

**CARL D. PERKINS  
CONSOLIDATED ANNUAL REPORT  
FISCAL YEAR 2008**

The Kentucky Office of Career and Technical Education (OCTE) continually strives to improve the instructional quality of career and technical education programs throughout Kentucky. CTE Programs are offered to students in middle and high schools, area technology centers serving secondary students, a virtual area technology center, community and technical colleges, correctional facilities, and regional universities across the state. We are committed to providing the leadership and guidance necessary to provide the citizens of Kentucky with relevant and rigorous career and technical education that meets the needs of business and industry. Input from industry, community leaders, students, parents and educators play a vital role in curriculum development and instructional improvement. Our goals are for all career and technical education programs to continuously improve, meet the Perkins accountability indicators, encourage more stringent and frequent program assessments, and to keep programs current with business and industry.

**REQUIRED & PERMISSIVE ACTIVITIES**

An assessment instrument has been developed with input from administrators, secondary and postsecondary teachers, and business and industry representatives to evaluate technical programs at the secondary level in area technology centers and locally controlled secondary programs located within the high schools. The goal of the assessment project is to ensure that all technical programs operated by state and local school districts are offering students the same quality of program offerings, and ultimately, the same opportunities for employment and a seamless path to post-secondary education. The assessment document evaluates 17 standards and impacts 485 programs.

During the school year, one-half of programs at the secondary level were visited by assessment teams. These teams consisted of a university teacher educator as the leader, an industry representative, and state staff from secondary and post-secondary educational agencies. During each assessment visit, programs were thoroughly reviewed and evaluated in each of the following areas: technical and academic curriculum, lesson planning, postsecondary links, program contributions to the community, follow up and placement, classroom safety, involvement in student organizations, incorporation of technology in the classroom, work-based learning opportunities for students, teacher certification, and professional development.

Seven focus group meetings were held during the year to obtain input from stakeholders regarding the revision of the program assessment process. Technical assistance was given to teachers, principals, and coordinators as visits were made. Training was provided throughout the school year and summer. A web site has been developed <http://www.kytech.ky.gov/programassessment.htm> to house the assessment instrument and

allow schools to access the instrument to conduct a self-evaluation at the end of the school year. The website also includes instructions, supporting documents, resources, and examples of documentation. The statewide school average for assessment team visits continues to increase.

The majority of programs in the state utilized Perkins funds to upgrade, expand and purchase new equipment and software for their programs to better meet the needs of business and industry. The Office of Career and Technical Education continued their partnership with the Kentucky Department of Education - Kentucky Virtual High School to provide technical courses to students with limited access to technical education. Through this endeavor the Kentucky Virtual Area Technology Center (KVATC) is a recognized provider of online learning as part of the Kentucky Virtual Schools framework, which serves the K-12 community.

The KVATC is providing online content in Computer Aided Drafting, Geographic Information Systems, Computer Programming and Computer Applications to remotely located students. These courses serve students studying to be technicians and those pursuing careers in Engineering, Architecture and Software Engineering. In addition, KVATC is offering computer literacy training to OCTE staff in an effort to increase the use of instructional technology by all teachers. Training is also being offered to new CTE teachers to help enhance their classrooms and assist them in completing teacher certification requirements. Over 60 CTE teachers are taking advantage of KVATC capabilities by moving technical content to the online format. Students will be able to access class content from home or anywhere they have an internet connection. Teachers have commented that students are more likely to complete homework assignments, stay on task and current with course work.

An E-learning project sought to expand the use of technology as an instructional tool and increase emphasis on academic integration. Thirty-seven instructors received training on the use of Blackboard, an online course management system, as an instructional tool. Teachers upload course content to the Blackboard system so that students can access it on demand. This technology has made it possible for teachers and students to increase technology skills. Students can also easily stay current with course work even if they are absent or delayed in arriving to class. Currently, there are 287 teachers, 1,972 and 414 courses in the Blackboard system.

The automotive technology programs began a project utilizing Today's Class/Melior Online Resource. Forty three instructors assisted 529 students who enrolled in the online classes. A total of 2,361 modules/classes were taken by students in the program. The areas covered in the modules included brakes, electrical systems, suspension and steering, basic engine performance, safety, heating and air conditioning, engine repair, and manual transmissions and transaxles. The online materials can be accessed by the student at school or at home on a 24/7 basis. The software also includes the industry on line end of program test in partnership with ASE/NATEF. The automotive technology instructors were very pleased with the resource and found it to be an excellent teaching tool that complimented the lab and classroom work that was already involved in the subject matter.

