Revenues And Expenditures For Career And Technical Education In Kentucky

Research Report No. 461

Office Of Education Accountability

Kentucky Legislative Research Commission

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Revenues And Expenditures For Career And Technical Education In Kentucky

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Foreword

In November 2018, the Education Assessment and Accountability Review Subcommittee approved a research agenda for the Office of Education Accountability that included a study of career and technical education expenditures and revenues.

Kentucky students access career and technical education through a combination of state-operated area technology centers, local area vocational education centers, comprehensive high schools, and the Kentucky Community and Technical College System. This publication includes an in-depth examination of state-appropriated revenues and expenditure allocations for the 53 state-operated and 42 locally operated area technology centers used by students across the commonwealth.

Jay D. Hartz
Director

Legislative Research Commission
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Summary

In this report*, career and technical education* (CTE) refers to program offerings designed to develop knowledge and skills that are transferable to specific industry sectors. These programs are made available to Kentucky students through state-operated area technology centers (ATCs), local area vocational education centers (LAVECs), and comprehensive high schools. Many students also attend dual-credit and other classes in the Kentucky Community and Technical College System.

The focus of this report is the state-appropriated revenues and expenditure allocations for the 53 ATCs and the 42 LAVECs used by students across the commonwealth. This report provides an analysis of state-appropriated funds to these two types of centers and how these funds have been used during school years 2009 to 2018. A more detailed analysis of state-level revenues and expenditures is provided for the 2018 school year.

Total state-appropriated funding per student for both ATCs and LAVECs was calculated for the 2018 school year. Total state funding was divided by an unduplicated CTE student count for each type of center. ATCs received approximately $45.3 million from the combination of the Kentucky Department of Education (KDE) general fund and secondary vocational Support Educational Excellence in Kentucky (SEEK) appropriations. Total state appropriations per ATC student were $2,032.91 in 2018. LAVECs received approximately $11.8 million from the KDE general fund. Total state appropriations per LAVEC student were $396.53. ATCs received, in terms of total dollars, approximately $3.80 for every $1 appropriated to LAVECs. The ratio when calculated per student favored ATCs at a rate of $5.10 for every $1 per LAVEC student.

The Kentucky Department of Education provided 10 years of total CTE revenue data. Total CTE revenues were adjusted for inflation using the Consumer Price Index to determine lost purchasing power from all funding sources. When accounting for inflation, total funding for all CTE in Kentucky would have required an additional $18 million (22 percent increase) in school year 2018 to match the purchasing power of CTE funding appropriated during school year 2009.

An analysis of the state funds appropriated for both ATCs and LAVECs, and of the unique statutory and regulatory frameworks that exist for the two types of technology centers in Kentucky, yielded the following conclusions.

- The 20 percent SEEK allocation required by 702 KAR 1:130 is generated according to the total number of full-time equivalent students (FTEs) per ATC, and it is distributed to the home district of ATCs for “retirement of debt service and building maintenance”; however, KDE has approved use of these funds for equipment and supplies, as well as allowing districts to carry revenues to future years to pay for equipment, building maintenance, security, and debt payments. Staff analysis conducted on ATC expenditures also found that 25 percent of these funds were not used for debt service and building maintenance but were instead used for school-based decision-making council (SBDM) and non-SBDM instructional salaries and supplies.

- Districts that house the ATCs receive additional facility funding to support their ATC building, but districts with LAVECs do not.
- Staff analysis of a comparison sample group of ATCs and LAVECs showed that students who attended those ATCs cost districts nothing to very little in terms of local funding, while the students attending those LAVECs cost districts approximately $1 million in local funding.
- Vocational transportation included in the secondary vocational education budget totaled $2.4 million annually. These funds covered 33 percent of the amount districts spent on vocational transportation in 2018.
- Prior to 2014, LAVEC schools were included in the biennial budgets as a line item. Since then, funding allocations provided by the General Assembly for LAVEC schools are included in the annual KDE budget allocation. Although KDE has no statutory or regulatory obligation to provide a specific amount of annual funding to LAVEC schools, the department has continued to distribute $11,843,500 each year to the LAVEC institutions.
- The KDE general fund dollars allocated for ATCs are also not included in the biennial budgets as a line item.
- KDE is required to compute the FTE counts to distribute LAVEC funding according to statutory and regulatory formulas. Since 2014, KDE has used an internal formula to calculate FTEs at LAVECs. This has been acknowledged by KDE at meetings of the 2019 CTE Task Force.

Eight schools currently provide CTE at centers that do not receive any state-appropriated CTE funding.[a] These schools have requested LAVEC funding from KDE but have not received any funding for the 2020 school year. KDE also provided a list of unfunded pathways at existing LAVECs. Estill County is constructing a technology center but has yet to secure state-level operational funding. The following major conclusions pertain to the estimated costs to fund these schools and pathways.

- KDE estimates that $610,000 in additional funding is needed for operational costs for the Estill County technology center.
- Most recent data shared by KDE shows there are eight schools that have open requests to be designated a LAVEC. Estimated total funding needed to fund these schools is more than $1.3 million, according to total weighted FTE projections.
- There are also 28 Category 2 pathways and 29 Category 3 pathways that are not funded within existing LAVECs. Estimated total funding needed to fund these pathways is approximately $1.4 million, according to total weighted FTE projections.
- There are 78 comprehensive high schools that could meet the qualifications to request LAVEC funding status with KDE. As of August 2019, none of these schools have made this request. According to 2020 FTE calculations from KDE, an estimated $19.4 million in additional LAVEC funding would be required to fund these schools.

[a] The data provided by KDE does not include the estimated FTE or estimated additional funding needed for Taylor County or the Ignite Academy.

An examination of expenditure reports for all 53 ATCs showed that expenditures paid from the KDE general fund for ATCs accounted for approximately $24.2 million (approximately 57 percent) of total expenditures for these centers during the 2018 school year. Expenditures for ATCs are paid from the KDE general fund at the full discretion of KDE. There exists no statutory or regulatory framework that states the methodology for distribution of these funds.

ATC expenditures paid from the KDE general fund exhibit considerable variation when calculated per FTE and per total student count. Staff analysis concluded that the FTE counts are distorted by the fact that in some cases the districts that house the ATCs have local CTE classes in the ATC buildings and KDE is counting these students in final FTE calculations.

The SEEK appropriation for ATCs should be distributed according to 702 KAR 1:130. The regulation provides the FTE formula for distribution. In budget allocations for ATCs, the FTE amounts for each center were equal in terms of final allocation (KY Tech Share + 20 percent SEEK appropriation).

Several accounting discrepancies were discovered during examination of AFRs for districts with LAVECs and ATCs. Analysis identified the following factors as sources of those discrepancies:

- The KDE chart of accounts requirements for capturing Reserve Officer Training Corps program costs
- KDE chart of accounts requirements for capturing SBDM program costs
- KDE not reporting the revenues and expenditures for ATCs on the finance survey (F-33) to the National Center for Education Statistics
- KDE and districts not reporting all CTE teachers properly
- District inconsistencies in reporting expenditures at school location codes on AFRs and professional staff data reports (PSDs)
- Districts not correctly coding CTE expenditures to the 300 program series on AFRs

Districts are required to update facility plans every 4 years. These plans include needs for CTE buildings and are used to determine unmet facilities needs by district. As of February 2019, 25 districts were determined to need new CTE buildings, at an estimated total cost of $183 million. Another 66 districts need CTE building upgrades with an estimated total cost of $211 million. All told, unmet need for CTE buildings totals approximately $394 million.

The Office of Education Accountability (OEA) reviewed the 2018 PSD files to determine how many career and technical education teachers were employed in each district in Kentucky. There were only 168 career and technical education teachers reported in 31 districts, there are 42 districts that receive LAVEC funding, and there are another 6 that have CTE-approved programs not receiving LAVEC funding. Further review showed that some career and technical education teachers are coded as a regular high school teachers. A review of the 2018 Local Educator Assignment Data report showed that there were 3,157 teachers teaching a career and technical education class in Kentucky. This is much higher than the 180 teacher count that was reported on the PSD file, which KDE uses to submit the number of career and technical education teachers to the United States Department of Education (USED).

Based on the number of CTE teachers reported, it would also appear that, in its reports to USED, KDE is not including CTE teachers who are teaching at the state-run area vocational centers. According to KDE, there were 385 career and technical education teachers employed in ATCs in school year 2018. By not including the state-employed career and technical education teachers, the reports also miscalculate the student/teacher ratio at high schools.

Special education teachers and aides are more likely to be employed at a stand-alone or A2 LAVEC center than at an ATC center. Of the 53 ATC centers, only 6 reported special education expenditures on district AFRs in 2018.

An analysis of ATC teacher salaries relative to LAVEC district teacher salaries was conducted for school year 2018. OEA staff found that the majority of beginning ATC teachers earn more than beginning district-employed teachers, but the salary schedules for teachers with 20 years of experience show that the majority of district-employed teachers earn more than those teaching at ATCs for all ranks.

Recommendations

Recommendation 2.1
The School Facilities Construction Commission should work in collaboration with the Kentucky Board of Education and the Kentucky Department of Education to promulgate an administrative regulation that identifies the methodology for equating the average daily attendance of area technology centers with the average daily attendance of other local school districts to ensure that these centers receive a proper share of Kentucky Education Technology System funding.

Recommendation 2.2
The Kentucky Department of Education should comply with all provisions of 702 KAR 1:130 for area technology center funding as written, or the Kentucky Board of Education should align 702 KAR 1:130 to reflect current practices.

Recommendation 2.3
If the General Assembly wants the Kentucky Department of Education (KDE) to continue allocating funds for secondary career and technical education programs at the Kentucky Community and Technical College System, then the General Assembly should include language in subsequent budget bills directing KDE to do so.

Recommendation 2.4
The General Assembly should change the local area vocational education center (LAVEC) categorical funding formula in KRS 157.069 to reflect the proper methodology of computing Category II and Category III LAVEC full-time equivalent students.

Recommendation 2.5
The Kentucky Board of Education should revise 705 KAR 2:140 to reflect the actual methodology used to distribute funding to local area vocational education centers.

