Kentucky BEEFS UP its CTE Programs

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Employers are looking to career and technical education (CTE) programs to supply a workforce possessing academic and employability skills to complement the technical component. In Kentucky, the state has instituted assessment standards to ensure that CTE programs are working to increase student achievement. Kentucky Administrative Regulations[1] require that CTE programs:

- provide a rigorous curriculum, leadership skills through student organizations and work-based learning opportunities;
- be accountable for students completing a technical program and positive student transitions after high school; and
- include stakeholder involvement.

CTE programs are directed to incorporate academics in instruction and to be active partners in increasing student achievement as measured by the Commonwealth Accountability Testing System (CATS) [2], Perkins performance measures, and the Kentucky Occupational Skill Standards Assessment (KOSSA) [3]. CTE teachers are dedicated to fulfill all the requirements expected of them.

How it Began

In 2001, Kentucky legislators asked the Office of Career and Technical Education (OCTE) and the Division of Career and Technical Education in the Kentucky Department of Education (KDE) to review secondary technical programs in both the 55 state-operated area technology centers and the 36 departments and centers operated by local school districts. These schools provide CTE instruction in primarily business, communications/information technology, construction, health sciences, manufacturing, marketing and transportation programs. To comply with legislators' request and meet the accountability criteria set by CATS, KOSSA, CTE regulations, Perkins performance measures, and the Southern Association of Colleges and Schools (SACS) accreditation standards, CTE stakeholders developed the assessment process and program assessment document (Figure 1). (Stakeholders were business and industry, OCTE and KDE-DCTE staff, two- and four-year postsec-

FIGURE 1: Assessment Document. A committee of CTE stakeholders developed an assessment document that includes indicators of quality programs. The assessment document brings together the multiple requirements of CTE teachers and their programs. ➤➤

ondary institutions, teachers and administrators.) OCTE staff then developed a Web site to assist teachers and administrators in documenting the assessment standards and a database to collect, manage and analyze the data gathered from the process.

Assessment Process

The program assessment process identifies gaps and brings strengths and weaknesses to the forefront. From 2001-2005, 365 secondary programs were reviewed by assessment teams. A second, two-year cycle of assessment team visits began with the 2005-2006 school year and assessment teams visited 504 programs. Data for the third cycle from 2007-2009 will be available in June 2009.

Team Visit

Every two years all programs receive an assessment team visit. The team, chaired by a university educator, is comprised of representatives from secondary CTE, the community college system and business and industry. The team reviews one year of documentation of the assessment standards gathered by the program teacher, and the program receives a score based on a 0-4 scale. All scores are entered

FIGURE 2: Standard 8, Assessment guide. The program assessment team will check, but not limited to, the following: ➤➤

- Students and teacher(s) wearing appropriate eye protection
- Students and teacher(s) wearing appropriate clothing
- Equipment guards
- Safety posters
- Visual warnings
- Posted written policies
- Visible MSDS
- Visible first-aid kit
- Clean and orderly shop and classroom
- Working eye wash station
- Eyewash log
- Condition and placement of fire extinguishers
- Other items as appropriate

into the program assessment database. A high-quality program is expected to have at least a 3.0 rating. After the team visit, the principal shares the team's findings with the teachers to assist in developing school and program improvement plans and improving the documentation for the self-study at the end of the school year. Summary data are used by the OCTE and KDE to identify professional development activities, to assist school and district leaders in making decisions and developing district improvement plans, and to provide individual assistance to teachers.

Self-Assessment

In addition to an assessment team visit

every two years, all programs submit a self-assessment in May that maintains the continuity of the process. The assessment document is revised every two years for use in beginning a new cycle of assessment team visits. (The standards are listed in Figure 1.) Each standard lists required documentation and includes a scoring guide, related resources and instructions. (Figure 2 shows Standard 8—one of the two safety standards.)