A "Computer Skills for New Teachers" project was developed as a result of changes in the new teachers' internship program (KTIP). This is a mandatory one year internship for all new teachers in Kentucky. A recent revision of KTIP includes a reporting mechanism that requires the new teacher to complete forms electronically. In addition, teaching resources are more commonly produced in electronic form. Both of these trends make it necessary for teachers to have proficient computer skills. However, many of our new teachers are lacking these important skills. Introductory computer skills training was developed and delivered in January 2008. During this time, 12 new teachers completed the training. All teachers provided positive feedback as to the value and quality of the training. In addition, school principals indicated they would like to send veteran teachers to future training opportunities.

The Kentucky Community and Technical College System continued its planning and development of on-line courses. Partnerships were formed between secondary and post secondary educational agencies to provide access to education for Kentucky citizens who would not have the opportunity to learn if not for the convenience and accessibility of e-learning through the Kentucky Virtual University.

Professional development activities were held throughout the year on a variety of topics requested by teachers, including learning to use technology in the classroom, integration of academics and technical skills, classroom management, and working effectively with special population students. In addition, short-term classes known as "technical upgrade" were offered during the summer. The classes were specifically designed for each program. The classes ranged in length from one to five days and provided hands on training in the latest equipment, software and teaching materials. The training was available for all CTE instructors including those from the universities, community and technical colleges, area technology centers, and locally controlled secondary programs. Over 800 instructors participated in a total of 51 workshops. The workshops included the latest in industry processes and equipment, industry certifications, and enhancing academics in the CTE programs. Many teachers earned nationally recognized certification in their respective fields. Participants also had an opportunity to network, share ideas, and locate resources.

A statewide three day conference was also held during the summer with both secondary and postsecondary instructors and administrators invited to attend. Those attending the conference had an opportunity to network, share ideas, locate resources, and develop new instructional strategies. The Kentucky Community and Technical College System (KCTCS) provided a variety of initiatives geared toward technical/program faculty development including a Master Teacher Seminar, New Horizons Conference on Teaching and Learning, Scenarios Online, the Ashland Teaching Learning Conference, Content Literacy Training, and the popular Teaching Consultation Program as well as many discipline specific opportunities

The New Principal Institute (NPI) was designed to provide new area technology center principals overall information that focuses on major goals and objectives. The NPI Workshop provides information to support the new principal's growth as a professional person to continue improvement, learning and understanding of Instructional Improvement, Technical Education System in Kentucky, Management of a Technical School, Supervision,

Administration and Budget Information, Rules, Regulations and Responsibilities, School and Program Issues, Working with Local Board of Education, and Working with Business and Industry/Community Relations. This workshop is designed to provide the new principal with learning activities such as Problem-Solving, Brain-Storming, Team Work, Role Playing, Time Management, and Communication Skills.

The New Teacher Academy (NTA) has been developed for 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> year secondary teachers that have completed a B.S. Degree and who are presently teaching in a career and technical education program. The workshop is designed to provide relevant teaching competencies based on the new teacher standards and target specific areas of instruction which participating teachers have identified as being a challenge. At the same time, NTA provides new teachers an opportunity to reflect on and analyze their teaching practices and to make curriculum and management adjustments necessary for ensuring maximum student learning.

The emphasis on academic and technical integration of instruction continued throughout Kentucky. Through an E-learning project, teachers created online curriculum specifically related to math and science. These teachers created four Computer Aided Drafting and three Geographic Information System courses. Computer Aided Drafting places an emphasis on mathematical equations and Geometry. Geographic Information Systems emphasizes geometry and earth science, including geology, geophysics, hydrology, meteorology, physical geography, and oceanography. Relevant instruction grants were awarded to 26 teams consisting of one academic and one technical instructor. Each team developed three lesson plans that emphasized the academics (math, English, or science) inherent in the lesson. The academic teacher acted as a resource for the CTE teacher. A pre and post evaluation was conducted by the CTE teacher. The results of the evaluations showed that student achievement improved on these lessons, both academically and technically.

The Kentucky Department of Education (KDE) continued its development and revision of the CTE Program of Studies. Particular attention was paid to the integration of math and science. Other aspects of development included alignment of academic expectations, core content for assessment, technical content, skill standards and SCANS. A committee of KCTCS instructors and secondary instructors developed a career pathway consisting of sequences of courses from secondary to community/technical colleges and four-year institutions. Consensus on the pathway was obtained from a broad group of stakeholders including teachers, administrators and business and industry.