Recommendation 2.6
The Kentucky Department of Education should determine final allocations of local area vocational education center funding by January 1 of each year in accordance with 705 KAR 2:140, sec. 5(2), or the Kentucky Board of Education should amend 705 KAR 2:140, sec. 5(2) to reflect current practices.

Recommendation 2.7
The Kentucky Department of Education should fund new career and technical education programs at existing local area vocational education centers in accordance with 705 KAR 2:140, sec. 5(2), or the Kentucky Board of Education should amend 705 KAR 2:140, sec. 5(2) to reflect current practices.

Recommendation 3.1
The Kentucky Department of Education (KDE) should review the chart of accounts and change how expenditures paid by ROTC, school-based decision-making councils, and school boards are captured so that all schools are reporting career and technical education expenditures to program series of 300. In addition, KDE should work with district staff to ensure that all career and technical education expenditures are coded correctly on the annual financial reports.

Recommendation 3.2
The Kentucky Department of Education (KDE) should ensure that districts' A2 and area technology center (ATC) career and technical education school expenditures are coded to a KDE A2 or ATC location code or a district-assigned school number.

Recommendation 3.3
The Kentucky Department of Education (KDE) should work with districts to ensure that all career and technical education (CTE) teaching and administrative staff are coded correctly on the professional and classified staff data reports. In addition, when reporting the total number of CTE staff to the United States Department of Education, KDE should include the total number of CTE teachers, administrators, and other staff working at state-run area technology centers.

Recommendation 3.4
The Kentucky Board of Education should promulgate regulations concerning the distribution of area technology center (ATC) funding. These regulations should address both general fund and Support Education Excellence in Kentucky funding for ATCs.

Chapter 1

Introduction And Overview

Career and technical education **(CTE) refers to program offerings designed to develop knowledge and skills that are transferable to specific industry sectors. The program offerings in Kentucky are organized into 16 broad categories referred to by the Kentucky Department of Education (KDE) as career clusters.**

In this report, *career and technical education* (CTE) refers to program offerings designed to develop knowledge and skills that are transferable to specific industry sectors. The program offerings in Kentucky are organized into 16 broad categories referred to by the Kentucky Department of Education (KDE) as career clusters. These clusters include industry sectors such as manufacturing, health sciences, information technology, construction, and other industries that collectively encompass most occupations in the commonwealth.[a]

CTE programs are made available to Kentucky students through a combination of state-operated and locally operated centers and comprehensive high schools. Many students attend classes at campuses of the Kentucky Community and Technical College System (KCTCS).

These programs are made available to Kentucky students through state-operated area technology centers (ATCs), local area vocational education centers (LAVECs), and comprehensive high schools. Many students also attend dual-credit and other classes in the Kentucky Community and Technical College System (KCTCS). The focus of this report is the state-appropriated revenues and expenditure allocations for the 53 ATCs and the 42 LAVECs used by students across the commonwealth. Appendix A provides a listing of CTE access by district.

This report provides an analysis of state-appropriated funds to area technology centers (ATCs) and local area vocational education centers (LAVECs) and how these funds have been used during school years 2009 to 2018. A more detailed analysis of state-level revenues and expenditures is provided for the 2018 school year.

This report provides an analysis of state-appropriated funds to these two types of centers and how these funds have been used during school years 2009 to 2018. A more detailed analysis of state-level revenues and expenditures is provided for the 2018 school year. The analysis of 2018 ATC expenditures is straightforward, and the data came directly from the individual expense reports for each ATC. As for LAVECs, this analysis was complicated by several factors, including expenditure coding errors concerning specific items from the KDE Uniform Chart of Accounts. Both expenditure analyses yielded several findings and recommendations for stakeholders to consider. Each will be discussed throughout the report.

[a] The Kentucky Career Clusters include Agriculture, Food, & Natural Resources; Arts, A/V Technology & Communications; Architecture & Construction; Business Management & Administration; Education & Training; Finance; Government & Public Administration; Health Science; Hospitality & Tourism; Human Services; Information Technology; Law, Public Safety, Corrections & Security; Manufacturing; Marketing; Science, Technology, Engineering & Mathematics; and Transportation, Distribution & Logistics.

Major Conclusions

The major conclusions for this report are categorized below.

Total state-appropriated CTE funding per student for ATCs and LAVECs was calculated for the 2018 school year. Total state appropriations per ATC student were 5 times as great as those per LAVEC student.

State Funding Per CTE Student. Total state-appropriated CTE funding per student for both ATCs and LAVECs was calculated for the 2018 school year. Total state CTE funding was divided by an unduplicated CTE student count for each type of center.

- Total state appropriations per ATC student were $2,032.91 in 2018.
- Total state appropriations per LAVEC student were $396.53.
- The ratio of state funding per student favored ATCs at a rate of $5.10 for every $1 per LAVEC student.

An additional $18 million in CTE funding from state and federal sources would have been required in the 2018 school year to match the purchasing power exhibited during the 2009 school year.

Total CTE Revenues Passing Through KDE. The Kentucky Department of Education provided 10 years of total CTE revenue data. Total CTE revenues were adjusted for inflation using the Consumer Price Index to determine lost purchasing power from all funding sources.

- Total funding for all CTE in Kentucky would have required an additional $18 million (22 percent increase) in school year 2018 to match the purchasing power of CTE funding appropriated during school year 2009.

The following major conclusions pertain to state funds appropriated for both ATCs and LAVECs, as well as major conclusions in relation to the unique statutory and regulatory frameworks that exist for the two types of technology centers in Kentucky.

State-Appropriated Funding For ATCs And LAVECs. The following major conclusions pertain to state funds appropriated for both ATCs and LAVECs, as well as major conclusions in relation to the unique statutory and regulatory frameworks for the two types of technology centers in Kentucky.

- The 20 percent Support Education Excellence in Kentucky (SEEK) allocation required by 702 KAR 1:130 should be used for “retirement of debt service and building maintenance”; however, KDE has approved use of these funds for equipment and staff salaries, as well as allowing districts to carry these revenues to future years for various projects.
- Districts that house the ATCs receive additional facility funding to support the ATC building, but districts with LAVECs do not.
- Vocational transportation included in the secondary vocational education budget totaled $2.4 million annually. These funds covered 33 percent of the amount districts spent on vocational transportation in 2018.
- Funding allocations provided by the General Assembly for LAVEC schools are not a budget line item but are included in the annual KDE budget allocation. Although KDE has no statutory or regulatory obligation to provide a specific amount

of annual funding to LAVECs, the department has continued to distribute $11,843,500 each year to the LAVECs.

- The KDE general fund dollars allocated to ATCs are also not included in the biennial budgets as a line item.
- KDE is required to compute the student full-time equivalent (FTE) counts to distribute LAVEC funding according to statutory and regulatory formulas. KDE has acknowledged it uses an internal formula to calculate the FTE counts for LAVECs.

KDE reported that an additional $2.7 million in LAVEC funding would be required to fund the schools and pathways that have made formal requests to KDE. KDE also stated that $19.4 million would be required to fund the comprehensive high schools that could possibly meet the qualifications for LAVEC funding. KDE estimates that $610,000 in annual operational funding would be required for an Estill County building to open.

Unfunded Career And Technical Programs. Eight schools provide CTE at centers that do not receive any state-appropriated CTE funding. These schools have requested LAVEC funding from KDE but have not received any such funding for the 2020 school year. KDE also provided a list of unfunded pathways at existing LAVECs. Also, Estill County has started building an area technology center but as of 2019 has not received the funding required to open it. The following major conclusions pertain to the estimated costs to fund these schools and pathways.

- Estimated total funding needed to fund these schools is more than $1.3 million, according to total weighted FTE projections.[b]
- Estimated total funding needed to fund additional pathways in existing LAVECs is approximately $1.4 million, according to total weighted FTE projections.
- There are 78 comprehensive high schools that could meet the qualifications to request LAVEC funding status with KDE. An estimated $19.4 million in additional LAVEC funding would be required to fund these schools, according to 2020 FTE calculations from KDE.
- KDE estimates that the Estill County building would require approximately $610,000 annually for staff and operational costs in order to open.

Expenditures paid from the KDE general fund and from CTE-specific Support Education Excellence in Kentucky (SEEK) funding for ATCs exhibited considerable variation when calculated per FTE and per student count. General fund dollars are distributed at KDE's discretion. CTE-specific SEEK funding should be distributed according to 702 KAR 1:130, but SEEK expenditures did not match SEEK budget allocations.

ATC Expenditures. Expenditures paid from the KDE general fund for ATCs accounted for approximately $24.2 million (approximately 57 percent) of total expenditures for these centers during the 2018 school year. An examination of expenditure reports for all 53 ATCs for the 2018 school year yielded the following major conclusions:

- Expenditures for ATCs are paid from the KDE general fund at the full discretion of KDE. There exists no statutory or

[b] The data supplied by KDE did not include the estimated funding amounts needed for Taylor County or the Ignite Academy.

regulatory framework that states the methodology for distribution of these funds.

- ATC expenditures paid from the KDE general fund exhibit considerable variation when calculated per FTE and per total student count.
- The SEEK appropriation for ATCs should be distributed according to 702 KAR 1:130. However, staff analysis of ATC expenditure reports concluded that expenditures paid with SEEK funds do not match the budget allocations KDE publicly reports.
- An examination of the difference in SEEK expenditures relative to SEEK budget allocations showed considerable variation across ATCs.

Several accounting discrepancies were discovered during examination of the annual financial reports (AFRs) for districts with LAVECs and those with ATCs. These errors make it nearly impossible to report costs at the district level.

CTE Accounting Discrepancies. Several accounting discrepancies were discovered during examination of the annual financial reports (AFRs) for districts with LAVECs and those with ATCs. These errors make it nearly impossible to report costs at the district level. These errors were found in the data:

- The KDE chart of accounts requirements for capturing Reserve Officer Training Corps (ROTC) program costs are different from other CTE costs.
- The KDE chart of accounts requirements for capturing school-based decision-making council (SBDM) program costs mask the total funding for CTE paid from district-level funds.
- KDE is not reporting the revenues and expenditures for ATCs on the finance survey (F-33) to the National Center for Education Statistics.
- KDE and districts are not reporting all CTE teachers properly.
- Districts are inconsistent in reporting expenditures at school location codes on AFRs and professional staff data reports (PSDs).
- Districts are not correctly coding CTE expenditures to the 300 program series on AFRs.

