



ACCELERATING CTE EVALUATION CASE STUDY

Southeast Kentucky Community & Technical College

AT A GLANCE

This report summarizes the Accelerating CTE project at one of the participating colleges. It provides details on student outcomes and the college's lessons learned, and concludes with information on how the college will build from its project experience going forward. For outcomes across all four participating colleges, see the *Reflections on Accelerating CTE* final evaluation report.

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For many individuals from underserved backgrounds, educational pathways toward upward mobility are too often not accessible or even available. Students of color, those from low-income families, and first-generation college students continue to face barriers on the way to completing credentials. Therefore, it is more important than ever to develop high-quality postsecondary CTE programs that prepare learners for high-skill, high-wage, and high-demand careers needed in the new economy. Advancing innovative models capable of driving higher persistence, completion, and credential attainment rates was our goal, in partnership with five progressive community colleges. This study presents a set of promising findings and models for CTE programs across the country to consider and build upon.

Our team at JFF wishes to thank the talented staff members and students at the participating colleges. We also want to acknowledge the amazing team at ECMC Foundation for their support and for their belief that advancing effective postsecondary CTE pathways as a means of fostering economic mobility for all students is one of the nation's most important imperatives. This investment and study add more evidence that that goal is possible.



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SKCTC Service Area Profile

This case study shares findings from the evaluation of the Accelerating CTE program at Southeast Kentucky Community & Technical College (SKCTC).

The main campus of SKCTC is located in Cumberland, Kentucky, part of Harlan

County. The college has four other campuses in its service area, which includes Bell and Letcher counties. The college serves about 3,200 students annually, and the student body is about 88 percent white, 51 percent female, with an average student age of 27. Almost half the students (47 percent) attend full time and the vast majority (95 percent) are eligible for Pell Grants.

	HARLAN COUNTY	BELL COUNTY	LETCHER COUNTY
Population	27,548	27,469	23,011
Median age	41.4	41.6	41.8
Under age 18	22.9%	21.4%	21.6%
Over age 65	16.7%	17.9%	17.3%
Racial/ethnic makeup	95.4% white 2.6% black 1.0% two or more races	94.7% white 3.3% black 1.6% two or more races	98.2% white 1.0% two or more races
High school education or higher	71.4%	67.2%	75%
Median household income	\$24,451	\$23,558	\$30,293
Individuals below poverty level	36.5%	38.0%	30.5%
Unemployment rate, December 2018	6.1%	5.2%	5.3%
Industries with highest employment	1. Educational services 2. Health care and social assistance 3. Agriculture, forestry, fishing, hunting, and mining	1. Health care and social assistance 2. Retail trade 3. Manufacturing	1. Health care and social assistance 2. Educational services 3. Retail trade

Source: American Community Survey 5-Year Estimate, 2013-2017; Bureau of Labor Statistics, Local Area Unemployment Statistics Map, December 2018.

The Accelerating CTE Model at SKCTC

For the Accelerating CTE project, SKCTC built on work that started with the AO-Kentucky program to improve opportunities for student success in adult education.¹ In Accelerating CTE, the college focused on improving persistence and completion in career and technical education (CTE) pathways in health care and electrical technology by offering team teaching, supplemental instruction, and wraparound support services for students. At SKCTC, the primary approach to team teaching is described as an “institutionalized partnership model,” where the CTE teacher assumes the responsibility for instructing the entire class and the adult education teacher circulates around the room, watching and monitoring student understanding and behavior. The team teacher is present during 50 to 100 percent of class time to provide support, helping students with basic skills and modeling note taking and questioning behaviors. The team teacher also leads supplemental instruction twice a week.

Key Evaluation Findings

- Persistence rates for students in both medical assisting and electrical technologies were up sharply in the program period compared to the baseline period.
- Building on improved persistence rates, students also completed programs and earned credentials in both medical assisting and electrical technologies at higher rates during the program period.
- The college’s mix of support services, including intrusive advising and success coaching, were key to improving student success.

