counseling is equitable, that students are making career choices based on their career interests, that accessibility to programs is provided, and that strategies and support services are helping members of special populations to be successful in CATE programs. Technical assistance and recommendations are provided on the basis of the results of the on-site visits. The OCTE continued in 2005 to collaborate with the SDE's Office of Exceptional Children, the SCVRD, the USC School of Medicine, and Project SIGHT (Systemic Involvement for Gaining Heightened Transitions) to disseminate information on the IDEA (Individuals with Disabilities Education Act) and information on serving CATE students with disabilities.

B. Permissible Activities

Technical Assistance for the LEAs

Approximately four hundred fifty teachers in the business, marketing, and information technology (IT) program areas, as well as counselors and administrators, received technical assistance through twelve regional workshops addressing competency revisions, end-of-course testing, Microsoft Office Specialist (MOS) certification, Internet and Computing Core Certification (IC^3), textbook adoptions, proposed teacher training, and the opportunity for training through the Oracle Internet Academy. Resource CDs were distributed. An information

technology conference provided IT teachers and administrators with updated information about program areas within the cluster, program funding, and strategies to enhance those programs.

The engineering and industrial technology education (EITE) program staff members conducted twenty professional development sessions to provide teachers and administrators with information on new technology, industry certification, program development and revision, and student organizations. The teachers received technical assistance that included methods of restructuring their programs to address new and emerging technologies; development of articulation agreements; implementation of STW activities; national skill standards; and industry/national certification for EITE programs, teachers, and students. CDs containing new and revised course standards, along with resources for teachers, were sent to schools. Teachers new to EITE are required to attend a two-year institute designed to help them make the transition from business and industry to the field of education. Participants in the institute focus on professional development, instructional strategies, and strategies to assist special-populations students in meeting state standards and acquiring skills to compete for high-skill, high-wage careers.

The health science technology (HST) programs received technical assistance that included promising program initiatives. The Virtual Surgery Insider project, in partnership with the South Carolina Hospital Association, included a live broadcast of an open-heart surgery to ten health science classrooms reaching over seven hundred fifty students. Supplemental curriculum materials were developed to support the project. Through electronic newsletters and the continuous updating of a comprehensive health science Web site, teachers received information on curricula, business/industry partnership development, national assessments and certifications, technological advances, and local program and student successes. Sixty-eight health science teachers participated in the South Carolina HST educators virtual mentoring program. To provide support and share their expertise, experienced teachers were linked with new teachers who were making the transition from the health care industry into education.

Family and consumer sciences (FACS) program teachers received technical assistance through twelve regional workshops addressing standards revisions, education legislation, and program changes. The South Carolina FACS Roundtable sponsored a summer conference at Midlands Technical College, where approximately sixty professionals were provided opportunities to network; share information with their counterparts; and attend general sessions on such topics as marketing, the new EEDA, and working with greater efficiency. Concurrent sessions provided participants with information on National Board certification, national certification programs for students, best-practice teaching strategies, and graduate credit opportunities. The OCTE partnered with Winthrop University for a second year to offer training in the revised FACS middle school curriculum. Eight middle and high school teachers attended the six-day class for graduate credit at Winthrop University. A total of nineteen teachers are now trained.

Fifteen *HSTW* sites sent cross-curriculum teams of administrators and teachers to two-day workshops that focused on the ten key educational practices and methods of incorporating these practices into the district/school improvement plans. The OCTE staff provided technical assistance and implementation guidelines to principals and coordinators from ten sites preparing to implement *HSTW*. Principals and district/site coordinators also received technical assistance at a statewide *HSTW* workshop that included new and experienced sites and at the 2005 Education and Business Summit. Site representatives worked in teams to review and

discuss their action plans and participated in discussions focusing on the ten key practices. Twenty *HSTW* sites received written reports following the three-day technical assistance visits by teams of twelve to fifteen educators, parents, and community and business leaders.

Improvement of Career Guidance Programs

An OCTE staff member provided training to guidance coordinators across the state to enhance the quality of career guidance. Sixteen classes were conducted during the year to prepare educators for national certification as career development facilitators (CDFs). As a result of this training, South Carolina has vaulted to seventh in the nation in the number of educators obtaining the CDF certification. Eight monthly professional development workshops on the subject of career guidance were produced and broadcast by SCETV's Office of Instructional Technology. These workshops featured topics such as career clusters and career development strategies to assist school counselors in the statewide implementation of the EEDA.