Unmet need reported for CTE buildings included need for new buildings in 25 districts and need for building upgrades in 66 districts. Total unmet need for CTE buildings as of February 2019 was $394 million.

Unmet Facility Needs. Districts are required to update facility plans every 4 years. These plans include needs for CTE buildings and are used to determine unmet facilities needs by district.

- As of February 2019, 25 districts were determined to need new CTE buildings at an estimated total cost of $183 million. Another 66 districts need CTE building upgrades with an estimated total cost of $211 million. All told, unmet need for CTE buildings totals approximately $394 million.

A crosswalk between various data sources revealed that KDE has underreported the number of CTE teachers. Further analysis determined that special education teachers and aides were more likely to be employed at a stand-alone LAVEC than at an ATC.

CTE Teacher Counts. A crosswalk between various data sources revealed the following conclusions pertaining to the actual teacher counts relative to the number of teachers reported by KDE.

- KDE has underreported the amount of CTE teachers in Kentucky.
- Special education teachers and aides are more likely to be employed at a stand-alone or A2 LAVEC center than at an ATC center. Of the 53 ATC centers, only 6 reported special education expenditures on district AFRs in 2018.

Beginning ATC teachers earn more than the majority of beginning district-employed teachers, but the majority of district-paid teachers earn more than ATC teachers with the same years of experience across all ranks.

CTE Teacher Salaries. An analysis of ATC teacher salaries relative to LAVEC district teacher salaries was conducted for school year 2018. The following conclusion addresses the variance between the salaries when accounting for teacher rank and years of experience.

- The majority of beginning ATC teachers earn more than beginning district-employed teachers, but the salary schedules for teachers with 20 years of experience show that the majority of district-employed teachers earn more than those teaching at ATCs for all ranks.

Previous Research

CTE revenues have been reported on by the Legislative Research Commission in 2003, and in a finance-specific report conducted by Thomas P. Miller & Associates (TPM).

CTE revenues have been reported on by the Legislative Research Commission in 2003, and in a finance-specific report presented by Thomas P. Miller & Associates (TPM) in 2015.[1] These reports provided information on total state and federal revenues, or appropriated funds for career and technical education in Kentucky.

The 2003 LRC report found that funding inequities between LAVECs and ATCs were apparent, and that there was a lack of consistent policy for funding LAVECs and ATCs.

LRC Report (2003). This report was required by HB 185 (2001) and was conducted by the Subcommittee on Vocational Education during the interims of 2001 to 2003. Notable findings pertaining to CTE funding from the report included funding inequities between LAVECs and ATCs; a funding formula for LAVECs that provided a fair distribution process for funding; an insufficient funding level for LAVECs; and a lack of consistent policy for funding LAVECs and ATCs.

The 2003 LRC report also recommended that another study be conducted to determine the amount of funding required to bring parity between ATCs and LAVECs.

The 2003 report recommended that another study be conducted to determine the level of increased funds that would be necessary to bring funding parity between the two delivery systems and to project a methodology for providing those increases.

The 2003 report discussed expenditures from local sources relative to state appropriations for LAVECs, but it did not discuss in depth how these dollars are spent at ATCs.

The TPM report focused on the distinction between adequate funding and equitable funding. It found a shortfall of adequate funding for CTE in Kentucky, which the report attributed to state budget limitations and existing funding policies.

Thomas P. Miller Report. The TPM report focused on the distinction between adequate funding and equitable funding.

Interviews with state leaders, educators, and administrators working with Kentucky's CTE programs revealed a shortfall of adequate funding. The report attributed the shortfall to state budget limitations and existing funding policies for CTE in Kentucky.

The TPM authors noted that state funding for ATCs and LAVECs appeared to be unequal, and that overall CTE funding levels appeared to be critically low in support of student pathways and in areas of financial and material supports.

In terms of equitable funding, the TPM authors stated that the differences between funding policies between ATCs and LAVECs "create the appearance, if not the reality, of a wide gap between the dollars state and locally operated CTE programs receive." The authors also noted that CTE funding levels at that time "appear[ed] to be critically low in support of student pathways and in areas of financial and material supports, especially for equipment, educator salaries, facilities and operations."

The report recommended that CTE funding in Kentucky be based on state goals and the needs of business/industry rather than balancing existing funding levels. The report also recommended considering an additional per-pupil weight tied to state-prioritized CTE program areas.

The TPM report provided recommendations that included basing funding for CTE in Kentucky on state goals and business/industry needs rather than on balancing existing funding levels, and taking into consideration an additional per-pupil funding weight tied to state-prioritized CTE program areas based on state and regional industry needs. However, the authors noted that the first step toward reaching goals relative to CTE funding is to determine what adequate funding means in Kentucky, which would be followed by implementing more equitable funding mechanisms to distribute the adequate level of funding, and finally making the commitment to expanding and sustaining these funding levels in the future.

Description Of This Study

In November 2018, the Education Assessment and Accountability Review Subcommittee requested that the Office of Education Accountability (OEA) conduct a study on revenues and expenditures for career and technical education in Kentucky from local, state, and federal sources.

In November 2018, the Education Assessment and Accountability Review Subcommittee (EAARS) requested that the Office of Education Accountability (OEA) conduct a study on revenues and expenditures for career and technical education in Kentucky from local, state, and federal sources. EAARS specifically requested a revenue and expenditure comparison between ATCs and LAVECs in terms of total state-appropriated dollars and estimated per-pupil amounts.

Data Used For This Report

Data sources used for this report include district-level AFR data, state grant allocation data, and several data sources provided by KDE. OEA also administered a survey to superintendents and CTE principals at ATCs, LAVECs, and comprehensive high schools.

Primary data sources for this report include district-level AFR data used to track revenues and expenditures by center type; state grant allocation data; and data provided by KDE for ATC expenditures, unduplicated student counts by school, LAVEC funding allocations by program category, and 10 years of total CTE revenue and expenditure data that passed through KDE. Other data sources included data collected from OEA-designed surveys sent to district superintendents, ATCs, LAVECs, and comprehensive high schools.

Unless otherwise noted, revenue and expenditure amounts in this report have not been adjusted for inflation. However, an analysis using inflation-adjusted dollars is in Chapter 2. This report refers to school years by the year in which the school year ends.

Unless otherwise noted, revenue and expenditure amounts in this report are in nominal dollars and not adjusted for inflation. An analysis was conducted to illustrate the effect inflation had on the purchasing power of funding from relevant sources. This inflation-adjusted analysis is in Chapter 2. This report refers to school years by the year in which the school year ends. For example, the 2017-2018 school year is called the 2018 school year.

Organization Of This Report

Chapter 1 continues with some background information and a comparison of state funding allocated to ATCs and LAVECs. Notable findings from the OEA surveys are discussed, as is the Kentucky CTE Task Force.

Chapter 1 continues with some background information and a brief comparison of ATC and LAVEC funding. The chapter continues with notable findings from the OEA-administered surveys, followed by a brief discussion of the recently formed Kentucky Career and Technical Education Task Force. Chapter 1 concludes with an overview of CTE funding in other states.

Chapter 2 provides an analysis of total revenues for CTE that passed through KDE for school years 2009 to 2018.

Chapter 2 provides an analysis of total revenues for CTE that passed through KDE for school years 2009 to 2018. The chapter continues with a description of the budget allocations and the legal framework for distributing state appropriations to ATCs and LAVECs.

Chapter 3 examines expenditures for both ATCs and LAVECs for the 2018 school year.

Chapter 3 examines expenditures for both ATCs and LAVECs for the 2018 school year. Expenditure reports for all 53 ATCs were analyzed in order to provide clarity on how KDE actually distributes the funds to the individual ATCs. The analysis of LAVEC expenditures was more complicated because of coding issues discovered by OEA staff. These issues are discussed along with findings pertaining to CTE teacher counts and CTE teacher salaries.

Background

In August 2012, an executive order moved the Office of Career and Technical Education (OCTE) from the Education and Workforce Development Cabinet to KDE.

In August 2012, an executive order moved the Office of Career and Technical Education (OCTE) from the Education and Workforce Development Cabinet to KDE. During the 2013 regular session, HB 207 established OCTE at KDE. KRS 156.802, which also provides the framework for CTE in Kentucky, codified the merger.

A Career and Technical Advisory Committee was also developed from the same executive order to provide guidance on the development of CTE programs focused on college and career readiness. The committee met frequently in 2013 during the period of transition to KDE, but it has convened only sporadically in the years since.

A Career and Technical Advisory Committee was also developed from the same executive order to provide guidance on the development of CTE programs focused on college and career readiness. The committee was statutorily ratified in KRS 156.806, and the committee has included representatives from KDE, the General Assembly, KCTCS, and the Department of Workforce Investment, as well as teachers and members of business and industry in Kentucky. The committee met frequently in 2013 during the period of transition to KDE, but it has convened only sporadically in the years since.

It is generally accepted that some CTE programs can cost much more than traditional academic programs because of high-cost equipment and facilities, and because many CTE classes have lower student-to-teacher ratios.

With regard to the total costs to provide CTE relative to traditional academic programs, it is generally accepted that some CTE programs can cost much more to administer, due to high-cost equipment, fluctuation in costs for consumables used for instruction, costly facilities with modern equipment, and the fact that CTE programs have smaller class sizes than traditional academic programs have. These costs are driven by the programs that are offered, and the program choices per center for the most part are based on projected labor force needs in the commonwealth.

Equity Between ATCs And LAVECs

The central theme of this report is whether or not the state-appropriated funds for ATCs are equitable relative to those for LAVECs.

The central theme of this report is whether or not the state-appropriated funds for ATCs are equitable relative to those for LAVECs. The conclusion is complicated by factors such as state-level budgetary limitations, different funding mechanisms for the two types of centers, and many others that will be discussed throughout this report. However, the previous reports on this topic determined that in terms of state dollars devoted strictly to CTE, the state-operated ATCs receive a much larger share of total CTE revenues than LAVECs. Table 1.1 illustrates the state funding received by ATCs and LAVECs during the 2018 school year.

