

Starving

Status Report on Career and Technical Education (CTE) Funding for Operations, Supplies and Equipment

January 22, 2020

Prepared by the Kentucky Association for Career and Technical Education (KACTE)

CTE (Career and Technical Education) is receiving increasing attention; however, CTE in Kentucky is facing a critical juncture.

- The Kentucky General Assembly (CTE) Task Force met throughout the summer-fall of 2019 to examine possible improvements to CTE operations and funding.
- Newly elected Gov. Andy Beshear promoted expanded CTE in his campaign.
- The Kentucky Department of Education's (KDE) accountability system for public schools stresses student transition readiness, which includes CTE measures.
- Enrollment increases in CTE programs suggest its growing recognition among both parents and students as a path toward careers.
- Business and industry proclaim the need for a skilled workforce, which largely is educated through CTE.

With the demands placed on CTE, the ability of technical colleges, school districts and career and technical centers to deliver quality, relevant and in-demand education is challenged to achieve its goals in the face of declining funding. All education can benefit from increased funding, but this paper will show how CTE works to:

- support economic and workforce development;
- provide relevant, hands-on education; and
- how CTE is threatened by funding shortfalls.

The focus of this report is on secondary CTE, but many of the funding issues apply equally to postsecondary CTE programs.

CTE Works

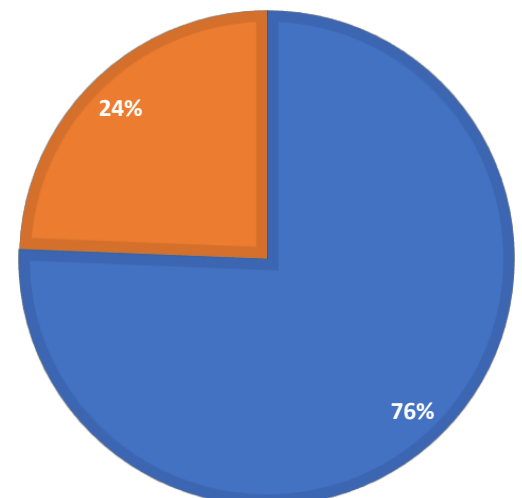
The latest statistics available from the KDE Office of Career and Technical Education and Student Transition (OCTEST) reveal in the 2018-19 school year more than 181,000 students pursued CTE instruction in one or more courses: 137,197 secondary enrollment and 44,231 postsecondary enrollment.

For the same school year, 99.04 percent of CTE concentrators graduated high school, and 74.37 of them earned an industry certification or passed an end-of-program assessment. Among postsecondary CTE students, 76.42 percent earned a credential, certificate or degree.

As reported to the Kentucky General Assembly's Education Assessment and Accountability Review Committee in November 2019, two-thirds of all jobs in Kentucky do not require education beyond high school. CTE is important in providing the skills training needed for those filling these jobs. Further, it was reported at the meeting CTE concentrators earned higher wages "across the board" than non-CTE students.

CTE ENROLLMENT: 181,428

■ Secondary, 137,197 ■ Postsecondary, 44,231



Studies in Wisconsin, Washington State, Tennessee and others show that CTE provides a positive return on investment. Wisconsin taxpayers receive \$12.20 in benefits for every dollar appropriated for the technical college system. High school CTE programs in Washington State return to taxpayers \$9 for every dollar budgeted. The return in Tennessee is \$2 for each dollar invested at the secondary level.

Why CTE Works

CTE takes students beyond theory to real-world application of knowledge and skills

learned. CTE allows exploration of career paths so students can identify and then pursue careers. CTE engages students in their education. As evidenced by the 99 percent of CTE students who graduate high school, engaged students get their diplomas. Most continue their education. Studies report that CTE concentrators enroll in postsecondary programs at a higher rate than overall high school graduates.

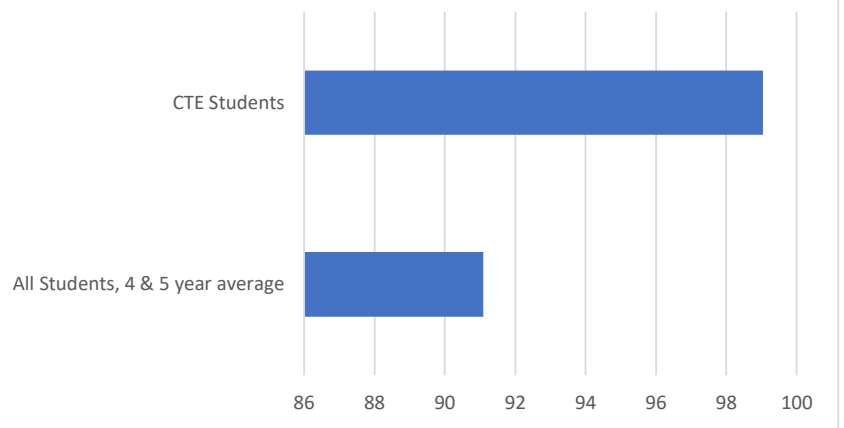
Best-practice CTE instruction in Kentucky melds basic, core academics (reading, writing, math and science) with rigorous and relevant skill development attained through hands-on applications, project-based learning and demonstration of competence. Student competence can be exhibited by earning industry-recognized certifications, from passing rigorous end-of-course assessments, and in Career and Technical Education Student Organization (CTSO) competitive events. Secondary students can earn dual credit from participating postsecondary institutions adding associate degrees and credentials to their resumes in less time.