Support for Vocational and Technical Student Organizations

The South Carolina student organizations supported by the OCTE each received grants of $6,400 to provide leadership and skill development activities. DECA—An Association of Marketing Students, the Future Business Leaders of America, the Family Career and Community Leaders of America, FFA, Health Occupations Students of America (HOSA), SkillsUSA, and the Technology Students Association continued to support the CATE program curricula through skill-building and leadership events throughout the year. The combined membership of these student organizations for 2004–05 was 17,673.

Support for CATE Programs That Address All Aspects of an Industry

The OCTE continued to support career centers and high school administrators and teachers in their efforts to develop CATE programs that meet national skill standards. Increasing numbers of CATE programs and teachers are addressing these standards and are working toward national/industry certification. During 2004–05, one hundred seventy-one EITE students were reported as receiving industry certification before they graduated. In addition to students receiving industry credentials, five career centers have been awarded the national Accredited Training and Education Facility (ATEF) status for their building construction programs.

Support for Education and Business Partnerships

The 2005 Education and Business Summit provided opportunities for business and education professionals to participate in discussions on curriculum alignment with industry and state standards, best-practice presentations, and open forums that emphasized the continuing need to concentrate on academic success, vocational-technical competencies, and economic development. Approximately one hundred fifty businesses participated in the 2005 Summit. The OCTE continues to partner with the South Carolina Chamber of Commerce to promote CATE initiatives and best practices.

The OCTE's collaboration with several business partners in the Maintenance and Construction Technology Alliance (MCTA) encourages industry and education groups to build strong partnerships that promote CATE and help students realize their career choices. The MCTA connects trade associations, construction and maintenance industries, and education entities

with a central statewide clearinghouse. In addition, the National Center for Construction Education and Research (NCCER) has formed a partnership with the SDE to offer resources to schools, students, and teachers that will provide extended credentialing opportunities, industry-driven curriculum, and national end-of-program assessments for students.

Partnerships with Certiport, Thomson Learning, and SD Solutions have enabled IT students and teachers to train and test for the MOS and IC^3 certifications. A continued partnership with Cisco Systems gives students the background they need to take the Cisco Certified Network Associate (CCNA) exam or to articulate credit to the technical colleges to pursue CCNA certification there. Through the partnership with the Oracle Corporation, thirty-nine schools and centers now offer the foundation course in database management.

Support to Improve or Develop New CATE Courses

Standards for the following CATE courses were developed or revised by committees of business/industry representatives and secondary and postsecondary instructors: Child Development; Education for Parenthood; Food Science and Dietetics; Housing and Interiors; Human Development: Responsible Life Choices; Personal Skills; Nail Technology; Building Construction Cluster; Carpentry; and Graphic Communication. The Information Technology Foundations course was developed to introduce students to all areas of the IT cluster so that they will be better prepared to make informed decisions regarding their individual career plans.

The HST area is experiencing increased interest in the online pharmacy-technician training program, which will provide high school seniors with the knowledge and skills they need to be successful on the national Pharmacy Technician Certification Board examination. An additional forty health science teachers were trained to facilitate the program and will assist in arranging the work-based learning opportunities for these students to begin their supervised internships. Over two hundred students are enrolled in the course, which integrates rigorous math and science concepts into the curriculum.

The Electric Vehicle Education Program (EVEP) was implemented in seven sites to provide high school and middle school students the opportunity to explore careers in the environmental and transportation clusters. The EVEP curriculum allows for the integration of chemistry, language arts, math, physics, and hands-on problem-solving activities that challenge students to use higher-order thinking skills as they build an electric vehicle in the classroom.

III. DISTRIBUTION OF FUNDS AND LOCAL PLAN FOR VOCATIONAL AND TECHNICAL EDUCATION PROGRAMS

In South Carolina, eighty-five school districts and the two state correctional agencies that operate as special school districts receive initial allocations from Perkins III secondary funds. Eleven independent multidistrict career centers also provide secondary CATE programs, and seven of the LEAs transfer all or a portion of their Perkins secondary funds to support their students who attend one of these multidistrict career centers. The sixteen two-year technical colleges under the SCTCS each receive an allocation of Perkins postsecondary funds. South Carolina has sixteen Tech Prep Consortia that receive an allocation of Title II funds. All sixteen technical colleges, the eighty-five local school districts, and the school district within the SCDJJ belong to a consortium. Each consortium has one technical college and one or more LEAs as members.

Note: The following required "Accountability" section is submitted as section IV, "Accountability—Secondary Programs," and section V, "Accountability—Postsecondary Programs."