Table 1.1
State Funding By Center Type
School Year 2018

Center Type	KDE General Fund (Millions)	SEEK Appropriation (Millions)	Total State CTE Revenues (Millions)	CTE Revenues Per Student
ATCs	$24.2	$21.1	$45.3	$2,032.91
LAVECs	11.8	N/A	11.8	396.53

Note: The SEEK appropriation includes the 20 percent SEEK allocation described in 702 KAR 1:130 that KDE distributes annually to districts that house the ATCs.
Source: OEA analysis of state-appropriated CTE revenues.

State appropriations for ATCs totaled approximately $45.3 million in 2018, while state appropriations for LAVECs were $11.8 million. When these appropriations are calculated per student, the ratio favors ATCs 5.1 to 1 relative to LAVECs.

In terms of state appropriations specifically for CTE, ATCs were appropriated approximately $24.2 million from the KDE general fund and an additional $21.1 million through the secondary vocational funding SEEK appropriation, which is different from the foundational SEEK funding allocated to all districts. The LAVECs were allocated $11.8 million from the KDE general fund, which makes the total state funding 3.8 to 1 in favor of ATCs. When these appropriations are calculated per student, the ratio favors ATCs 5.1 to 1 relative to LAVECs.

Foundational SEEK dollars are allocated for LAVEC students, but ATCs do not receive foundational SEEK dollars. No additional weight is applied to the foundational SEEK allocation for CTE, even though many of these programs can be more costly to administer than other academic programs.

While LAVECs may benefit from foundational SEEK allocation dollars "following" the student to the local career and technical center and ATCs receive no foundational SEEK allocation for the students attending those centers, more context is needed to fully understand this funding relationship. The foundational SEEK allocations going to LAVECs stay in the home district, and in many cases in the same school.[c] [d] Additionally, foundational SEEK funding goes to the districts that house the ATCs, as well as to the districts that feed into those ATCs. No additional weight is applied to the foundational SEEK allocation for career and technical education, even though many of these programs can be more costly to administer than other academic programs.

Local superintendents have been expressing concerns about increasing operation costs at LAVECs for several years. These concerns in part may be enhanced due to the weighted funding mechanism for distributing the LAVEC funds.

Local superintendents have been expressing concerns about increasing operation costs at LAVECs for several years.[2] These concerns in part may be enhanced due to the weighted funding mechanism for distributing the LAVEC funds. Using a weighted funding mechanism may also lead to funding of some higher-cost programs when industry may need students trained in programs that cost less.

[c] Jessamine, Scott, and Woodford Counties partner with two Fayette County LAVECs. Students from these districts attend classes at the Fayette LAVECs in programs not available in the home district. A portion of per-student SEEK foundational funding follows these students to the Fayette County LAVECs.
[d] There are 42 LAVECs that are funded through the KDE general fund. Of those, 26 are at A1 high schools and 16 are A2 stand-alone centers.

Notable Findings From CTE Surveys

OEA staff developed surveys that were administered to district superintendents, ATC principals, LAVEC principals, and comprehensive high school principals. Overall, respondents indicated that the funding mechanisms could benefit from some improvements, but the larger issue from their perspective is the adequacy of the funding provided.

OEA staff developed surveys that were administered to district superintendents, ATC principals, LAVEC principals, and comprehensive high school principals. Respondents were asked about fees for CTE programs, funding sources for dual credit offerings, and their views concerning the funding mechanisms for state CTE funding. Overall, respondents indicated that the funding mechanisms could benefit from some improvements, but the larger issue from their perspective is the adequacy of the funding provided. The full text of these surveys can be found in Appendix B.

Superintendents were asked for their views concerning state CTE funding in Kentucky. In total, 31.9 percent of respondents answered that either portions of the current funding mechanisms should be changed, or major alterations should be made.

Superintendent Views On CTE Funding. Superintendents were asked for their views concerning state CTE funding in Kentucky. Table 1.2 shows superintendents' responses to the survey question. In total, 31.9 percent of respondents answered that either portions of the current funding mechanisms should be changed, or major alterations should be made. Many of the explanations by respondents who chose "Other" indicated dissatisfaction with the current level of funding, if not the mechanisms through which it is distributed; 68.4 percent of respondents who marked "Other" specifically stated that funding for CTE should be increased. In sum, 48 respondents, roughly 40.3 percent of the total, indicated that funding mechanisms should change or funding generally should be increased.

Table 1.2 also provides the average per-pupil property value assessment for the districts in each answer category. The measure is a popular indicator of district wealth and resources.

Table 1.2 also provides the average per-pupil property value assessment for the districts in each answer category. The measure is a popular indicator of district wealth and resources. There does not appear to be a strong correlation between district wealth and opinions on state funding of CTE, as the two lowest averages are for opposing answers—"Keep the current funding mechanisms for ATCs and CTCs" and "Make major alterations to the current funding mechanisms."

Table 1.2
Superintendents' Survey Responses Concerning State CTE Funding In Kentucky, 2019

Survey Response	Percent	Average Per-Pupil Property Value Assessment
Keep the current funding mechanisms for ATCs and CTCs	31.1%	$372,845
Change portions of the current funding mechanisms	13.4	477,589
Make major alterations to the current funding mechanisms	18.5	398,412
Don't know	21.0	417,286
Other	16.0	437,809

Note: A total of 119 superintendents responded to this survey item.
Source: OEA survey.

Table 1.3 illustrates the response data for this question when separating superintendent responses for districts with ATCs, districts with LAVECs, feeder districts, and those districts that fund CTE centers without state CTE funding.

Table 1.3 illustrates the response data for this question when separating superintendent responses for districts with ATCs, districts with LAVECs, feeder districts, and those districts that fund CTE centers without state CTE funding. The rate of respondents reporting that "major alterations to the current funding mechanisms" are needed was much higher in districts with LAVECs than in districts with ATCs; however, ATC districts and LAVEC districts exhibited the highest response rates for keeping the current funding mechanisms.

Table 1.3
Superintendents' Survey Responses Concerning State CTE Funding In Kentucky
By CTE Delivery Method, 2019

Survey Response	ATC (n=39)	LAVEC (n=19)	Feeder District (n=28)	Other (n=5)
Keep current funding mechanisms for ATCs and CTCs	38.5%	36.8%	21.4%	0.0%
Change portions of current funding mechanisms	23.1	15.8	10.7	40.0
Make major alterations to current funding mechanisms	10.3	26.3	21.4	20.0
Don't know	10.3	5.3	28.6	0.0
Other	17.3	15.8	17.9	40.0

Source: OEA survey.

Superintendents were also asked to explain whether changes are needed concerning state-level CTE funding, and to provide any comments or suggestions they may have pertaining to state-level CTE funding. Table 1.4 includes an analysis of superintendents' responses.

Superintendents were also asked to explain whether changes are needed concerning state-level CTE funding, and to provide any comments or suggestions they may have pertaining to state-level CTE funding. Table 1.4 includes an analysis of superintendents' responses. A total of 75 superintendents responded to the question. Of those, 53 percent indicated the need for additional funding to help pay for teachers, buildings, equipment, transportation, and dual-credit courses. A superintendent in a western Kentucky district with an ATC building stated:

> With the focus on transition readiness, both dual credit CTE and CTE program funding should be increased if the desired result is for students to have early exposure to the same skills and tools (entry level models) used in industry today.

Approximately 35 percent of the responses indicated that current state-level funding is not equitable or adequate, and that all districts should get some state-level CTE funding.

Approximately 35 percent of the responses indicated that current state-level funding is not equitable or adequate, and that all districts should get some state-level CTE funding. In addition, 15 percent of the responding superintendents stated that they had limited slots available to attend a nearby ATC or that their school was too small to offer CTE classes. Five percent of respondents stated that ATCs should be governed locally and that the district should have local control of the CTE program.

Table 1.4
Superintendent Open-Ended Responses
To OEA Survey Question On Current State-Level CTE Funding

Response	Count Of Superintendents Responding
Additional funding needed	40
Funding not equitable/all districts funded	26
More program flexibility	15
Limited open slots at local ATC/small district	11
Change ATC to local control	4

Note: A total of 75 superintendents responded to this question. The responses were open-ended, so multiple answers per superintendent were counted in the total responses.
Source: OEA survey.

Similar to the question in the superintendent survey, ATC, LAVEC, and comprehensive high school principals were asked for their views concerning the current state CTE funding mechanisms. Table 1.5 provides the breakdown of responses by CTE school type.

Principals' Views On CTE Funding. Similar to the question in the superintendent survey, ATC, LAVEC, and comprehensive high school principals were asked for their views concerning the current state CTE funding mechanisms. Of the three types of principals surveyed, ATC principals seemed to indicate the highest level of dissatisfaction with the current funding mechanism, with 30.3 percent (a plurality) answering that they preferred major alterations to the current funding mechanism. In addition, of the 17.9 percent of ATC principals who answered "Other," all explicitly requested increased funding in their explanations. However, for both LAVEC and comprehensive high school principals, a plurality of respondents answered that they preferred to keep the current funding mechanisms for ATCs and LAVECs. Table 1.5 provides the breakdown of responses by CTE school type.

Table 1.5
Principals' Survey Responses Concerning State CTE Funding In Kentucky
By CTE Delivery Method, 2019

Survey Response	ATC n=39	LAVEC n=27	Comprehensive n=87
Keep the current funding mechanisms for ATCs and CTCs	25.6%	29.6%	32.2%
Change portions of the current funding mechanisms	15.4	18.5	11.5
Make major alterations to the current funding mechanisms	30.8	25.9	12.6
Don't know	10.3	11.1	32.2
Other	17.9	14.8	11.5
(Increase funding as a percentage of "Other")	(100.0)	(25.0)	(60.0)

Source: OEA survey.

Kentucky Career And Technical Education Task Force

The Kentucky Board of Education passed a resolution in February 2019 that requested the General Assembly to form a legislative task force to examine potential structural and funding changes to career and technical education in the state.

The Kentucky Board of Education passed a resolution in February 2019 that requested the General Assembly to form a legislative task force to examine potential structural and funding changes to career and technical education in the state. The task force held its first meeting in June 2019 and will continue to meet monthly with the goal of providing recommendations to address apparent inequities in the system prior to the 2020 biennial budget session.