Accelerating CTE Career Pathways and Student Outcomes at SKCTC

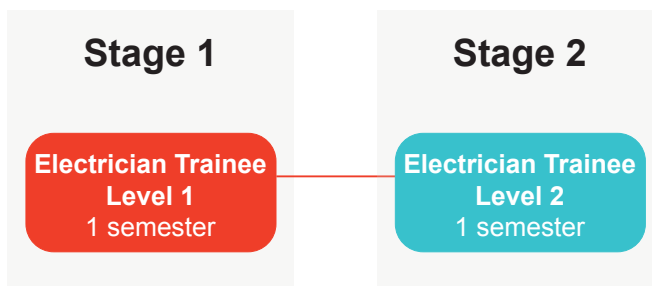
This section provides information on each career pathway offered at SKCTC and compares student progress and completion in these programs before and during Accelerating CTE.²

As part of the Accelerating CTE program, SKCTC offered two career pathways that are in high demand locally: medical assisting and electrical technology. In medical assisting, students were offered opportunities in phlebotomy, insurance billing and coding, and medical office administration assistant. Students could start the pathway at any of these three stages, and all of their coursework would count toward another program in the pathway. Most completed only one credential, though a few did complete the entire sequence. Those who bundled credentials often became more marketable. Many doctors in the region hire one person to fill multiple positions, such as working as a phlebotomist and also handling billing and scheduling for the office.



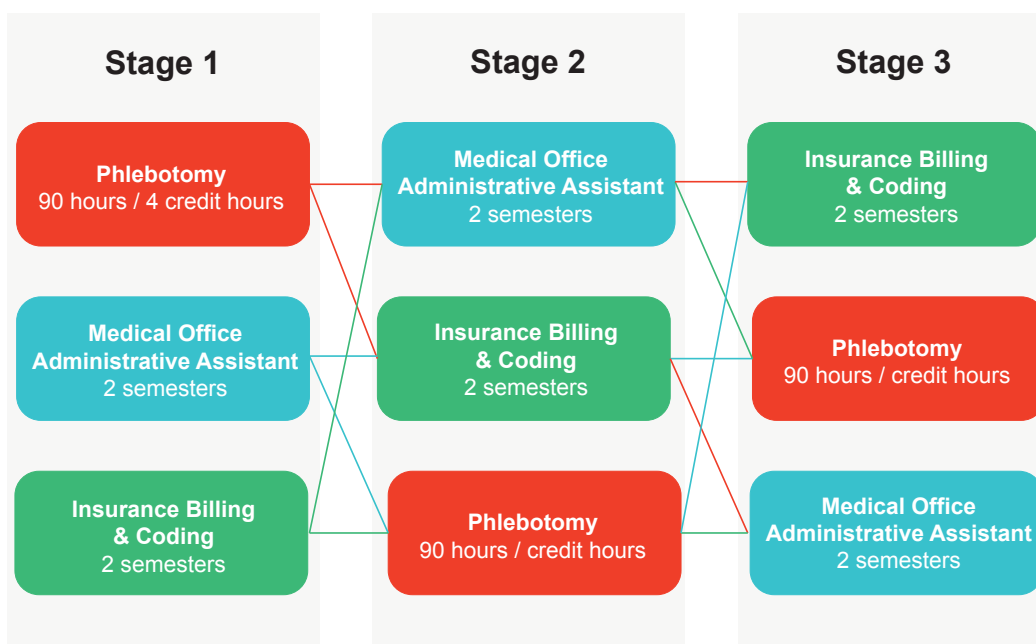
In electrical technology, students were offered Level 1 and Level 2 Electrician opportunities; while these are fairly linear pathways, students were able to mix classes between levels, and so their progression was not always as distinct as portrayed in the graphic below. The pathway graphics below show the stackable credentials that students can earn; note that the time estimates are based on full-time enrollment of 12 or more hours per semester.