IV. ACCOUNTABILITY—SECONDARY PROGRAMS

A. State's Overall Performance Results and Program Improvement Strategies

Table 1 presents the measurement approaches used for each of the secondary core indicators under Perkins III and the comparison of the actual performance results with the goals established for 2004–05. (Note: The underlined text reflects updated wording; however, the meanings of key terms have not changed.)

Table 1: Secondary Measures and Performance Levels for 2004–05

Perkins Indicator	Measurement Approach	Numerator/Denominator	2005 Goal	2005 Actual
1S1	Academic grade point average (GPA). Data program developed to accumulate, sort, and average applicable GPAs from individual student records and transcript files completed by each high school.	**Numerator** = total number of CIP-coded students (concentrators) achieving a final GPA of at least 2.0 averaged over the year in mathematics, science, and English language arts courses **Denominator** = total number of CIP-coded students	66.73%	74.95%
1S2	Career and technology GPA. Data program developed to accumulate, sort, and average applicable GPAs from individual student records and transcript files completed by each high school.	**Numerator** = total number of CIP-coded students achieving a final GPA of at least 2.0 averaged over the year for all CATE courses they took during the year **Denominator** = total number of CIP-coded students	83.00%	90.73%
2S1	State/local administrative data. Electronic data extraction of individual student records completed by each high school for CIP-coded students.	**Numerator** = total number of twelfth-grade career and technology CIP-coded students attaining a South Carolina high school diploma **Denominator** = total number of twelfth-grade CIP-coded students	74.96%	95.73%
3S1	Locally administered surveys and the annual placement report.	**Numerator** = total number of CATE completers who are placed in postsecondary education, military service, or employment averaged over a three-year period **Denominator** = total number of CATE completers available for placement averaged over a three-year period	93.03%	97.81%
4S1	State/local administrative data. Electronic data extraction of individual student records completed by each high school.	**Numerator** = total number of students of the underrepresented gender enrolled in CATE courses identified as leading to nontraditional training and employment **Denominator** = total number of students enrolled in CATE courses identified as leading to nontraditional training and employment	19.60%	29.78%
4S2	State/local administrative data. Electronic data extraction of individual student records completed by each high school for CIP-coded students.	**Numerator** = total number of CIP-coded students of the underrepresented gender who have completed CATE programs identified as leading to nontraditional training and employment **Denominator** = total number of CIP-coded students who have completed CATE programs identified as leading to nontraditional training and employment	16.33%	19.14%

Analysis of Secondary Results

Performance on the core indicators was assessed for eighty-five school districts and eleven multidistrict career centers, as applicable for the programs offered (i.e., not every LEA was assessed for every core indicator). As indicated in table 1, South Carolina exceeded the performance goals for every secondary measure in 2004–05. Actual performance exceeded the goal by as much as much as 20.77 percentage points for graduation and as little as 2.81 percentage points for nontraditional retention. Performance increased for three core indicators in comparison to 2003–04 performance: academic attainment (up .52 point), nontraditional participation (up 1.11 points), and nontraditional retention (up 1.25 points). For the three standards where performance decreased, the reduction was relatively small: technical skill attainment (down .11 point), graduation (down .5 point), and placement (down .08 point).

Core Indicators—Performance Levels Met

The following are examples of strategies the OCTE used in 2004–05 to improve CATE student achievement for the secondary core indicators of performance:

- **academic attainment—**updating CATE course standards and aligning them with the state academic standards to promote instructional integration; conducting a pilot study to determine whether automotive technology students improve their mathematics achievement as a result of their teachers' implementing the strategies they have learned in career cluster mathematics training;

- **vocational-technical skill attainment—**providing training sessions for teachers seeking national/industry certification and securing active business partners to provide a link to emerging and advanced technology;

- **completion (i.e., graduation)—**developing and disseminating CATE course standards that are aligned with state standards for English language arts, mathematics, science, and social studies and organizing student instruction and experiences around the sixteen career clusters;

- **placement—**continuing business/industry partnerships that support registered apprenticeship programs to increase job opportunities for economically disadvantaged students; expanding opportunities for national certification to help graduates become more marketable;

- **nontraditional participation—**creating an advisory board to research methods of recruiting girls for science, technology, engineering, and mathematics programs; developing recruiting brochures and multimedia presentations to attract more students to FACS-related careers; and

- **nontraditional retention—**participating in the WomenTech train-the-trainer workshop designed to identify best practices for recruiting and retaining females in technology education and careers.