KDE presented at the August 21, 2019, task force meeting and provided an overview of total state funding for ATCs and LAVECs.

KDE presented at the August 21, 2019, task force meeting and provided an overview of total state funding for ATCs and LAVECs. KDE also addressed inequities and other concerns with state CTE funding that included 78 schools that meet the statutorily defined classification of being locally operated CTE centers but have not yet requested this status or funding from KDE.

KDE also acknowledged the 96,000 students in CTE programs at 220 comprehensive high schools that do not receive any state-level CTE funding.

KDE also acknowledged the 96,000 students in CTE programs at 220 comprehensive high schools that do not receive any state-level CTE funding. Students at comprehensive high schools outnumber all ATC and LAVEC students combined by a ratio of nearly 2 to 1. Of these 220 comprehensive high schools, KDE reported that 183 offer high-demand CTE pathways that are not currently funded with any state-level CTE appropriations.

KDE also acknowledged that there were instances where it was not following statute or regulation in funding CTE programs.[e]

KDE concluded the August 2019 presentation with a series of recommendations for the task force to consider. KDE proposed an incremental approach to reform with recommendations spread out over the next 3 biennial budget sessions.

KDE concluded the August 2019 presentation with a series of recommendations for the Task Force to consider. KDE proposed an incremental approach to reform with recommendations spread out over the next 3 biennial budget sessions. KDE proposed increasing LAVEC funding by $2.8 million during Phase 1, which accounts for the next two budget sessions, to account for the unfunded schools and unfunded pathways in existing LAVECs. Phase 1 also included the recommendation of moving selected ATCs under local control during this time period. Phase 2 called for the continued transition of ATCs to local control, as well creating a funding mechanism for equipment upgrades, and creating the structural framework for the expansion and continuous improvement of CTE in Kentucky.

[e] These instances are discussed in more detail in Chapter 2.

Funding Career And Technical Education In The United States

CTE programs receive a mix of federal, state, and local funds. Federal funding is distributed mostly through federal grants. State funds can be distributed to programs through a variety of mechanisms.

CTE programs receive a mix of federal, state, and local funds. Federal funding is distributed mostly through federal grants. State funds can be distributed to programs through a variety of mechanisms. Local funding mechanisms are determined by local school districts and include sources such as district-level general funds, foundation funds, and donations from local businesses.

Federal Funding

As of July 1, 2019, states receive federal funds through the Strengthening Career and Technical Education for the 21st Century Act (Perkins V). That law replaced the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV). Perkins V authorizes a 10.53 percent increase in Perkins state grants over 6 years beginning in FY 2019.

As of July 1, 2019, states receive federal funds through the Strengthening Career and Technical Education for the 21st Century Act (Perkins V). That law replaced the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).[f] Each state was given the option to submit a 1-year transition plan for FY 2019 and submit its Perkins V state plan in FY 2020 covering FY 2020-2023 or submit a 5-year state plan that includes an FY 2019 transition year and a 4-year period covering FY 2020-2023.[g] During that time, states are required to meet with stakeholders to develop a new state plan and submit it for approval to the US Department of Education (USED). Perkins V authorizes a 10.53 percent increase in Perkins state grants over 6 years beginning in FY 2019.[3] This is the first increase in Perkins state grants since FY 2007.[4] While Perkins V increased the amount for state grants, the overall funding mechanisms have not changed from Perkins IV.

Federal Funding To State Education Agencies

With both Perkins IV and Perkins V, each state is given funds based on a formula. The total allotment for FY 2019 was $1.263 billion.

With both Perkins IV and Perkins V, each state is given funds based on a formula. The total allotment for FY 2019 was $1.263 billion. According to the formula, 1.63 percent was reserved for outlying areas and the Native American program. The remainder was distributed to states based on the population aged 15-65 and per-capita income. There were no reductions in grants to states, which were held harmless at the FY 2018 level. Small states received a minimum of 0.5 percent of the total distribution to states.[5] Based on the formula, Kentucky will receive $19,360,956 in FY 2019.[6] In FY 2018, Kentucky received $18,292,888.[7]

[f] This report refers to both Perkins IV and Perkins V as Perkins funding.
[g] Kentucky elected to use FY 2019 as a 1-year transition period and develop a 4-year plan.

States' Use Of Perkins Funding

States must distribute at least 85 percent of the total state Perkins fund allotment to secondary and postsecondary institutions.

States must distribute at least 85 percent of the total state Perkins fund allotment to secondary and postsecondary institutions. States are allowed to keep up to 15 percent of the Perkins fund allotment to administer the grant and for state CTE leadership.

State Administrative Funds

States are allowed to use up to 5 percent or $250,000 (whichever is greater) to administer the Perkins Grant.

States are allowed to use up to 5 percent or $250,000 (whichever is greater) to administer the Perkins Grant. The grant must be matched by state funds and can be used for

- developing the state plan,
- reviewing local applications,
- monitoring and evaluating program effectiveness,
- assuring compliance with other federal laws,
- providing technical assistance, and
- supporting and developing state CTE systems.[8]

In FY 2018, Kentucky allocated the entire 5 percent ($914,644) for state administration purposes.

In FY 2018, Kentucky allocated the entire 5 percent ($914,644) for state administration purposes.[9]

State Leadership

States are allowed to use up to 10 percent of their Perkins funds for state CTE leadership purposes.

States are allowed to use up to 10 percent of their Perkins funds for state CTE leadership purposes.[10] Perkins IV had 9 required uses of the funds and 17 permissible uses of the funds. Perkins V amended the requirement to 5 required uses and 25 permissible uses.[11] According to 20 USC 2344, Perkins V state leadership funds must be used to

- support "preparation for non-traditional fields in current and emerging professions, programs for special populations, and other activities that expose students, including special populations, to high-skill, high-wage, and in-demand occupations";
- support "individuals in State institutions, such as State correctional institutions, including juvenile justice facilities, and educational institutions that serve individuals with disabilities";
- support "recruiting, preparing, or retaining career and technical education teachers, faculty, specialized instructional support personnel, or paraprofessionals, such as preservice, professional development, or leadership development programs";
- support "technical assistance for eligible recipients"; and

- report on the effectiveness of such use of funds in achieving the goals for preparing an educated and skilled workforce and reducing disparities or performance gaps.

In FY 2018, Kentucky allocated the entire 10 percent ($1,829,288) to state leadership.

In FY 2018, Kentucky allocated the entire 10 percent ($1,829,288) to state leadership.[12]

Local Perkins Funding In Kentucky

In FY 2018, Kentucky distributed 55 percent of its local Perkins funds ($8,551,925) to secondary CTE programs and 45 percent ($6,997,029) to postsecondary CTE programs.

In FY 2018, Kentucky distributed 55 percent of its local Perkins funds ($8,551,925) to secondary CTE programs and 45 percent ($6,997,029) to postsecondary CTE programs.[13]

Distribution Of State Funds

In addition to federal funds, CTE programs receive state funds. The mechanisms through which states support their CTE programs differ throughout the United States.

In addition to federal funds, CTE programs receive state funds. The mechanisms through which states support their CTE programs differ throughout the United States. A 2014 USED report identified three approaches states use in funding CTE:

- Foundational funding
- Funding for area CTE centers
- Categorical funding[14]

The most common funding mechanism for state funding is categorical funding.

The most common funding mechanism for state funding is categorical funding.

Foundational Funding

States that fund their CTE programs using foundational funding do not earmark any additional funds for CTE programs. Funds for those CTE programs are included in the states' funding for education.

States that fund their CTE programs using foundational funding do not earmark any additional funds for CTE programs. Funds for those CTE programs are included in the states' funding for education. As of 2014, only six states used only foundational funding to fund their CTE programs.[h] None of Kentucky's neighboring states use foundational funding exclusively to fund their CTE programs.[15]

[h] Maryland, Nebraska, New Mexico, Oregon, South Dakota, and Wisconsin use only foundational funding for their CTE programs. The Republic of Palau (which participates in a wide range of US federal programs) and the District of Columbia also use foundational funding only for their CTE programs.

Funding For Area CTE Centers

Seven states fund their CTE programs through area CTE centers. These states use CTE funds exclusively for their area CTE centers and rely on foundational funding for other CTE programs.

Seven states fund their CTE programs through area CTE centers.[i] These states use CTE funds exclusively for their area CTE centers and rely on foundational funding for other CTE programs.[16] None of Kentucky's neighboring states fund their CTE programs solely through area CTE centers. While Kentucky does fund area technology centers, other CTE programs in the state do not rely solely on foundational funding.

Categorical Funding

There are 37 states that use categorical funding to support CTE programs. These states earmark funds specifically for CTE programs.

There are 37 states that use categorical funding to support CTE programs. These states earmark funds specifically for CTE programs. Kentucky and all of its neighboring states use categorical funding to fund at least some of their CTE programs. There are three ways states use categorical funding for CTE programs:

- Student-based funding
- Unit-based funding
- Cost reimbursement funding[17]

Student-Based Funding

Student-based funding is used by 21 states and is the most common CTE funding method used in the US.

Student-based funding is used by 21 states and is the most common CTE funding method used in the US. Student-based funding can be implemented in several ways:

- Proportional allocation
- Weighted student funding
- Differential weighting[18]

States that allocate CTE funds proportionally generally fund their local education agencies' (LEAs') CTE programs based on their proportion of CTE students compared to the total state CTE population.

Proportional Allocations. States that proportionally allocate CTE funds generally fund their local education agencies' (LEAs') CTE programs based on their proportion of CTE students compared to the total state CTE population. Nine states, including Illinois and West Virginia, allocate funds proportionally.[19]

Seven states add an additional weight to the LEA's foundational funding to account for student participation in CTE programs.

Weighted Student Funding. Seven states add an additional weight to the LEA's foundational funding to account for student participation in CTE programs.[20] None of Kentucky's neighboring states uses this approach.

[i] Arkansas, California, Connecticut, New Hampshire, New Jersey, New York, and Vermont set aside CTE funds for area CTE centers exclusively. While Kentucky does have a system of state-funded area CTE centers, that is not the only way CTE programs are funded in Kentucky.