Program Assessment Web site

A program assessment Web site provides teachers with the tools needed to complete the activities and documentation required for an assessment team visit and the annual self-assessment. The Web site includes


Education Cabinet Program Assessment Document

17 Standards from the Department for Workforce Investment, Office of Career and Technical Education; and the Kentucky Department of Education, Division of Career and Technical Education

1. Curriculum
2. Lesson/Unit Plans
3. Student Achievement
4. Student Recognition
5. Postsecondary Links
6. Perkins Performance Measures
7. Program Area Safety
8. Student Safety
9. Student Organization
10. Public Relations
11. Families and Community
12. Advisory Committee
13. Industry Certification
14. Work-Based Learning
15. Professional Growth
16. Program Improvement Plan
17. Technology

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8. Learning Environment	Student Safety	4	3	2	1	0
Students observe and demonstrate safe practices within the classroom.		☐	☐	☐	☐	☐

Documentation:

1. *Teachers and students comply with personal and environmental safety practices associated with clothing, eye protection, hand tools, and power equipment.
2. Safety tests are available with the following criteria:
   - Dated
   - Two different tests (the tests and students are different.)
   - Grade of 100 percent
3. Students conduct monthly safety inspections for lab with classroom or classroom only. The teacher and students sign and date safety inspection form. (Include inspections for at least two months.)
4. Recommendations from student monthly safety inspections have been implemented. (May be documented in 8C.)
5. Written policies regarding safety/lab operations are posted.
6. Current safety posters are posted.
7. Visual warnings are posted.
8. The student and parent/guardian sign written policies regarding general safety/lab operations. (Include at least two dated samples.)

*No documentation is needed since this will be observed by the program assessment team.

Scoring Guide:

4 Documentation of all eight of the standards.
3 Documentation of one and at least six of standards two-six.
2 Documentation of one and at least five of standards two-six.
1 Documentation of one and at least four of standards two-six.
0 Documentation insufficient.

Resources:

- Standard 8 Example Documentation
- Monthly Classroom Safety Inspection Checklist
- Monthly Lab Safety Inspection Checklist
- Eyewash Log!

the standards-based assessment document, accountability crosswalks, industry certification alignments, example documentation, blank forms, and resources. In addition, program assessment training is provided each summer in approximately 14 locations throughout Kentucky.

Analyzing Data

Figure 3 depicts the average assessment scores of all programs for the pre-assessment (completed in 2001) and two cycles. Cycle one included the four school years 2001-2005; cycle two, the two school years 2005-2007. During the pre-assessment and cycle one, a scoring guide with a scale of 1-4 was used to evaluate standards. Beginning with cycle two, the assessment scoring guide was revised to use a 0-4 scale, which increased the difficulty of the requirements. Cycle three began with the 2007-2008 school year. It increased emphasis on program improvement plans, lesson plans and work-based learning. Taking into consideration the scoring guide, changed to reflect higher expectations beginning with cycle two, the data in Figure 2 shows an increase in the quality of CTE programs in Kentucky. After the process and data were analyzed, OCTE identified the progress, challenges and concerns shown in Figure 4.

FIGURE 3: Average Program Assessment Scores

PreAssessment: 1-4 scale	Cycle 1 School years 2001-2005: 1-4 scale	Cycle 3 School years 2005-2007: 0-4 scale
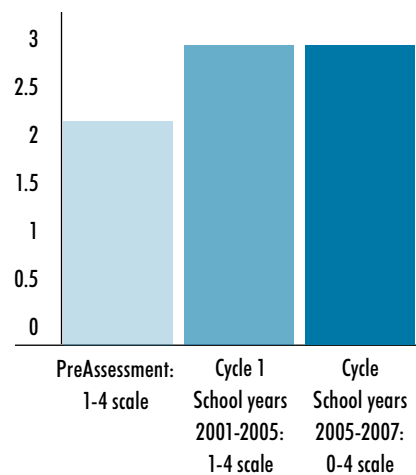
FIGURE 4: Program Assessment Data Results