Local improvement plan strategies designed to improve students' academic and vocational-technical skill attainment included monitoring student competency attainment every nine weeks; providing extra help and support such as additional training after school; tutoring students in the basic skills; reevaluating students' career interests for more suitable course

placement; providing CATE teachers with staff development in a variety of instructional methodologies such as learning styles, applied/contextual teaching methods, cooperative learning, and methods of integrating CATE and academic instruction; and encouraging CATE and academic teachers to jointly plan curriculum and instruction.

Local improvement plans that addressed the core indicators for nontraditional participation and retention included strategies implemented by school counselors to actively encourage students to consider nontraditional training and employment, such as using course registration materials and assessment tools that are free of gender specific language and displaying and distributing promotional materials—photos, posters, videos, and so on—of males and females in nontraditional careers. Representatives of businesses and industries that hire nontraditional employees were involved in efforts to promote nontraditional enrollment and retention in CATE programs by serving as members of school or CATE program advisory committees as well as participating in career fairs and other career awareness projects.

Core Indicators—Performance Levels Not Met and Program Improvement Strategies

South Carolina met each secondary core indicator for 2004–05. Under the state improvement plan, individual districts and multidistrict career centers that did not meet the state standards in 2004–05 will be required to develop a local improvement plan during 2005–06 that outlines activities and strategies to raise student achievement. These local improvement plans will be incorporated into each LEA's FY 2007 local plan, and the LEAs will be required to budget Perkins funds to address state standards that were not met. State-level emphasis on academic attainment for all students and targeted efforts to promote nontraditional participation and retention will continue.

B. Performance Results for Special Populations and Program Improvement Strategies

Analysis of Results for Special Populations

In 2004–05, seven special populations groups were reported for six indicators. Five of these forty-two performance targets were missed; however, two of these special populations groups contain less than fifty concentrators (measured by the denominator for technical skill attainment, which is the closest measure of an unduplicated count): "displaced homemakers" (8 students) and "limited English proficient" (37 students). Given the volatility of performance for small populations, these two groups were not analyzed. Of the thirty possible special populations performance targets that were analyzed, only three were missed: 1S1 (academic attainment) and 1S2 (skill attainment) for students with "other educational barriers" and 4S2 (nontraditional completion) for "single parents." Overall, the data indicate continuous improvement for these special populations groups during the last three years; five of the targets were missed in 2002–03, and four were missed in 2003–04.

All of the special populations groups that were analyzed met the targets for completion (2S1), placement (3S1), and nontraditional participation (4S1). More impressively, three of the five analyzed groups made every single indicator target: "individuals with disabilities," "economically disadvantaged" students, and "nontraditional enrollees," who were reported for the first time for core indicators 1S1, 1S2, 2S1, and 3S1. The disaggregated data for "Tech Prep" students, although not a "special population" under Perkins III, indicated that this group of students returned to making the five targets where data were available, and the group

improved significantly on the indicator for nontraditional participation (4S1). A three-year average for placement (3S1) of "Tech Prep" students will not be available until 2006.

Strategies That Contribute to Special Populations Student Achievement

The strategies outlined above in section A appear to have had a positive effect on all students. With most special populations groups now exceeding the statewide targets (and with the targets all being met for 2004–05), the current focus is on those factors that have affected performance among those special populations where it has been needed the most. The statewide emphasis placed on the nontraditional indicators 4S1 and 4S2 for the past several years has contributed to improved performance for the special populations, whose performance for 2004–05 was higher for five of seven and six of seven groups, respectively. Although "single parents" did not meet the state target for 4S2, their performance was improved. Examples of improvement strategies that LEAs identify annually in their local applications are the use of billboards, brochures, and posters depicting students in nontraditional programs or occupations; professional development training in recruiting and retaining students in nontraditional courses/programs; and career fairs where students can interact with individuals who are employed in nontraditional fields.

Possible Barriers to Achievement and Program Improvement Strategies

The special populations data analysis identifies two areas where performance by specific groups tends to lag: nontraditional completion for "single parents" and performance in academic and technical skill courses by students with "other educational barriers." Increasing the percentage of "single parents" who complete nontraditional programs will take a concerted effort to identify and alert those schools where such students exist and assist them in identifying and implementing strategies to help this small population of students complete the requirements of their nontraditional programs. Recommended strategies include tracking and monitoring of student progress and attendance in order to evaluate and identify potential problems and barriers to academic achievement; providing support that will enable students to develop survival skills needed to meet their obligations at home and in the classroom; and providing professional development for faculty and staff to promote understanding and support of students who are single parents.