Electrical Technology Pathway



At SKCTC, all of the medical assisting pathway courses count toward the three integrated programs. Students are accepted into each of these programs every semester and can stack programs in any sequence.

Medical Assisting Pathway



Comparison of SKCTC Student Outcomes

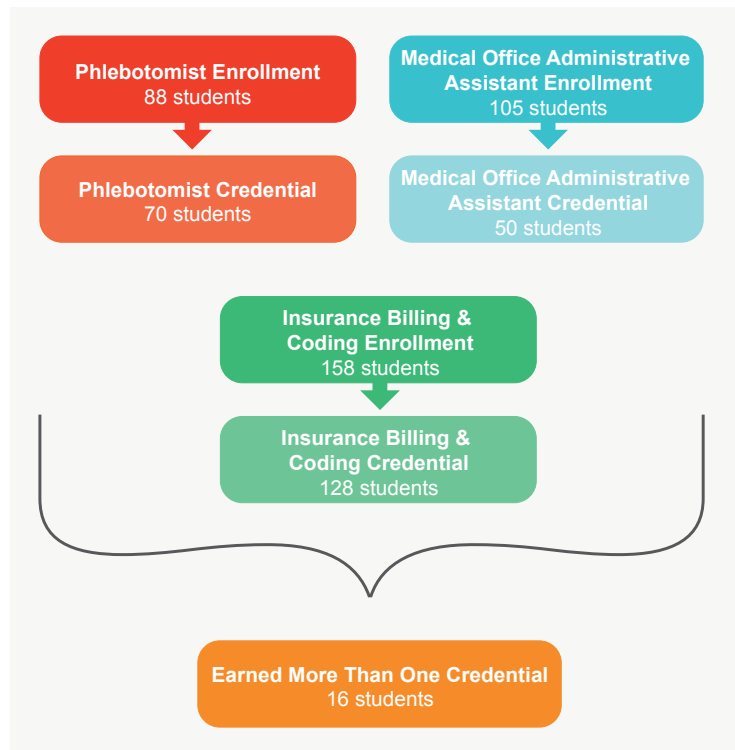
In the baseline period before the start of the AO-KY program (fall 2011 through spring 2013), SKCTC served a total of 93 students in these two pathways.³ Success rates, with success defined as students completing the program and earning an industry-recognized credential, ranged from 33 to 50 percent in the medical assisting programs but reached just 18 percent in the electrical technology program. Part-time enrollment was high in some programs (going as high as 93 percent), and even in programs with relatively high persistence from the first to the second semester, persistence dropped significantly after that.

In comparison, during the Accelerating CTE program (summer 2015 through fall 2018), SKCTC served a total of 456 students in these two pathways. Success rates were up sharply for both pathways, ranging from 48 to 80 percent in medical assisting and from 75 to 90 percent in electrical technology, a difference of 15 to 72 percentage points. This improvement appears to be connected with stronger student persistence from the first to second semester, which averaged between 55 and 82 percent during this time period and between 45 and 76 percent in subsequent semesters. Also during

this time, more students were enrolled full time. The graphic on the next page provides a summary pipeline for the SKCTC Accelerating CTE program.

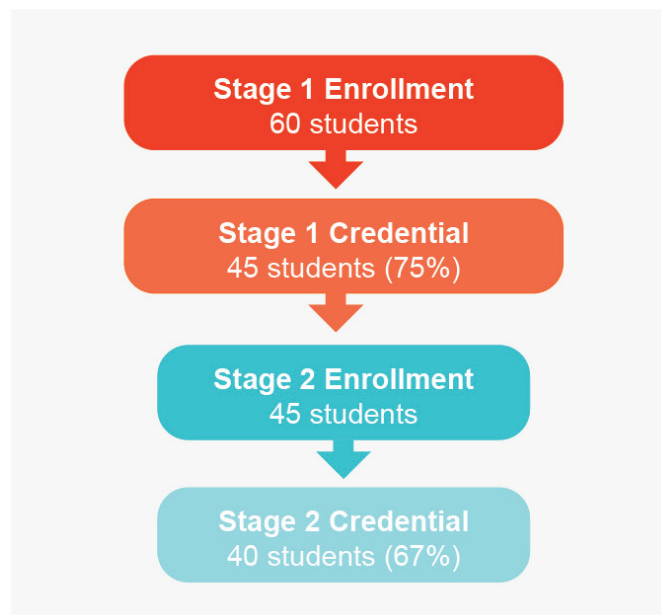


SKCTC Medical Assisting Pipeline, 2015-18



Source: JFF analysis of college data.