Development of two interdisciplinary courses integrating math and science is being continued. Members of the Kentucky Engineering Association provided input into the design of courses and reviewed materials as developed to increase the number of students earning science credit through interdisciplinary courses. To increase the science score for agriculture concentrators, an agri-science teaching manual was developed and distributed to teachers. The manual included sequences of courses for strands of plant, animal, food and environmental science. Another curriculum effort impacting CTE programs was the

identification and development of activities integral to each Career and Technical Education Student Organization.

An ongoing Math in CTE project utilized academic and CTE teachers to develop lesson plans jointly. Teachers from the business, welding, automotive, and health programs worked with math instructors in adjoining high schools to map curriculum, and develop lesson plans including powerpoints, worksheets, assessment and other instructional materials. This is the third year of the project. A project validity study will be completed in FY 2009. Early results show a gain in the math scores of the students who were in the classes where the interventions took place but there are not enough students involved for the results to be significant. Both academic and technical instructors have had a very positive response to the activities developed.

Kentucky is a member of the National Alliance for Partnerships in Equity. Kentucky utilizes the resources from this group to assist programs in improving enrollment and participation in non-traditional fields. A website is also available with teacher resources.

American Careers Magazine, Parent Edition for Non-traditional Careers was distributed to local school districts, area technology centers and postsecondary institutions. A total of 45,000 magazines were distributed to parents and students. Many local school districts used the magazines at local parent night; some used them in their career exploration classes then ask the student to take them to their parents to share their career information. Several of the postsecondary institutions used the magazines in their career resource department. For many parents this was the only career information they received.

The 2008 summer career camps for non-traditional students were held during the months of May and June. This is the first year that funding for the camps had been open to locally operated career and technical education centers and postsecondary institutions. Only one postsecondary institution took the opportunity to conduct a camp. The area technology centers held ten camps across the state. This was a decrease in the number of camps held at the ATC's this year due to many school districts having a late closing date because of the number of snow days. The centers that held camps reported that the students attending enjoyed the time there and said that they would come again and bring a friend.

The equity coordinator for the Department of Career and Technical Education provides support and guidance to secondary and post-secondary schools through workshops, technical assistance and availability of resource materials. Since the 1996 legislation, increasing the participation of students enrolled in programs preparing students for nontraditional employment has been a statewide goal. Posters have been printed and distributed to schools that depict students in nontraditional careers. An informational video was produced that introduced prospective secondary students to career technical education students in Kentucky who have completed nontraditional programs and are successfully working in their chosen career field. Hopefully, these efforts will increase student interest in nontraditional careers at an earlier age.

Each CTE program is required to have an advisory committee made up of business and industry representatives to provide input for program and instructional improvement. The committees meet at least once each year. The contacts provided through advisory committees provide valuable resources to teachers and students, especially mentoring, cooperative work experience opportunities, and job placement. In addition to business and industry partnerships at the local and state level, partnerships among educational institutions and levels is ongoing. Secondary CTE educators work with postsecondary partners at the community and technical college level and university level in developing curriculum, assessments, and articulation agreements.

The Office of Career and Technical Education has formed an advisory committee made up of business and industry representatives from across the state. Forums were held regionally across the state to obtain input into improving CTE programs. The State Plan Advisory Committee was organized to secure input from individuals who have a stake in CTE programs in the state. The committee met in February, 2008, and provided input on the proposed Perkins State Plan. The main issue of concern was the secondary and post-secondary funding split.

The president of the Kentucky Community and Technical College System met with industry leaders to determine their needs. Information from these meetings will be used by curriculum committees in the review of current curriculum and the development of new programs. Industry leaders were used in the KCTCS Delphi Studies project to determine if tasks were used in industry and how frequently they were used.

During the 2008 fiscal year, the Corrections Education Unit of the Kentucky Community and Technical College System provides educational opportunities for inmates housed within the adult public correctional facilities. Twelve technical certificate programs at ten correctional facilities are offered tuition free. Programs saw increased enrollment and expanded degree offerings during the school year. Perkins funding was utilized to provide new equipment to meet curriculum revisions and industry standards and provide professional development opportunities to faculty. Equipment purchases have continued to be a priority during the past year due to curriculum revisions. KCTCS' curriculum is developed using business and industry standards and is based on the input from business leaders in the state. Faculty continued to work on the implementation of collaborative programs between technical, academic and community college department to assist students in overcoming educational barriers to ensure students have the opportunity to reach the highest level of educational opportunities available through KCTCS. The goal of enhancing collaboration in statewide program improvement initiatives between administrative staff and faculty has been implemented through the creation of a corrections occupational technical work group. This group is in the process of conducting peer reviews to include the observation of teaching techniques, utilization of technology in the classroom, and integration of academics in instruction. Through continued curriculum development, state-of-the-art equipment, and adequate career counseling services, the correctional education program continually strives to meet the needs of its students.