Due to the difference in cost of some CTE programs compared to others, some states offer a differential weight to distinguish between high- and low-cost programs. Indiana, Kentucky, and Ohio all offer funding with differential weighting for programs.

Differential Weighting. Due to the difference in cost of some CTE programs compared to others, some states offer a differential weight to distinguish between high- and low-cost programs. Indiana, Kentucky, and Ohio all offer funding with differential weighting for programs.[21] Indiana uses labor market projections to fund programs that prepare students for high-wage, high-demand jobs. Ohio and Kentucky distinguish between low-cost and high-cost programs and assign higher funding weights for high-cost programs.[j]

Unit-Based Funding

Unit-based approaches to funding allocate funds to CTE programs on the basis of discrete instructional components.

Unit-based approaches to funding allocate funds to CTE programs on the basis of discrete instructional components. Discrete instructional components can include several educational inputs including instructional staff, books, equipment, and maintenance costs. States that use unit-based funding may use formula adjustments to allocate more funds to CTE programs, which are more expensive to operate. Seven states, including Tennessee, use a unit-based funding approach to fund CTE programs.[22]

Cost Reimbursement Funding

Cost reimbursement approaches compensate districts based on prior-year CTE expenditures. Cost reimbursement often depends on available funds, and the state reimburses only a percentage of the full cost.

Cost reimbursement approaches compensate districts based on their prior year's CTE expenditures. Cost reimbursement is often dependent on available funds, and only a percentage of the full cost is reimbursed by the state. Nine states, including Missouri and Virginia, use a cost reimbursement model.[23]

[j] Kentucky uses differential weighting for its CTC programs; however, as noted in the report, Kentucky also maintains a network of state-run, regional CTE programs (ATCs).

Kentucky And Its Neighboring States

Table 1.6 shows the amounts Kentucky and its neighboring states allocate to CTE from state funds.

Table 1.6 shows the amounts Kentucky and its neighboring states allocate to CTE from state funds.

Table 1.6
Amount Of State Funding Allocated To CTE In Kentucky And Neighboring States
FY 2018 And FY 2019

State	Amount	Fiscal Year
Illinois	$38,062,100	2018
Indiana	130,000,000	2018
Kentucky	61,694,869	2018
Missouri	21,000,083	2019
Ohio	322,970,151	2018
Tennessee	24,139,800	2018
Virginia	58,184,459	2018
West Virginia	22,440,602	2018

Sources: Tony Smith, Illinois state superintendent of education. FY 2018 Career and Technical Educ. Report. Letter to the Governor, Senate President, Senate Minority Leader, Speaker of the House, and House Minority Leader of Illinois. Jan. 15, 2019. Web. Accessed Aug. 21, 2019; Stefany Deckard, Indiana state director of career and technical education. Response to OEA Survey. July 22, 2019; David Horseman, associate commissioner, Kentucky Dept. of Educ., Office of Career and Technical Educ. and Student Transition. "Funding For Secondary Career And Technical Education (CTE)." Testimony. Meeting of the Kentucky Career and Technical Education Task Force. Frankfort. Aug. 21, 2019; Missouri Department of Elementary and Secondary Education. State CTE Base And Performance Grant Allocations, Fiscal Year 2019 (As Of May 15, 2018). Web. Accessed Aug. 21, 2019; Ohio Department of Education. FY2018 District Payment Reports (Excel Format): FY2018 Final #2 Payment File. Web. Accessed Aug. 21, 2019; Bill Lee, Governor of Tennessee. State Of Tennessee: The Budget, Fiscal Year 2019-2020. Web. Accessed Aug. 21, 2019; Virginia Department of Education. Final FY 2019 Direct Aid Payments: June 2019. Web. Accessed Aug. 21, 2019; West Virginia Legislature. 2017 First Extraordinary Session. Enrolled Senate Bill 1013. March 8, 2018. Web. Accessed Aug. 21, 2019.

Chapter 2

CTE Revenues

Total CTE Revenues, School Years 2009 To 2018

This chapter provides analyses on various aspects of state revenues provided for career and technical education in Kentucky. During the 2018 school year, Kentucky had approximately 132,000 students enrolled in CTE pathways.

This chapter provides analyses on various aspects of state revenues provided for career and technical education in Kentucky. During the 2018 school year, Kentucky had approximately 132,000 students enrolled in CTE pathways. The chapter begins with a broad look at total revenue as it flows through KDE. The report continues with the distinction between the current state funding amounts provided, as well the mechanisms for appropriation and distribution to ATCs, LAVECs, and KCTCS.

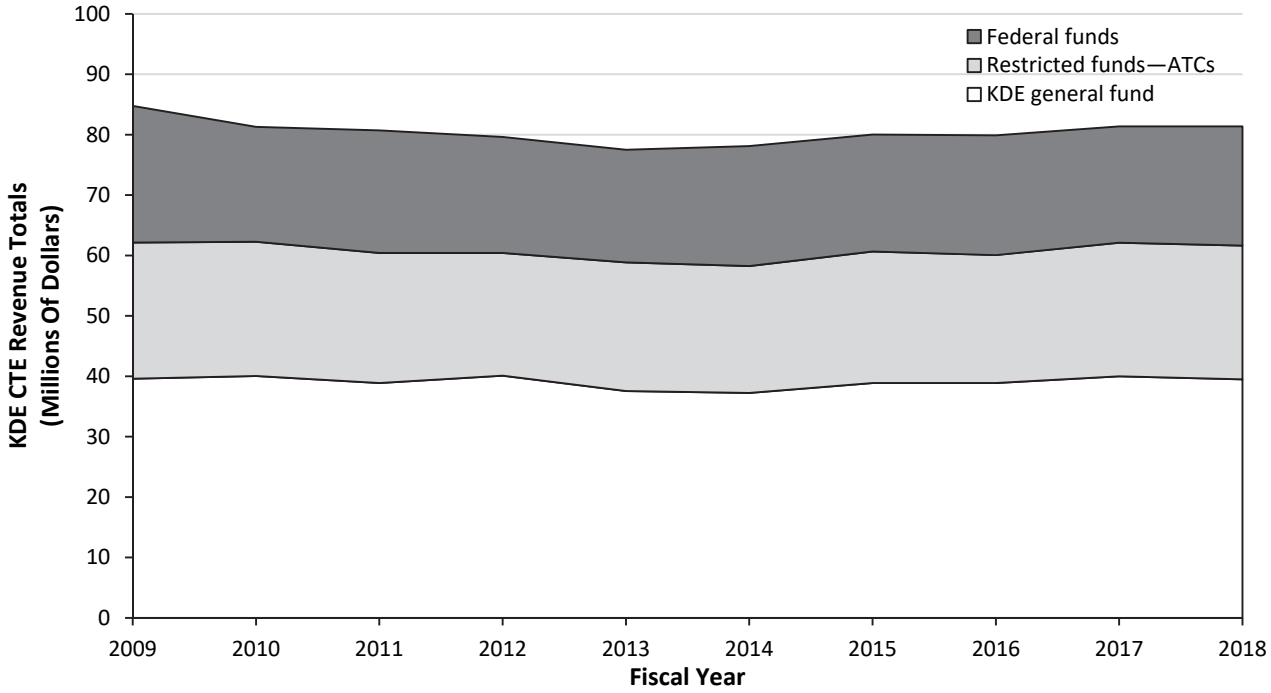
CTE Revenues Passing Through KDE

Total revenues for CTE as reported by KDE include revenue from the KDE general fund, restricted funds provided by the General Assembly for state-operated ATCs and federal funding from Carl D. Perkins Grant allocations. During the 2018 school year, total revenues for CTE were approximately $81.4 million.

Total revenues for CTE as reported by KDE include revenue from the KDE general fund, restricted funds provided by the General Assembly for state-operated area technology centers, and federal funding from Carl D. Perkins Grant allocations. Figure 2.A provides a graphical representation of these funds for fiscal years 2009 to 2018. During FY 2018, total revenues for career and technical education were approximately $81.4 million. The KDE general fund accounted for approximately 49 percent of the total, restricted funds for ATCs accounted for 27 percent, and federal grant funding accounted for the remaining 24 percent. The restricted funds for ATCs includes funding for ATC operations, the 20 percent SEEK allocation provided to districts that house the ATC buildings, and approximately $1.4 million paid annually to KCTCS.[a]

[a] The discussion pertaining to the funds paid to KCTCS continues later in this chapter.

Figure 2.A
State And Federal Revenues For Career And Technical Education
By Funding Source
FY 2009 To FY 2018



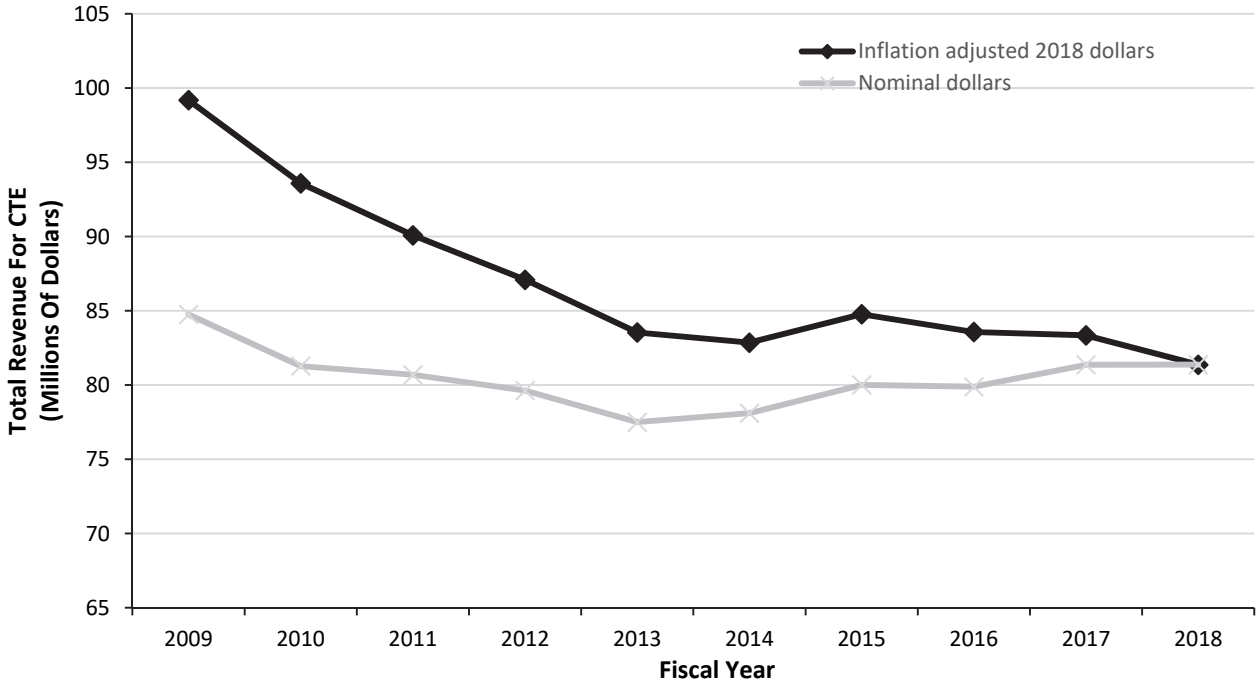
Source: Staff analysis of data from the Kentucky Department of Education.