SKCTC Electrical Technology Pipeline, 2015-18



Source: JFF analysis of college data.



Feedback on the Accelerating CTE Program at SKCTC

Faculty and staff involved in the Accelerating CTE program at SKCTC support the model. In response to surveys conducted in the fall 2017 and fall 2018 semesters, all three SKCTC respondents “agree or somewhat agree” that the Accelerating CTE model leads to improved student success. The respondent group—a CTE instructor, a team teacher, and a success coach—reported that core elements of the model are critical to student success, with all selecting supplemental instruction, and two of the

three selecting comprehensive student supports, career pathways with stackable credentials, and student acceleration opportunities. Asked how the program had changed over the last three years, one respondent noted:

“Over the past three years of working with the AO-CTE program we have seen a great deal of success. Team teaching along with supplemental instruction has been instrumental with the success of the AO-CTE program. We are very appreciative of all the support from JFF and team. The funding provided for this initiative helped many students in our area be successful and exceed above and beyond. It has been

a great three years working with AO-CTE. Hopefully, we can continue to serve our students with extra support through programs like AO-CTE.”

Team Teaching

The SKCTC team describe its approach to team teaching as an “institutionalized partnership model” where, similar to the monitoring teacher, an adult education instructor is in the CTE classroom between 50 and 100 percent of the time to help students interpret content and reinforce key points. The team teacher survey respondent reported that team teaching makes “a big difference” for students in the classroom, saying that it “*Boosts student moral, plus provides an extra set of eyes in the class for lab assignments.*” The respondent did identify some challenges with implementing team teaching, particularly understanding the course content. As a result of their participation in Accelerating CTE, the teacher noted, “*I do like seeing more students succeed. I think this has been a valuable program to ensure more student success.*”

Supplemental Instruction

At SKCTC, all students can participate in supplemental instruction and, depending on their TABE scores, some students may be required to participate. Supplemental instruction is typically offered twice per

week by adult education or developmental education instructors, typically before or after a CTE course. Faculty and staff respondents reported that supplemental instruction made “some difference or a big difference” for student success in the classroom. These instructors identified “*Improvement in test/graded assignments when students participate in supplemental instruction*” and “*Increased test scores and accountability*” as a result of student participation in supplemental instruction. Staff identified student engagement as the most challenging aspect of implementing the supplemental instruction component.

Student Support Services

Southeast Kentucky offers a range of student support services to increase student success, including intrusive advising,⁴ success coaching,⁵ first-year experience courses, financial aid, employment services, and health/mental health services. Asked which services are most critical to student success, SKCTC instructors and staff identified financial aid, intrusive advising, and success coaching. As one respondent reported, “*It’s important that the student is being advised correctly and put into classes that they NEED. I also think it’s important for each student to have a success coach, especially for first-year students.*”



Intrusive advising, first-year experiences, financial aid, and housing assistance were identified as support services the college would like to grow to better support student success. Asked about the biggest factor limiting student success, SKCTC instructors and staff identified limited employment/advancement opportunities in the local labor market, particularly for students with prior criminal convictions.

Finally, faculty and staff were asked what their college should do to improve student success; one reported that the college should continue “to encourage and empower students.” In reflecting on their experience in Accelerating CTE, one SKCTC respondent stated:

“My experience with the AO-CTE program has been wonderful. Being able to see a program help students succeed is rewarding in itself. ... Not only has this program helped numerous students over the past three years but it has also helped our programs as well. It’s helped us figure out what we need within the classroom and what we don’t. #studentsfirst.”