During this year, programs, services, and activities have been incorporated in CTE programs for individuals with disabilities, those from economically disadvantaged families, individuals preparing for nontraditional training and employment and those with limited English proficiency. Supportive services included the services of readers, tutors, special needs coordinators, disability coordinators, and liaison personnel.

The Office of Career and Technical Education in conjunction with the Kentucky Department of Education, Division of Career and Technical Education provided three training sessions for career and technical education instructors, coordinators, principals, and counselors who work with students with special needs. These two-day workshops, located in three different areas of the state, helped CTE educators develop lesson plans, teaching strategies, and evaluation methods in providing services to help students from special populations. These workshops provided strategies for working with students with different learning styles as well as from the stand point of right-brain, left-brain, whole brain learning. The workshops included a resource notebook for each participant that can be utilized when they return to the classroom. The intent of the workshops was to improve academic and technical achievement of students with special needs to assist in meeting Perkins IV accountability. The trainer, Dr. Mickey Wricenski, Professor of Applied Technology, Training and Development at the College of Education, University of North Texas, modeled the strategies that she talked about and engaged the participants in the strategies. The participants in the two day workshop rated the workshop highly and received practical information for working with special populations. Ms. Wricenski was so popular that she was invited to attend the summer conference and present information to both secondary and post secondary instructors and teacher educators.

The New Teacher Institute includes a session to help new teachers understand how to work with students from special populations. Emphasis is placed on understanding the legal aspects of and definitions used in working with students from special populations, the different types of special populations, and strategies for working with students from special populations. Scenarios are used as tools to help the new teachers better understand students. Questions regarding special populations are included on the examination that is given to the new teachers.

Kentucky continued to improve it's implemented of a web based Individual Learning Plan (ILP) for all students grades six through twelfth. The ILP includes components for interest assessment, exploring careers related to interest, developing an academic/career plan and other major components. This plan provides a coordinated approach to career planning and transition to various post-school outcomes. The ILP, also, coordinates with Go Higher, a web-based plan focusing on post-secondary education. These systems provide a data base for all students including special populations. Although not Perkins funded, the web based ILP helps CTE students with career planning.

Employees in the Kentucky Community and Technical College System work with students who have physical or other disabilities. When students request accommodations, the counselor and the student discusses what is needed and the counselor works with appropriate teachers to see that the student gets the help needed. The Kentucky Community and

Technical College System provided services to special populations at all colleges. Low-income students are provided with the opportunity to apply for financial aid and receive Pell Grants, CAP Grants and other aid if they meet the qualifications.

Students with disabilities are provided reasonable accommodations at all colleges. Each district has an employee who is designated to work with students with disabilities. If they meet the ADA guidelines, they are provided with instructional accommodations, adaptive equipment, and assistive technology as needed. The schools also meet the requirements for physical access to buildings. Many programs and classes are provided for students who are not academically prepared for college level classes. All new students are required to take a placement test and must take developmental classes if the scores indicate they are needed. This insures that they are ready for the challenges of college level classes. Many schools already meet the needs of ESL students and others are implementing English as a Second Language classes as the community population changes. Postsecondary educators are always striving to improve their services to meet new needs of the students.

During the past twelve months, both the Kentucky Department of Education and the Office of Career and Technical Education conducted civil rights desk audits. On-site visits were used as monitoring tools for schools receiving Perkins funding.

Technical assistance is available on an ongoing basis. Consultants and managers can provide workshops as well as on site assistance for instructors and administrators for curriculum development, assessment development and instructional improvement. The Federal Programs Branch provides information on the KYTECH website for Perkins related issues, sends informational e-mails and correspondence and provides workshops and on-site assistance for a variety of issues. Assistance was provided to schools to assist them in preparing the local funding application, interpreting accountability reports, and preparing local plans for improvement. A large amount of support is provided for the Technical Education Database System (TEDS), Kentucky's data collection system for federal reporting. During the 2007-2008 school year, assistance was provided for 277 high schools, middle schools and locally operated area technology centers, 55 state operated area technology centers, 16 community and technical colleges with 67 campuses and six universities. Yearly update training sessions were conducted for secondary and post-secondary staff. The database software was redesigned to assure data collection for Perkins IV.