Total CTE Revenue Adjusted For Inflation

Approximately $18 million in additional funding for FY 2018 would be required to match the purchasing power exhibited in FY 2009.

In terms of total nominal dollars, there was a decline of approximately 4 percent in the total revenue from federal funds, General Assembly restricted funds, and the KDE general fund from 2009 to 2018. Figure 2.B shows that, when these funds are adjusted for inflation, there was a 20 percent decline in purchasing power from FY 2009 to FY 2018. Approximately $18 million in additional funding for FY 2018 would be required to match the purchasing power exhibited in FY 2009.

Figure 2.B
Total Revenue For Career And Technical Education
Nominal Dollars And Inflation-Adjusted Dollars (2018)
FY 2009 To FY 2018



Source: Staff analysis of data from the Kentucky Department of Education.

KDE General Fund Revenue

During the 2018 school year, total revenues strictly from the KDE general fund included $11,843,500 for LAVECs, $24,246,889 in supplemental funds paid to ATCs, and $3,393,011 in salaries and fringe benefits for CTE personnel employed by KDE.

During the 2018 school year, total revenues strictly from the KDE general fund included $11,843,500 for LAVECs, $24,246,889 in supplemental funds paid to ATCs, and $3,393,011 in salaries and fringe benefits for CTE personnel employed by KDE. The supplemental funds paid to ATCs were approximately the same amount paid from the Education and Workforce Development Cabinet general fund each year prior to the merger of the Office of Career and Technical Education with KDE. Revenue from the KDE general fund accounted for approximately 57 percent of total revenue distributed to ATCs during the 2018 school year. KDE general funds used for any CTE function are not line-itemed in biennial budgets.

Table 2.1 shows the number of Frankfort-based CTE personnel employed by KDE according to function and the source of funds from which salaries and benefits are paid.

Table 2.1 shows the number of Frankfort-based CTE personnel employed by KDE according to function and the source of funds from which salaries and benefits are paid.[b] In terms of Frankfort-based staff, KDE has 44 employees who are paid from its general fund and 2 employees who are paid with a combination of KDE general fund and federal dollars. Overall, five of the Frankfort-based CTE staff are paid solely with federal dollars. KDE has eight positions that are not filled: four paid by the KDE general fund, three paid by a combination of KDE general fund and federal dollars, and one that is funded strictly with federal dollars.

Table 2.1
Number Of Frankfort-Based CTE Staff
By KDE Function And Per Funding Source For Salaries And Benefits

	Number Of Employees By Funding Source				
KDE Function Of Frankfort-Based CTE Staff	General	Federal	Split-Paid	Vacant	Function Total
Office of Career and Technical Education and Student Transition	3	0	0	0	3
Division of Technical Schools and Continuous Improvement	7	0	0	0	7
Kentucky Tech Schools Branch	4	0	0	0	4
Kentucky Tech Administrative Branch	4	0	0	1	5
Data and Investment Branch	2	4	2	3	11
Division of Student Transition and Career Readiness	3	1	0	1	5
Career Programs and Pathways Branch	11	0	0	2	13
Student Leadership Development Branch	10	0	0	1	11
Total employees	44	5	2	8	59

Source: Staff analysis of data from the Kentucky Department of Education.

ATC And LAVEC Revenues

General Assembly Budgeted Revenue Appropriations, FY 2009 To FY 2018

Table 2.2 shows the amounts that the General Assembly budgeted for CTE in FY 2009 to FY 2018.

Table 2.2 shows the amounts that the General Assembly budgeted for CTE in FY 2009 to FY 2018. Each of the budget bills included funding for vocational transportation, funding for ATCs, and budget language pertaining to the funding of LAVEC schools.[c]

[b] Table 2.1 does not include approximately 544 staff working at the ATC buildings. KDE pays ATC staff salaries through a combination of the KDE general fund and CTE SEEK dollars.

[c] The following language appeared in each of the bills: "Locally Operated Vocational Programs: Notwithstanding KRS 157.069, the supplemental funding distribution shall include Category II and III programs in districts established after June 21, 2001, with state assistance, if approved by the Commissioner of Education."

The budget bills also contain language pertaining to area vocational education centers participating in the Kentucky Education Technology System (KETS), as well as funds appropriated for construction of new vocational buildings.

The budget bills also contain language pertaining to area vocational education centers participating in the Kentucky Education Technology System (KETS), as well as funds appropriated for construction of new vocational buildings (2010).[d] The 2014 budget bill appropriated funding for the creation of a regional collaborative career academy, and funding for additional staffing at career and technical schools.[e] Appendix C provides a timeline of CTE budget-related events.

Table 2.2
State-Funding Budgeted Amounts For Career And Technical Education
FY 2009 To FY 2018

Fiscal Year	House Bill	Vocational Transportation	Secondary Vocational Education	Local Area Vocational Centers*
2009	HB 406 (2008)	$2,416,900	$23,289,000	$11,757,600
2010	HB 406 (2008)	2,416,900	23,289,000	11,757,600
2011	HB 290 (2010)	2,416,900	23,289,000	**
2012	HB 290 (2010)	2,416,900	23,289,000	**
2013	HB 265 (2012)	2,416,900	23,289,000	10,954,100
2014	HB 265 (2012)	2,416,900	23,289,000	10,954,100
2015	HB 235 (2014)	2,416,900	22,866,900	**
2016	HB 235 (2014)	2,416,900	22,881,900	**
2017	HB 303 (2016)	2,416,900	22,881,900	**
2018	HB 303 (2016)	2,416,900	22,881,900	**

*Actual funding to local area vocational education centers provided by KDE has been $11,843,500 since FY 2013.
**Budget allocations for local area vocational education centers were not given a budget line item since the FY 2013-2014 budget cycle.
Source: Staff analysis of the House budget bills listed in the table.

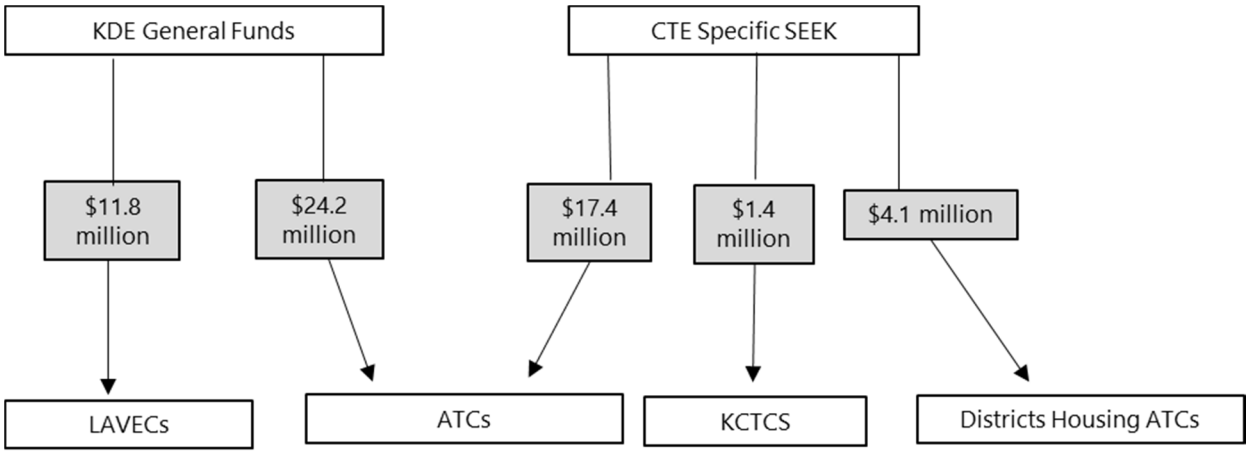
Figure 2.C provides a graphical representation of how these state-level funds are allocated to ATCs, LAVECs, and KCTCS.

Figure 2.C provides a graphical representation of how these state-level funds are allocated to ATCs, LAVECs, and KCTCS.

This section will continue with analyses of the existing statutory and regulatory framework of budget appropriations provided by the General Assembly for the career and technical education line items mentioned above.

[d] HB 290 (2010) included funding for vocational buildings in Floyd County ($4 million), Grant County ($1.7 million), Letcher County ($2 million), and Montgomery County ($8.8 million).
[e] The Regional Collaborative Career Academy was appropriated $250,000 in HB 235 (2014). Five districts (Carroll County, Gallatin County, Henry County, Owen County, and Trimble County) were involved in this collaborative effort. This process led to the creation of the iLead Academy.

Figure 2.C
Flow Chart Of State-Level Funding Allocated To ATCs, LAVECs, And KCTCS



Source: Staff analysis of state-level CTE funding for ATCs and LAVECs.

Budget language dating back to at least HB 502 (2000) requires that area vocational education centers shall be fully eligible to participate in KETS. However, the School Facilities Construction Commission has yet to promulgate the regulation identifying the average daily attendance for vocational centers equated to other local school districts to ensure that the centers receive proper distribution of KETS funds.