Student Feedback on Accelerating CTE Programs at SKCTC

In response to surveys conducted in fall 2016 and fall 2017, 17 SKCTC students provided feedback on their experiences in the Accelerating CTE program; the majority of respondents (88 percent) were from health care programs. Asked about the components of the Accelerating CTE model, 58 percent reported that they were in at least one class with a team teacher some or all of the time, and approximately 29 percent reported that they would have benefited from more team-taught classes. About four in ten respondents (41 percent) participated in supplemental instruction outside of class time, including one-on-one tutoring, supplemental instruction with small groups of students, and extra class sessions or online tutoring a few times a week. Almost one-third (29 percent) reported that they would have benefited from additional instruction or support outside of the classroom. A large majority of respondents (94 percent) reported that the program was preparing them “well or very well” for work in their targeted field, and 88 percent reported being “well or very well” prepared for further education. The majority (88 percent) would recommend their program to a friend or family member.



Conclusions from SKCTC's Accelerating CTE Experience

Overall Southeast Kentucky Community & Technical College students were more successful in Accelerating CTE pathways than they had been in the baseline period. While student enrollment increased in both pathways over the grant period, so too did success rates, which ranged from 50 to 90 percent. Students in both pathways were more likely to enroll full time during the program period and also persisted from the first to second semesters at higher rates than in the baseline period.

Most students, particularly in the medical assisting pathway, enrolled to pursue better job opportunities in the local labor market. After completing one credential, most of these students returned to work full time with little expectation of returning to complete a second credential. It is important to note, though, that a handful have done just that: 16 students completed more than one credential during the Accelerating CTE project period; it remains to be seen if more students will return to SKCTC in future semesters to earn additional medical assisting credentials.

Administrators at SKCTC identified multiple accomplishments from their participation in Accelerating CTE. They attributed the increase in student success

rates to team teaching and supplemental instruction funded by the grant. The process that staff and faculty went through to learn what each program has to offer and ways to help aid in instruction resulted in better communications with each other and with students. As one administrator noted, *“This was a very effective part of Accelerating CTE due to the commitment of the team teaching model.”*

The college's adult education program, and those across the state, were re-branded to “Skills U” in 2017 and are now administered through Kentucky Workforce Solutions. It is the state's goal for Skills U programs to implement co-enrollment models like Accelerating CTE across all workforce and technical programs. To support the state's strategy to improve high school equivalency and in-demand credential attainment, SKCTC is beginning to develop an Accelerating CTE model that combines high school equivalency instruction with Information Technologies (IT) programs. The college also has plans to expand team teaching and supplemental instruction into Advanced Manufacturing programs. SKCTC has demonstrated a long-standing commitment to innovative programming and will sustain Accelerate CTE moving forward. The college's leadership team understands that, in this rural part of the state with declining manufacturing and coal jobs, acceleration and success strategies are critical for students and employers.

Endnotes

1. See Lauren Eyster, Theresa Anderson, Robert Lerman, Daniel Kuehn, Burt Barnow, Maureen Conway, Ranita Jain, and Marcela Montes (2018). *Findings from the Accelerating Opportunity Evaluation*. Washington, DC: Urban Institute.
2. Southeast Kentucky provided aggregate student persistence and outcome data for each career pathway in the baseline period and in the Accelerating CTE program period. Researchers then calculated differences in completion and credential attainment between the two periods. Because the evaluation is based on a simple comparison of aggregate data, findings are suggestive but should not be considered a confirmation of impact.
3. The baseline medical assistant pathway only includes phlebotomy and medical office assistant.
4. Intrusive advisors follow students through the entire enrollment and class scheduling process, monitor student attendance and class progress, and follow up with students as needed.
5. Success coaches motivate students, connect students with resources for class, and provide referrals to outside partners such as WIOA and other support services.



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