Both secondary and post-secondary curriculum within our state is constantly undergoing revision and development to meet the changing needs of industry and provide students with skills to be successful in the workplace. Secondary curriculum for the KY Tech Area Technology Centers was reviewed and evaluated by teams of instructors, state supervisors of instruction and business and industry representatives to assure that skills demanded by industry were being taught. Instructors and business and industry representatives assisted with the review and revisions. The secondary curriculum used within KY TECH is aligned with that being used in post-secondary KCTCS technical colleges to allow a seamless transition for students from secondary to post-secondary technical education. The curriculum also integrates academic and technical skills. The web-based curriculum

database system includes all skill standards available in Kentucky. A lesson plan database has been implemented to assist new instructors in choosing appropriate educational activities for students that are aligned with KY TECH curriculum. Many lesson plans have compatible Power-Points, handouts, worksheets and tests attached. This database is available to anyone having web access. Both the lesson plan and curriculum databases have been very well received by teachers and are continually being updated to meet instructional needs.

Several schools participated in incentive grant renewal energy projects which provided students the opportunity to learn about energy and energy sources. These projects allowed technical teachers to partner with math and science teachers as well as representatives from business and industry. Students installed a solar power system and learned how to maintain the system. Desk top trainers were purchased to teach the students the different types of energy, how they work and how to gather data to see if these different types of energy systems are feasible in their area. Wind generation was also studied and students learned how to set up a solar power station.

Postsecondary curriculum was revised in 22 program areas including registered nursing, practical nursing, diagnostic medical sonography, industrial maintenance technology, engineering technology, business studies, paramedic technology, pharmacy technology, medical assisting, radiography, information technology, human services, culinary arts, respiratory care, physical therapist assistant, visual communications, cosmetology, interdisciplinary early childhood education, nuclear medicine and molecular imaging technology, automotive technology, fire/rescue technology, and homeland security and emergency management. The curriculum developed can be found online at <http://unity.kctcs.edu/docshare/dsweb/View/Collection-12198>. Accrediting body guidelines were utilized to update curriculum and to ensure that graduates were ready to enter the workforce as competent practitioners.

Articulation agreements for all technical programs offered in secondary area technology centers are in place and are constantly being reviewed. Discussions are ongoing with two-year technical colleges and eight regional universities within the state, and with selected private and technical colleges in the neighboring states of Indiana, Illinois, and Tennessee. The goal is to provide Kentucky students the opportunity for a seamless transfer of credits from the secondary to post secondary level, encouraging a better-educated workforce and potential economic development opportunities for our state.

Students enrolled in career-technical education were encouraged to develop leadership skills through participation in student organizations. Regional, state, and national conference participation was encouraged. Approximately 5,000 students from Career and Technical Students Organizations (DECA, FBLA, FCCLA, FFA, HOSA, PBL, Skills USA-VICA, TSA) represented Kentucky at state and national leadership conferences to compete in and develop leadership skills. Through the leadership training opportunities and the competitions, technical skills taught in the classroom were enhanced. Advisors supervised students at conferences and attended updates for conference activities, award programs, ran competitive events, and participated in conference forums. As a result, students and

teachers became more aware of career and technical education initiatives. The networking opportunities provided through participation in conference activities assisted advisors in establishing resource contacts with fellow technical educators.

Teachers and administrators are encouraged to utilize data collected through the Technical Education Data System (TEDS) to impact instructional improvement within the classroom. Improvements continue to be made to the system which became operational in 2000 as a requirement of Perkins III. Each school is responsible for inputting student data for their programs, running summary reports, and utilizing the data for program improvement. The intranet software is becoming more user friendly as modifications are made yearly. User screens and summary reports were modified this year to make them more user friendly, import and rollover programs were developed and refined to eliminate the need for secondary institutions to enter student data into TEDS that had already been entered into a similar system, and programming was evaluated and revised to assure accurate calculations in summary reports.

New data fields have been added, such as dual credit hours/postsecondary school where earned. Data entry screens allowing the user to enter the same type of data for multiple students and new reports have been identified and will be available to schools in the 2008-2009 school year. A component has been added to assist in identifying postsecondary tech prep students. In-service sessions were held throughout the year to train and retrain individuals to input data into TEDS. On site workshops were held to teach teachers how to utilize information on the reports for program improvement. Statewide and school summary reports are routinely run at the state level to pinpoint schools who are not entering their data or identify schools and programs who are showing weakness in meeting their accountability goals. Schools are then contacted and assistance provided. Data audits have been conducted to identify problem areas, and efforts are ongoing to assist school personnel in accurately coding and entering information so that data more accurately reflects the success of the school.