The lower performance of students identified as having "other educational barriers" in academic courses (1S1) and CATE courses (1S2) is a persistent and significant problem: 10 percent of all concentrators are labeled as such. The performance level of this group has dropped over the last three years for indicator 1S2 and now misses the target. "Students with other educational barriers" include, among others, high school students whose grades are below 2.0 on a 4.0 scale and high school students who have failed to attain minimal academic competencies. This special population is a self-defining group in part; therefore, it is difficult to demonstrate improvement in their performance on 1S1 and 1S2 (where academic attainment and skill attainment are measured by GPA). A better gauge of progress might be to determine whether the number of students identified in this category *decreases* on an annual basis, rather than whether more of the identified students attain a GPA of 2.0 or higher.

Nevertheless, strategies that will be implemented during the program year to raise the academic and skill achievement of CATE concentrators include monitoring students' attendance, discipline, and academic performance; maintaining regular contact with the home, home school, and current teachers; providing support services such as a job coach, transition

coordinator, or teacher assistant to aid instructors, ensure appropriate recruitment, and assist in modifying instruction; conducting student, teacher, and parent conferences; providing individualized tutoring or academic assistance programs to improve language arts, math, science, social studies, and technology skills; and offering after-school programs for additional academic and CATE skill assistance.

C. Definitions

The following definitions apply to the Perkins secondary core indicators for 2004–05:

- A *vocational participant* is a student who is enrolled in a CATE course associated with a career cluster.
- A *vocational concentrator* is a student who has been assigned a CIP code designating a specific CATE program. CIP codes identify students who are pursuing at least 4 units of credit in CATE course work leading to a career goal.
- A *vocational completer* is a student with an assigned CIP code who has earned at least 4 Carnegie units in CATE course work leading to a career goal.
- A *Tech Prep student* is a student with an assigned CIP code who is pursuing the requirements of a career major consisting of at least 4 Carnegie units in an approved, articulated sequence of CATE course work leading to a career goal and the academic courses required for graduation.

D. Measurement Approaches

Table 1 presents the measurement approaches and definitions used for each of the secondary core indicators under Perkins III and the comparison of the actual performance results with the goals established for 2004–05.

E. Improvement Strategies

The CATE student reporting procedures manual posted on the SDE Web site was updated to provide the LEAs with access to current definitions of fields and instructions needed for data extraction as well as current CATE course and program information. The OCTE conducted three regional workshops in spring 2005 that covered data collection procedures, deadlines, expectations, and common errors in data reporting. The end result was fewer districts needing to resubmit or correct data for 2004–05, despite a tighter submittal and review schedule. Additional workshops are planned for spring 2006, given lingering data quality problems, local staff turnover, and stepped-up performance goals.

A joint data-sharing effort between the SDE and the SCTCS was initiated in 2004–05 to remedy missing accountability data for the "Tech Prep" reporting category. Records of secondary Tech Prep *completers* who graduated are now being shared. While the major benefit of the shared data will be the ability to report all of the required postsecondary accountability measures, an added benefit will be a greater ability to identify the characteristics (e.g., CIP code, gender, special populations status) and further achievement of secondary Tech Prep students who continue their studies at the postsecondary level. Data sharing during 2005–06 will include an additional cohort, which should produce more complete reporting.

A final improvement strategy is new SAS programming implemented for 2004–05 data, which produced an unduplicated count of "nontraditional enrollees" based on gender and assigned CIP code so that the performance of this special population can be reported for 1S1, 1S2, 2S1, and 3S1. Previously, nontraditional students were identified only for 4S1 and 4S2.

V. ACCOUNTABILITY—POSTSECONDARY PROGRAMS

A. State's Overall Performance Results and Program Improvement Strategies

Table 2 presents the measurement approaches used for each of the postsecondary core indicators under Perkins III and the comparison of the actual performance results with the goals established for 2004–05. (Note: The underlined text reflects updated wording; however, the meanings of key terms have not changed.)