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common as a range and stove or a sewing machine in a Family and Consumer Sciences course. They must be maintained to work and sufficiently modern to be relevant. Supplies, whether food ingredients or thread and fabric must be purchased. If students do not have access to workable, simple tools, how can they be expected to learn on more complicated pieces of equipment.

Examples exist in every CTE program: Hand tools for construction, automotive, and agriculture; computers for Business and Marketing, Information Technology, and Engineering and Technology; stethoscopes and blood pressure monitors for Health Sciences; cameras and printers for Media Arts; programmable logic controllers and 3-D printers for manufacturing. Every CTE pathway requires equipment, some of which is expensive to acquire and maintain.

2019 Kentucky High School Graduation Rate



Kentucky CTE continually monitors Labor Market Information (LMI) data to align curriculum with identified industry sectors resulting in career pathways that prepare students for available jobs.

In Kentucky, secondary CTE students do not just learn theory. They practice their skills. They are transition ready, whether for college or the workforce. Postsecondary CTE programs further the academic transition toward workplace contributions.

Concerns Raised

Hands-on CTE requires learning and practice with equipment that models the job site using consumable materials typical for the job. Both can be expensive. Equipment can be as

These programs all need consumable supplies, too. A cup of flour in a cake cannot be reused. A two-by-four can be cut only so many times. Tongue depressors are one-and-done. Welding rods necessarily are used and disposed.

Information collected by the Kentucky Association for Career and Technical Education (KACTE), a non-profit, professional association comprised of CTE teachers and administrators from across Kentucky in all teaching disciplines and all instructional levels, highlights how the lack of funding may be hindering CTE effectiveness in preparing students for the workforce. Without a prepared workforce, Kentucky will struggle to grow or attract business investment and continue to place near the bottom of various measures of economic health.

Studies reviewed and testimony given at the Kentucky General Assembly CTE Task Force meetings in the summer-fall of 2019 indicated CTE is both underfunded to provide access and inequitable in funding distribution. The situation with lack of consumable supplies and with necessary equipment repair and upgrades led one educator to observe, ***“Our programs are being starved to death.”***

Testimonials

“Our CTE programs continually strive to provide skills necessary to truly consider students career ready in their pathways,” a secondary CTE teacher wrote regarding the future of CTE in Kentucky. “However, a lack of funding as budget cuts continue and the strict nature of federal funding, which restricts access to consumable materials, limits our CTE courses in how much hands-on learning they can provide. Can we truly call our students career ready when they haven’t had the means to practice the essential skills of that career path due to a lack of funding?”

Another secondary teacher wrote, “Students are disadvantaged by not having the tools they need to learn the skills employers want.” The teacher’s horticulture program depends on donations of trees, grafting tape, rooting hormone, etc., to teach the skills that are in demand by employers in the region. Not every program or region has the capability of receiving significant donor support, potentially leaving students ill-prepared for transition.

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A secondary career center principal wrote, “We feel we are very responsible in how we spend our money, but being limited in this capacity at times creates a roadblock to the quality education we strive to give our students.”

A construction teacher provided comment: “A few years ago, I received a budget of \$6,500. At that time, I was teaching four classes (blocks) a day, around 60-70 students max. Last year and this year, I am teaching six classes a day. Both years I have had more than 100 students. Last year, I had a budget of \$100. I spent it all on nails because I did not have any. We gathered up pallets and tore them apart to build projects in the Introduction to Construction classes. I also have had to beg for donations.”

An electrical technology instructor at an ATC noted: “From 2013-19, the enrollment in my program increased by nearly 20 percent from 56 students to 69 students. Meanwhile, my operating budget decreased over 60 percent, going from \$3,000 in 2013 to \$1,200. For the 2019-20 school year, I have \$17 per student to purchase wire, conduit, etc.”

Students across Kentucky are at a disadvantage when seeking some industry certifications a business teacher reports. Neither the school nor the individual can afford the fees for some of the most valued certification tests, such as A*S*K and MOS. Obtaining recognized industry certifications is an integral part of the state’s secondary educational accountability measures. Accountability, and eventually students’ ability to make an economic contribution and achieve a living wage, is compromised by the lack of funding for the industry certification process. If state-mandated accountability incorporates industry certification as a measure, access to the testing process should be supported with public funding.

Sometimes teachers feel they are their own worst enemies. Their selfless actions mask the true cost of their programs. They beg or even buy materials out of their own pockets to have the materials needed to achieve the high standards that are expected. The dedication to their students turns teachers into pseudo procurement officers further impacting the time needed to develop lesson plans and improve teaching techniques.