Progress
- Increased student achievement as measured by KOSSA and Perkins
- Teachers' increased awareness of accountability requirements
- Date-driven program improvement plans
- Monitored program improvement plans
- Increased membership in CTE student organizations
- Increased involvement with the community and parents
- Enhanced program advisory committee meetings
- Implementation of a reading program in CTE programs
- Development of interdisciplinary courses
- Inclusion of Math-In-CTE program instruction

Challenges
- Continuing to increase work-based learning opportunities for students
- Providing more professional development on preparing lesson/unit plans
- Developing/maintaining/increasing relationships with the high schools that send students to the technology centers
- Developing a process to utilize data on student achievement

Concerns
- Time for teachers, administrators and central office staff to complete tasks
- Teacher retention
- Funding for the administrative staff and process
- Integrity of the assessment standards
- Consistency of assessment teams
- Teacher's role in utilizing the standards to improve programs
- Enhancing integration of academics in CTE programs
- Teachers' understanding of how accountability impacts program/student success
- Motivating teachers

FIGURE 5: Student Achievement

Perkins (Percentage Meeting Academic Accountability
KOSSA (Percentage Passing)
CATS (Academic Index)
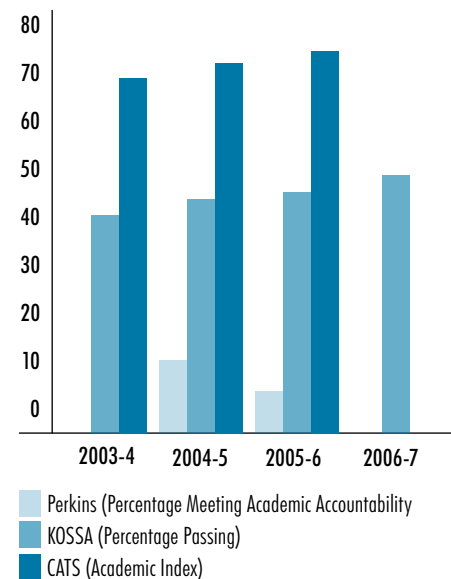
A Step Closer to Excellence

OCTE went one step further to become the first group of career and technical schools in the nation to be accredited by the Southern Association of Colleges and Schools Council on Accreditation and School Improvement (SACS CASI). In the process, OCTE was identified as a district. The OCTE district has the responsibility to monitor and support the progress of the area technology centers. The teachers' responsibilities in SACS CASI accreditation process are limited to documenting the standards as required by program assessment.

Summary

With pressure from employers for well-prepared employees and from the education community to meet accountability requirements, CTE teachers are responsible to many stakeholders. The program assessment standards bring all the accountability requirements together in one package making it easier for teachers to satisfy their many stakeholders.

The program assessment process is a work in progress for CTE teachers and administrators. The assessment process is a tool to measure progress and provides

the analytical data needed to guide the district through continuous improvement. Although student achievement has increased, students' scores need to be higher to meet CATS proficiency levels. Figure 4 outlines the progress, challenges and concerns identified by data from program assessment data. Figure 5 shows student achievement as measured by CATS, KOSSA and Perkins.

The OCTE and KDE continue to improve the program assessment process and to use the data to increase student achievement through quality CTE programs. **T**

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Web Sites
The Program Assessment Web site is available at **http://kytech.ky.gov/programassessment.htm**.

The Team Visit document is available at **www.kytech.ky.gov/pateamvisit.doc**.

The Self Assessment document is available at **www.kytech.ky.gov/paDoc0709.doc**.

Notes
[1] Kentucky Administrative Regulations are available at **www.lrc.state.ky.us/kar/780/004/010.htm**.
[2] CATS is the Kentucky test that measures skills in math, science, reading, writing and other areas. More information on CATS is available at **http://education.ky.gov/KDE/Administrative+Resources/Testing+and+Reporting+/CATS/**.
[3] KOSSA is a set of academic and employability skills developed by representatives from business and industry. More information is available at **http://education.ky.gov/KDE/Instructional+Resources/Career+and+Technical+Education/Skill+Standards+and+Assessments/**.