Table 2: Postsecondary Measures and Performance Levels for 2004–05

Perkins Indicator	Measurement Approach	Numerator/Denominator	2005 Goal	2005 Actual
1P1	GPA. Concentrators—excluding students in transfer programs**,** students in two or more developmental education courses, and students not declaring a major—achieving a 2.25 or higher cumulative GPA at the end of spring term.	**Numerator** = total number of concentrators with cumulative GPA of 2.25 or higher at the end of spring term **Denominator** = total number of concentrators in opening fall term	72.37%	72.95%
1P2	Same as above. Technical courses represent approximately ¾ of the program requirements with ¼ of the courses academic.	**Numerator** = See above. **Denominator** = See above.	72.37%	72.95%
2P1	State/local administrative data. First-time, full-time participants graduating within 150% of required program completion time. Transfers and entering military are not counted as completers. Data based on the IPEDS/NCES graduation rate cohort.	**Numerator** = total number of students graduating within 150% of required program completion time **Denominator** = total number of first-time, full-time students enrolled in beginning fall term	15.89%	12.96%
3P1	Administrative record exchange. Graduates/completers employed in related fields within 9 months or continuing education. Data collected by each technical college through local survey.	**Numerator** = total number of graduates placed on jobs related to program of study and/or continuing their education **Denominator** = total number of graduates available for employment	87.62%	76.34%
3P2	State/local administrative data. Graduates/completers remaining employed more than a year after program completion.	**Numerator =** total number of graduates/completers, excluding AA/AS, remaining employed after one or more years **Denominator** = total number of graduates/completers, excluding AA/AS, employed in the first collected quarter after completion	87.48%	90.84%
4P1	State/local administrative data. Underrepresented gender annual enrollment in defined nontraditional programs as determined by the individual colleges from the approved technical college system list.	**Numerator** = total number of males and females enrolled in designated nontraditional programs **Denominator** = total number of students enrolled in designated nontraditional programs	16.50%	23.32%
4P2	State/local administrative data. Underrepresented gender completers in defined nontraditional programs as determined by the individual colleges from the approved technical college system list.	**Numerator** = total number of males and females graduating from designated nontraditional programs **Denominator =** total number of graduates from the designated nontraditional programs	12.42%	19.52%

Analysis of Postsecondary Results

Performance on the core indicators was assessed for sixteen technical colleges as was applicable for the programs offered at the various institutions. As indicated in table 2, South Carolina met the performance goals for each of the postsecondary measures except 2P1 (completion) and 3P1 (placement). The completion goal for 2004–05 was missed by 2.93 points, and the placement goal was missed by 11.28 points. Actual performance exceeded the adjusted level of performance for the other core indicators: academic attainment and vocational-technical skill attainment (exceeded by .58 point), retention (exceeded by 3.36 points), nontraditional participation (exceeded by 6.82 points), and nontraditional completion (exceeded by 7.1 points).

Core Indicators—Performance Levels Met

As indicated in table 2, the SCTCS goal for 1P1 and 1P2 (academic attainment and vocational-technical skill attainment) was met; over half the colleges met the goal for the second consecutive year. A large number of students met the requirement of a 2.25 or higher GPA at the end of the spring term, a fact suggesting that the program improvement strategies continue to have a positive impact on students' academic performance. Despite a weak economy and high unemployment rates across the state, the system exceeded the institutional goals for 3P2 (retention)—a good indication that individuals who obtain employment after graduating are maintaining their positions. The system also exceeded the established performance level for 4P1 (nontraditional participation) and 4P2 (nontraditional retention).

The following are the improvement strategies that were implemented to promote student achievement during 2004–05 for core indicators 1P1 and 1P2, 3P2, 4P1, and 4P2:

- academic and technical skill attainment—continuing one-on-one tutoring availability, providing more diverse tutorial software and videotapes, expanding hours of operation in the tutoring lab, providing opportunities for occupationally relevant learning experiences, expanding assessment testing to improve placement, and increasing access to Internet course offerings and vocational-technical electronic books;
- retention—continuing one-on-one and group career counseling, increasing the number of students who take the Kuder career-planning assessments, and collaborating with business and industry for work-based learning opportunities;
- nontraditional participation—increasing nontraditional program awareness, promoting male participation, and enhancing support services that assist and counsel students involved in nontraditional programs; and
- nontraditional retention—increasing the number of study and test-taking skills workshops and continuing transportation and child-care assistance.

Core Indicators—Performance Levels Not Met and Program Improvement Strategies

The system goal for 2P1 (completion) was missed by 2.93 points. Students who attend community and technical colleges do not typically move through academic programs in a linear, semester-to-semester fashion. Their attendance patterns may vary due to financial barriers or to external responsibilities related to work or family. It is not unusual for these students to begin taking courses full-time and then reduce their credit load at some point due to

their other obligations. Such obligations may also prolong a student's time in technical college because they cause him or her to perform poorly in the classroom and thus to be forced to retake courses. Attendance variations also affect the amount of time such students need to complete their degrees.