Lack of funding impacts students' participation in Career and Technical Education Student Organizations (CTSOs): DECA, FBLA, FCCLA, FFA, HOSA, SkillsUS and TSA. CTOSs are co-curricular organizations cited in federal CTE law (Perkins Act). CTOSs promote skill development, teamwork, collaboration, cooperation, communication and personal development. Participation in skill competitions and outreach activities is limited by funding to support materials, fees, buses and accommodations.

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A group of secondary CTE Engineering and Technology teachers offered concern about the impact of a lack of funding for CTOSs. Unlike sports, CTOS faculty advisers are not compensated for the extra time they spend with students, and the CTOSs typically have to raise money to pay for entry fees and transportation to skill-assessment contests where they can demonstrate their achievement and build their resumes.

Survey Results

An agriculture teacher reported a survey of 45 colleagues from across the state whose priorities were CTE funding, teacher retention, and equipment and supplies. These priorities are supported by the results of a survey KACTE conducted in mid-December 2019 among principals at state-operated Area Technology Centers (ATCs), school district controlled Local Area Vocational Education Centers (LAVECS), and at comprehensive high schools offering CTE programs.

By Dec. 23, 2019, 118 principals responded to the survey request. Geographically, the responses span the Commonwealth.

- The state data that CTE secondary enrollment is growing was reflected in the survey. Eighty-four (84), or 72 percent, report CTE enrollment increased over the last 10 years. Twenty-three (23) reported declines, and nine stayed the same. Reasons cited for decreases are inability to add pathways due to lack of funding for staff and equipment; lack of certified instructors; lack of supplies and maintained equipment; and competition with Advanced Placement and Dual Credit courses.
- In most schools, CTE programs serve a majority of students. Eighty-two (82) principals reported 60 percent or more of all students at their school participate in at least one CTE course. Eighteen (18) reported CTE enrollment greater than 80 percent, with five reporting 100 percent. Conversely, only 34 reported CTE enrollment at less than 60 percent of all students, with three reporting less than 10 percent.
- CTE funding has shown a steady decline over the past seven years. Eighty-nine (89) of the principals reported a decrease in funding, some as dramatic as more than 50 percent. Twenty-one (21) reported either an increase or no change.
- About 60 percent of CTE funding goes for maintenance, utilities, and facility operating expenses. About 40 percent is allocation for staff.

★ *72 percent reported CTE enrollment increase*

★ *Majority of students participate in at least one CTE course*

★ *Principals reported a decrease in funding*

The principals reported the areas of greatest need for their CTE programs. They could cite more than one specific element.

- Fifty-five (55) cited updated and maintained equipment.
- Fifty-one (51) cited operations and consumable supplies.
- Seventeen (17) cited staffing and professional development.

- Ten cited updated or new facilities.
- Four cited new textbooks.

Survey Comments

- *“Supplies, welding gloves, safety glasses, toilet paper, paper towels, health science gowns, scrub tops for clinicals, copy paper, software for web design and multimedia publishing, dry erase markers, manila folders, oil, antifreeze, welding rods.”*
- *“Our buildings are very outdated and in very poor condition. It’s almost to a point to where they are unsafe for our students.”*
- *“It’s a tossup between operating expenses and updated equipment. We are in desperate need of both.”*
- *“More space to offer more programs for students. More staff for the programs and everything that would come with an expansion. We could be doing so much more.”*
- *“Where do I begin? Built in 1974, locally operated, well supported and maintained over the years; however, limited technology and purchase of equipment, outdated areas of the building that are wasted space. Cannot grow new programs. Can maintain what we have. Need to start an Industrial Maintenance program reflecting industry needs. Have strong staff, good enrollment, all industry-certified programs; but stagnant in many ways limited by the age of the building. We will need a building one day, but never are in the priority list in our district or state. District is currently building a \$5 million football field.”*
- *“Our biggest need is having more staff to cover the demand. Our special education students are under performing on industry certification exams and may need more support in the classroom. With limited special education resources, it would be nice if CTE funds picked up additional support in that area.”*
- *“While our enrollment is fairly consistent due to the popularity of the programs we offer, we have seen a decrease in CTSO participation. I foresee this getting worse as we have less funding to cover CTSO related expenses. This is especially true for sending students and advisers to state and national competition. Our school and local district do not have the funding to cover those costs.”*

This paper documents the dire situation facing most CTE programs in Kentucky. A quality secondary education that guides students to achieve true transition readiness will benefit not only the student -- who then becomes a productive member of society -- but also is essential in establishing a renewable skilled workforce to support a vibrant economy. The potential return on investment in CTE argues for increasing CTE funding for equipment maintenance and modernization, and for sufficient consumable supplies necessary for effective hands-on instructions. **KACTE urges the Kentucky General Assembly to make this investment in the 2020-22 biennial budget.**

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The Kentucky Association for Career and Technical Education (KACTE) is a non-profit professional association representing teachers and administrators in all Career and Technical Education (CTE) teaching disciplines (agriculture, business, construction, engineering and technology, family and consumer sciences, health sciences, information technology and media arts, manufacturing, marketing, and transportation) and at all levels of CTE instruction: middle school, high school, area technology center, career and technical center, community and technical college, and university. More information on KACTE may be found at www.kacteonline.org, or by contacting KACTE at 502-223-1823 or kmstone1951@gmail.com.