The New Teacher Institute (NTI) is a joint effort between the state universities offering an approved teacher education-training program (certification) and the Office of Career and Technical Education. New technical teachers employed by the Education Cabinet, Office of Career and Technical Education, Job Corps training centers, and high school (non-degree) instructors participate in NTI in order to develop essential competencies in areas such as methods of teaching, working with special needs students, assessment techniques, group instruction, instructional media, classroom control, and lesson plan preparation in their first year of teaching. Participants are also required to prepare and present a lesson presentation that will be critiqued by participants. The initial five-day training is followed up three to six months later with a two-day workshop. The two-day workshop brings participants together with experienced educators and state department staff to share experiences and develop strategies in planning, managing, organizing and evaluating instruction and teaching techniques. This program is integrated into the teacher internship and field-based education programs offered through the universities in Kentucky. New teachers participating in NTI receive three hours of college credit upon successful completion of the workshops. Over 100 new teachers participate in the New Teacher

Institute workshop each year. The NTI program is continuously improving its curriculum and delivery system to incorporate new teacher standards that are research based and reflective of best teacher practices in technical education.

In order to encourage newly hired technical instructors to pursue degree requirements, regional universities awarded up to 18 credit hours for the successful completion of a written and performance National Occupational and Competency Testing Institute (NOCTI) exam. Newly hired technical instructors are required to successfully pass the written NOCTI to determine their competence in the program area in which they are to be hired. In order to receive college credit, 14 instructors also elected to complete the performance NOCTI. Instructors were also encouraged to obtain professional skill certification in their program area, such as ASE, AWS, CISCO, CTIA, NCCER, NIMS and MOUS.

### **TECHNICAL SKILL ASSESSMENTS: Development and Implementation**

A performance-based training and assessment system known as the Skill Standards Certification System was initiated in 1999 for secondary students enrolled in technical education. The statewide implementation of the skill standards project has encouraged all teachers to ensure that they are teaching current curriculum that is aligned to the industry endorsed skill standards by occupational area. Aligning the curriculum is helping to ensure that students statewide are receiving high-level technical training in their chosen career area in addition to measuring academic and employability skills. The reporting of assessment results at the state, school and student level has been very beneficial to career and technical education teachers as they work to align their curriculum and evaluate how their students "measure up" to others statewide on the Kentucky Occupational Skills Standards Assessment (KOSSA). This endeavor is helping to shape the direction of career and technical education in our state. The Skill Standards Assessment implementation has placed a heavy focus on the need for all schools to accurately and consistently report student data at the secondary level. This system is helping to close the gap and guide districts in more thorough and accurate reporting. The skill standards assessment has served as one means of reviewing the performance level of secondary career and technical education programs in Kentucky.

The Skill Standards assessments were developed "in house" with input from business and industry representative and teachers. All students who are enrolled in technical programs at the secondary level in local high schools and area technology centers who have completed or are currently enrolled in the 3<sup>rd</sup> credit of a career major take the appropriate test for the career area in which they are enrolled each spring. Although successfully passing the test is not a requirement for their graduation, participation in the assessment process allows the student to see the skill level they have obtained in their class work in the technical field he or she is pursuing. In addition, the test results serve as a credential for students to provide future employers. The KOSSA system is serving as a meaningful tool at the school, district, and state level as a means for program evaluation and improvement in career and technical education in Kentucky.

Program areas for which the Kentucky Occupational Skill Standards Assessment are available include Business Education; Marketing Education; Family Consumer Science; Manufacturing; Agriculture Education; Allied Health; Communications; Construction; Transportation; and Technology Education/Pre-Engineering. The estimated percentage of students who would be reported as concentrators who took assessments: Of the 19,427 identified senior concentrators—13,700 took a technical assessment; 71% total. Currently, all program areas have at least one or more technical assessment available. Beginning in 2009, additional industry assessments will be available in the following areas: Business Education; Communication; Construction; Human Services; Information Technology; Manufacturing; Marketing; and Transportation. In 2008, 18 assessment areas were available; 13,701 students assessed; 6,533 certificates were given; 48% pass rate. State-development of three new assessment areas are in progress and will be field tested in 2009 and implemented in 2010—Business Management; Accounting; Agri-Business.