The following are the improvement strategies that will be implemented or intensified to promote student success for core indicator 2P1 (completion):

- monitoring each student's academic progress every semester and providing intervention strategies for those students who have a GPA of less than 2.2;
- monitoring the files of each student for verification of attendance at scheduled appointments and class meetings;
- continuing follow-up services for academic, financial, personal, and/or career concerns;
- continuing to educate students on how to find scholarships and complete financial aid applications in order to ease the economic burden of attending college; and
- encouraging students to take courses through the South Carolina TechOnline Consortium, which is a system designed to allow students to take SCTCS courses online rather than in a traditional classroom setting.

As the economy in South Carolina continues to struggle, it is not surprising that less than half of the state's technical colleges achieved the system goal for 3P1 (placement). Due to the economic challenges faced around the state, several of the rural communities have been plagued with significant layoffs and closure of many large manufacturing companies—factors that severely stifle an extremely tight labor market. Additionally, colleges have reported that a large number of students do not respond to the graduate follow-up survey, which is the primary means of collecting graduate placement data.

The following are the improvement strategies that will be implemented or intensified to promote student success for core indicator 3P1 (placement):

- conducting individual and group sessions on job-search strategies, résumé writing, and employability skills;
- conducting individual and group career development sessions to help students become knowledgeable of the connection between their majors and the job market;
- hosting a technology career fair at various colleges to help students connect with potential employers; and
- continuing to use the Kuder career assessments to help students develop career portfolios.

B. Performance Results for Special Populations and Program Improvement Strategies

Analysis of Results for Special Populations

The system exceeded the established performance level for 4P1 (nontraditional participation) and 4P2 (nontraditional retention). Three of the seven special populations groups met the SCTCS goal for 1P1 and 1P2: "single parents," "displaced homemakers," and "limited English proficient" students. The proportion of these special populations students meeting the state goal

is extremely encouraging, since the colleges have provided these students with numerous resources to ensure that they have the textbooks and supplies that are essential for academic success. The system goal for 2P1 was met by four of the seven special populations groups: "single parents," "displaced homemakers," "limited English proficient" students, and "nontraditional enrollees"—a fact indicating that the individual career counseling sessions offered to the special populations groups by the colleges are playing a significant role in enabling these students to complete their programs.

The system goal for 3P1 was met by only one of the special populations groups, students with "other educational barriers." The general student population missed this goal by a wide margin as well, so it is not surprising that the special populations groups would have difficulty reaching this goal. Many of the special populations students return to college to improve their skills in order to keep pace with the changing technology. Once they obtain the desired skills, they tend to drop out of school. This factor often has a negative impact on the system's placement and completion rate, but in actuality, the students have accomplished their individual goals. The system goal for 3P2 was met by three of the special populations groups.

Strategies That Contribute to Special Populations Student Achievement

More recruitment strategies were developed to inform students of the career opportunities and income potential that are available in nontraditional career fields. Several of the colleges developed mentor programs to match "nontraditional enrollees" with professionals in the industry. Nontraditional students also participated in job-shadowing programs in order to obtain hands-on experience in their respective fields.

Individual career counseling sessions were held to specifically address the needs of single parents and displaced homemakers. Several of the colleges offered evening tutorial services to accommodate the special populations students. During 2004–05, the SCTCS partnered with the SDE to purchase access to the Kuder Career Planning System, which helped to strengthen the colleges' ability to identify students who are interested in nontraditional career fields and enabled students to make more informed decisions about their career and college plans.

Possible Barriers to Achievement and Program Improvement Strategies

The special populations data analysis identifies that the "individuals with disabilities" did not meet any of the performance goals. All of the institutions house a disability service office, and the college staff are making a concerted effort to improve the overall performance of this group. Recommended strategies include individual tutoring sessions, monitoring students' academic performance, and designing workshops to equip students with the skills that are essential for academic success in college.

The "economically disadvantaged" students also missed several of the performance goals. The economic challenges faced around the state have a direct effect on this group of students. Many of these students cannot afford to pay the increased tuition cost. Others are forced to work two jobs in order to meet the needs of their family. Such issues will continue to play a key role in the "economically disadvantaged" students' ability to successfully complete school. Recommended strategies include extending the regular tutoring hours to include evenings and weekends, designing Web-based tutorial programs that are available for student access at all times, and allowing students to "check-out" laptop computers from the institution to decrease the digital divide.

The data reveal that students with "other educational barriers" were the only special populations group that met the performance goal for 3P1. The system placement rate is largely based upon the number of graduates who complete a graduate follow-up survey. Recommended strategies include holding graduate exit interviews to stress the importance of completing the follow-up survey and calling the graduates who have not returned the survey in an effort to encourage them to do so. Additionally, the special populations data analysis shows that "individuals with disabilities," "single parents," and "limited English proficient" students did not met the performance goal for 4P1. The colleges have designed job-shadowing and mentoring programs to better inform students about nontraditional career options. The colleges will offer professional development workshops for the faculty to promote understanding of the importance of students' participation in nontraditional programs.

C. Definitions

The following definitions are provided as required for the 2004–05 program year (underlined text reflects changes from the previous program year):

- A *vocational participant* is a student who has enrolled in a CATE program. Students in the Associate in Arts and Associate in Science degree programs were not included within this category since these programs are general education preparation for transfer to a higher education institution. (Note: The postsecondary core indicators do not include any measures that use the term *vocational participant.*)
- A *vocational concentrator* is a student who has enrolled in a CATE program. Students in the Associate in Arts and Associate in Science degree programs were not included within this category since these programs are general education preparation for transfer to a higher education institution.
- A *vocational completer* is a graduate of a CATE program.
- A *Tech Prep* student is a high school graduate who was identified at the secondary level as a Tech Prep completer and who entered the technical college system and enrolled in a CATE program of study.

D. Measurement Approaches

Table 2 presents the measurement approaches used for each of the postsecondary core indicators under Perkins III and the comparison of the actual performance results with the goals established for 2004–05.

E. Improvement Strategies

The SCTCS will continue to provide all of the general population data for the indicators as a means of establishing consistency in the reporting structure for all sixteen colleges. The institutions will continue to provide data on the nontraditional students and special populations. Continuous communication of efficient and effective processes among the institutions will improve data collection.

This year the SCTCS and the SDE established a memorandum of understanding to share the Tech Prep student data required for this report. This agreement enabled the SCTCS to identify secondary Tech Prep completers who entered into the technical college system and enrolled in a CATE program of study. Each program year, data on an additional cohort of secondary Tech

Prep completers will be submitted by the SDE to the SCTCS, thereby providing a more complete depiction of the performance of Tech Prep students throughout the system.

The SCTCS continues to review the data quality and to streamline the data-collection process to ensure consistency and reliability within the system for Perkins reporting. Emphasizing the value of accurate data and developing a simplified data-collection process will provide the technical colleges with an improved snapshot of their students and allow comparison to other higher education systems. Although there is still much work to be done to improve the data-collection process for the annual report, the reporting process itself is becoming much more uniform among the sixteen institutions, making it possible to compare them with one another and with other postsecondary institutions in the state with regard to student achievement.

VI. MONITORING FOLLOW-UP

(This section does not apply to South Carolina for the 2004–05 program year.)

VII. WORKFORCE INVESTMENT ACT (WIA) INCENTIVE GRANT AWARD RESULTS

In FY 2004, South Carolina received a WIA incentive grant that ended June 30, 2005. Eleven school districts received a grant award through the OCTE to implement activities allowable under Perkins III and/or WIA Titles I and II in support of five workforce development incentive grant goals: create sustainable partnerships; develop seamless, client-centered delivery system across agency boundaries; engage more people in innovative learning programs; reduce the number of at-risk students and dropouts; and improve program performance outcomes. The grantee final reports illustrated how the educational and workforce development programs in these eleven LEAs improved through the creative, well-planned local grant initiatives, many of which will be sustained through the proven-effective programs that were obtained and utilized under the grants. Some of the more prevalent programs or strategies employed by the LEAs are PLTW, linkages with one-stop centers, career development facilitator training, *HSTW*, *MMGW* (*Making Middle Grades Work*), WorkKeys, Kuder career assessments, development of career clusters and related materials, and distance learning.

VIII. ATTACHMENTS

Copies of the organizational charts and local applications for funding required for section IA and section III will be forwarded as a separate electronic submission, sent to car2005@ed.gov. The Financial Status Report (which includes the interim and final reports for the State Basic Grant and Tech Prep Grant programs), the Vocational-Technical Education Student Enrollment Report, and the Vocational-Technical Education Accountability Report will be submitted with this narrative report through the CAR online database, as required by the United States Department of Education's Office of Vocational and Adult Education.