Committees have been formed at both the secondary and postsecondary level to evaluate end of course and end of program assessment options. Several end of course assessments have been developed in house and piloted at the area technology centers. These include Automotive and Auto Body Technology, Business Technology, and Health Sciences programs. These assessments were delivered via the internet and CPS technology. The project was basically in planning mode for the 2007-2008 year. The project manager attended a workshop on test construction sponsored by The Ohio State University. The workshop provided valuable information on test construction, reliability, validity, etc. Test instruments from NOCTI, Skills USA, and VTECS are currently being reviewed to see how they may be integrated with Kentucky developed KOSSA assessments to form a statewide assessment program. The Kentucky Community and Technical College System began planning field testing assessment instruments in several technical areas including communication and teamwork, math and measurement, workplace safety, problem solving, quality assurance, blueprint reading, business planning and operation, workforce issues, workplace skills and learning skills. Post-secondary representatives from the Kentucky Community and Technical College system are working with state CTE representatives to identify assessment options that can be utilized at the post-secondary level. Decisions regarding the statewide direction of assessment in Kentucky career and technical education programs will be finalized in early 2009.

### **IMPLEMENTATION OF STATE AND LOCAL IMPROVEMENT PLANS**

Kentucky met each of the required Perkins core indicators for FY 2008. The success of the secondary schools can be attributed to several collaborative efforts with business, industry and other educational institutions. Curriculum updates, increased number of work-based learning activities offered to students, implementation of skill standard assessments, increased participation by schools in nationally recognized programs such as High Schools that Work and Tech Prep, and the availability of numerous workshops assisted teachers and school administrators to meet the FY 2008 indicators. Workshops and on-site technical assistance was provided throughout the year to assure that student data was entered

accurately. Area technology centers have a goal of all programs meeting industry certification requirements.

At the school level, 73 schools did not meet at least 90 percent of the agreed upon adjusted level of performance for 1S1 Academic Attainment - Reading, 81 schools did not meet at least 90 percent of the agreed upon adjusted level of performance for 1S2 Academic Attainment - Math, and 5 schools did not meet at least 90 percent of the agreed upon adjusted level of performance for 4S1 Graduation Rates.

Of these schools, four did not attain the 90 percent adjusted level of performance for any of the three indicators required for reporting for FY 2008. Seventy nine schools did not meet either the reading or the math adjusted levels of performance. LEP, non-traditional, tech prep and economically disadvantaged students met all three required performance indicators. Students classified as having a disability performed the lowest of students categorized as special population students. Only 4.21% of the students identified as having a disability met the 90% adjusted level of performance for reading and only 9.93% of those students met the math adjusted level of performance. Students categorized as single pregnant did not meet either the reading or math adjusted levels of performance with 25.49% meeting the reading and 16.39% meeting the math adjusted level of performance. 34.12% of the students categorized as single parents met the adjusted level of performance for reading. They did not fare as well in math, with only 23.46% of the students meeting the adjusted level of performance for this indicator.

Reports will be provided to schools receiving Perkins funding indicating the core indicators they did and did not meet for 2007 - 2008. Schools who do not meet 90% threshold requirement will be asked to analyze their data by program to determine areas in need of improvement. This information will be shared with teachers and a plan of improvement will be requested. In the plan, the school must identify specific strategies that will be implemented, the timeline for implementation, and the person responsible for implementing the strategies. The Perkins coordinator in each school will monitor progress on the improvement plan throughout the school year. In addition, site visits will be made by central office staff, data audits conducted, and instructional plans will be reviewed. Consistent non-improvement may result in funding being reduced or eliminated to the program or school. On site technical assistance sessions with state program area consultants are available to assist eligible recipients in planning program improvements.

Data will continue to be analyzed routinely by school and program to determine specific program areas or student populations are in need of assistance. On site data audits and technical assistance visits are conducted periodically to verify information entered into the system and provide training to assure faculty and administration understands the Perkins definitions. Efforts will continue to evaluate the strategies used in the schools to determine if instructional techniques are affecting student performance. Reporting procedures will be evaluated to assure that all data is being reported and that it is reported accurately. Strategies will be reviewed and changes implemented to assure continued increases in performance for all accountability goals for next year.

## TECH PREP

Tech Prep continued to be an integral part of career technical education in Kentucky. Professional development was provided during the year to secondary and postsecondary academic and vocational-technical teachers, administrators, and counselors through workshops, meetings, and conferences. An annual Tech Prep coordinators' meeting was held with over 200 people attending. Statewide sessions were held on new requirements in the federal legislation, career clusters, articulation, integration of technical and academic skills, career guidance, teacher collaboration, identification of Tech Prep students, follow-up, developing secondary and postsecondary course sequences, distance learning, career pathways, and requirements for meeting the Tech Prep Section of Perkins IV, and use of technology in the classroom.

Technical assistance continued to be provided on-site and through phone and e-mail correspondence to assist high schools and post-secondary institutions in implementing new projects or in making improvements in their current program. Articulation agreements, integration of academic and technical subjects and other major components of Tech Prep implementation continued to grow. The consortium has taken advantage of collaborative on-line teaching and learning software, allowing students to use the World Wide Web to create and participate in collaborative on-line learning communities. A postsecondary partners' meeting brought together tech prep partners to develop ways to improve the tracking of secondary students to postsecondary institutions in our state.

Kentucky established 13 Tech Prep consortia sites in FY 2008. The consortium focuses on implementing major components of Tech Prep and meeting the Perkins IV requirements. Kentucky is also developing a career pathway model to follow the Tech Prep student from secondary to postsecondary career technical training.

In order to be funded, each Tech Prep consortium completed a request for proposal. The proposal included ten areas covering all the requirements of Tech Prep. Kentucky awarded Tech Prep grants to 13 consortiums for 2007-2008 fiscal year. The consortiums are composed of 102 high schools, 35 area technology centers, 11 local career and technical centers, and 20 postsecondary institutions. Each consortium was required to address all the components of Tech Prep. The sites were monitored in the spring for compliance.

Each proposal was reviewed and evaluated by a team of reviewers appointed by the Office of Career and Technical Education. A scoring rubric was used by the review team. Tech Prep funds were awarded on a competitive basis.

The Tech Prep consortium sites and the amounts they received are listed below.

Big Sandy Community and Technical College - \$160,200  
Bluegrass Community and Technical College - \$206,885  
Eastern Kentucky University - \$204,155  
Gateway Community and Technical College/Northern Kentucky University - \$261,040  
Jefferson Community and Technical College - \$78,685

Jefferson County Board of Education - \$241,550  
Morehead State University - \$132,470  
Murray State University - \$115,550  
Owensboro Community and Technical College - \$66,900  
Somerset Community and Technical College - \$56,050  
Southeast Community and Technical College \$127,800  
West Kentucky Community and Technical College - \$154,600  
Western Kentucky University - \$131,685

Several of the Tech Prep sites have focused on energy. They have created curriculum that integrated math, science and electricity directed toward wind and solar energy. One site included all students in the high school in an integrated project with a local industry. Each department in the school developed a special activity that involved some aspect of the industry and the local economy.

Our data system does not have the capability to look at tech prep results by consortium, but looks at results by school. The Technical Education Data System was updated in September and as of the submission date of this report, the programmer had not written accountability summary reports for the post secondary level. Therefore, the data we can provide for Tech Prep this year is limited. Tech Prep programs met all secondary required accountability indicators.

### **CONCLUSION**

During the past year Perkins funds have provided professional development opportunities for instructors and administrators and purchased state-of-the-art equipment in classrooms and laboratories. The administration has emphasized the importance of integrated academics and technical skills and special projects have been developed to assist instructors in developing lesson plans that integrate math, science and writing into their curriculum. Materials have been provided to all schools to utilize for nontraditional recruitment and retention. Professional development opportunities were expanded during the year, especially those that allowed instructors to upgrade their knowledge and skills on equipment being used in industry. Opportunities were also provided for instructors to work with their academic colleagues to develop integrated learning projects, to improve their knowledge in the use of technology in the classroom, to learn about individual learning styles, and to become more effective in classroom management skills. The implementation of the secondary program assessment process and assistance from state staff in curriculum, lesson plan database implementation, and instructional methodologies all contributed to student success. At the post-secondary level, equipment purchases have increased in all schools allowing students to be trained on the latest technology. Improved technology has increased student interest in class participation and increased their likelihood of being hired in industry upon completion of the program.

During the next school year, professional development opportunities will continue to be expanded to provide instructors with knowledge about the latest equipment, software, and instructional strategies. Workshops will continue to be provided to assist personnel at secondary and post-secondary institutions with special populations and gender equity

initiatives and equipment will continue to be updated to meet industry standards. Integration of technical and academic programs will continue to be encouraged with assistance provided in developing integrated projects. Partnerships will continue to be formed between educational institutions, state agencies, business and industry and the community in order to assure that all students in our state receive a technical education of the highest quality available.