Kentucky Education Technology System For Area Vocational Education Centers. Budget language dating back to at least HB 502 (2000) requires that area vocational education centers shall be fully eligible to participate in the Kentucky Education Technology System.[f] [g] The School Facilities Construction Commission (SFCC), in collaboration with KDE and the Kentucky Board of Education, is required to develop administrative regulations that identify a methodology where the average daily attendance (ADA) for area vocational centers is equated to the ADA of other local school districts so these centers receive the proper distribution of these funds. As of August 2019, SFCC has not promulgated the appropriate regulation identifying this methodology.

[f] According to the 2018-2024 KETS Master Plan budget, the annual unmet technology need is $366 million, but the annual allocation of KETS funding is only $15.4 million, or approximately 4 percent of technology need.
[g] For school year 2020, $11.2 million of the KETS funds will be used by the Office of Education Technology at KDE to provide shared tech services for all districts. The remaining $4.2 million is distributed as KETS offers of assistance to districts based upon average daily attendance.

Recommendation 2.1

The School Facilities Construction Commission should work in collaboration with the Kentucky Board of Education and the Kentucky Department of Education to promulgate an administrative regulation that identifies the methodology for equating the average daily attendance of area technology centers with the average daily attendance of other local school districts to ensure that these centers receive a proper share of Kentucky Education Technology System funding.

Area Technology Center Funding

Funds appropriated for ATCs are listed in the budget as "secondary vocational education funds." Figure 2.D shows the annual budget appropriations for secondary vocational funding by the General Assembly.

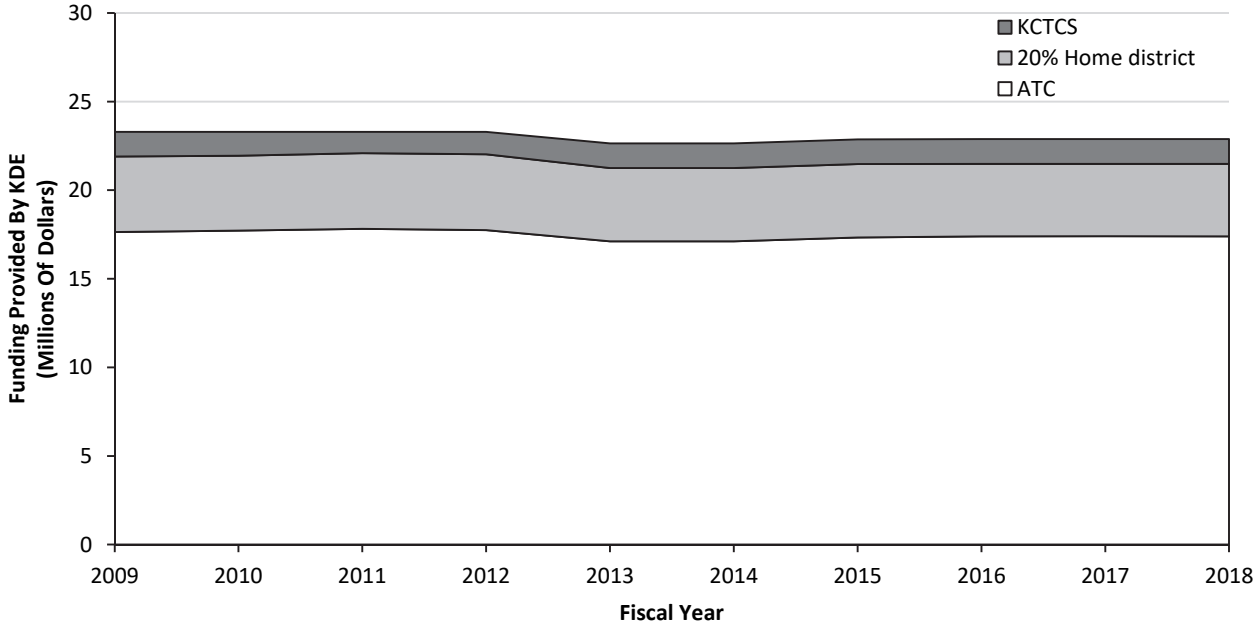
Funds appropriated for ATCs are listed in the budget as "secondary vocational education funds." Figure 2.D shows the annual budget appropriations for secondary vocational funding by the General Assembly. These funds include those appropriated to KDE for operations at the 53 state-operated ATC facilities, line-item funds paid to districts that house the ATCs, funding for career and technical satellite locations, and funds allocated for the Kentucky Community and Technical College System.

Total Area Technology Center Funding

The General Assembly has appropriated approximately $23 million annually for secondary vocational education since FY 2009. Figure 2.D provides the breakdown of secondary vocational funding for school years 2009 to 2018.

The General Assembly has appropriated approximately $23 million annually for secondary vocational education since FY 2009. The FY 2013-2014 budget cycle was the first year after the merger of OCTE with KDE. During this period of transition, the amount appropriated for secondary vocational education was the same as prior to the merger at $23,289,000. Since FY 2015, this allocation of funds has dropped slightly to $22,881,900 annually. Figure 2.D provides the breakdown of secondary vocational funding for school years 2009 through 2018.

Figure 2.D
Annual Budget Appropriations For Secondary Vocational Education Funding
FY 2009 To FY 2018



Source: Staff analysis of data from the Kentucky Department of Education.

Distribution Of ATC Funding

There is no statutory framework governing ATC funding, so the methodology for distributing secondary vocational education funds is established in 702 KAR 1:130.

There is no statutory framework governing ATC funding, so the methodology for distributing secondary vocational education funds is established in 702 KAR 1:130. Section 1 of that regulation allocates funding for students who attend ATCs by the number of full-time equivalent 3-hour students enrolled as of October 1. The regulation continues by stating that the amount calculated per FTE shall be determined by dividing the total available funds by the total number of secondary students served in the system, which seems to contradict the preceding sentence of the regulation by changing the denominator from the calculated FTE to total number of students served.[h]

During the FY 2013 to FY 2014 transition period of the OCTE merger with KDE, KDE did not alter FY 2014 funding allocations for any component of secondary vocational education funding from those implemented during FY 2013.

Distribution Of ATC Funds, FY 2014. During the FY 2013 to FY 2014 transition period of the OCTE merger with KDE, KDE did not alter FY 2014 funding allocations for any component of secondary vocational education funding from those implemented

[h] 702 KAR 1:130 was developed when the Office of Career and Technical Education was still part of the Education and Workforce Development Cabinet. At that time state funds for ATCs flowed through KDE to the Department for Adult and Technical Education. Because the regulation is outdated, KDE may want to consider amending 702 KAR 1:130 to reflect current practices.

during FY 2013. The FTE allocations were simply replicated in FY 2014 using FY 2013 information. Thus, during this time period KDE did not abide by the regulatory language for distributing secondary vocational funding.

702 KAR 1:130 requires 20 percent of the funds generated by the FTE calculation to be transferred to the local districts housing the ATC buildings.

ATC Funds For Building Maintenance And Retirement Of Debt. 702 KAR 1:130 requires 20 percent of the funds generated by the FTE calculation to be transferred to the local districts housing the ATC buildings. The regulation requires that these funds are to be used for retirement of debt service and building maintenance. Chapter 3 provides more detail on how these funds have been used for other purposes.

Recommendation 2.2

The Kentucky Department of Education should comply with all provisions of 702 KAR 1:130 for area technology center funding as written, or the Kentucky Board of Education should align 702 KAR 1:130 to reflect current practices.

Total FTE calculations for all ATCs grouped together did not exhibit much variation from FY 2009 to FY 2018; however, when looking at FTE counts at the individual ATC level over the same period, there were considerable fluctuations in FTE at several ATCs from year to year.

ATC Funding Per FTE. As stated above, the General Assembly has appropriated approximately $23 million per year for ATCs since FY 2009.[i] Total FTE calculations for all ATCs grouped together did not exhibit much variation from FY 2009 to FY 2018; however, when looking at FTE counts at the individual ATC level over the same period, there were considerable fluctuations in FTE at several ATCs from year to year. The variance in funding per FTE is more pronounced when adjusting for inflation.

ATC Funds To KCTCS. The 2003 LRC CTE study described how

> [i]nitially, the Workforce Development Cabinet had the responsibility for adult education, vocational rehabilitation, and the state-operated KY Tech System that included both secondary and postsecondary institutions … [T]he postsecondary components were transferred to the new KCTCS in 1998. However, KCTCS has continued to provide access to secondary career and technical education courses within the postsecondary facilities. In other cases, state-operated area technology centers provide space for full-time postsecondary education programs. KCTCS receives [SEEK] funds to support the secondary programming.[24]

[i] This amount includes the $1.4 million in secondary vocational funding allocated to KCTCS.

The postsecondary portion of SEEK funding was $1,393,000 in 1998 and has been capped at that amount since. The funding is taken out of the secondary vocational education funds appropriated for ATCs.

The postsecondary portion of SEEK funding was $1,393,000 in 1998 and has been capped at that amount since. The funding is taken out of the secondary vocational education funds appropriated for ATCs. Originally, KCTCS would receive funding only for programs that were serving secondary students; however, KCTCS started receiving funding for new programs in FY 2015.[25] In the 2018 school year, KCTCS provided CTE programs to 2,957 secondary students.[26] Funding is allocated by the number of student FTEs served by each KCTCS program.[j] All but one of the classes were dual-credit courses.[27] Kentucky secondary students in 161 public and private schools have access to these programs. Currently, KDE has no statutory or regulatory obligation to fund secondary CTE programs in KCTCS.

Recommendation 2.3

If the General Assembly wants the Kentucky Department of Education (KDE) to continue allocating funds for secondary career and technical education programs at the Kentucky Community and Technical College System, then the General Assembly should include language in subsequent budget bills directing KDE to do so.

In school years 2009 to 2018, the General Assembly appropriated approximately $2.4 million in vocational transportation funds annually to districts that transport CTE students. These funds were used as a reimbursement for districts whose students travel to attend CTE programs.

Vocational Transportation Funds. In school years 2009 to 2018, the General Assembly appropriated approximately $2.4 million in vocational transportation funds annually to districts that transport CTE students. These funds were used as a reimbursement for districts whose students travel to attend CTE programs. Total vocational transportation funds for recipient districts are considered when distributing these funds, to ensure that each recipient district receives the same share of reimbursement funds relative to actual vocational transportation costs for a given school year. During the 2018 school year, the $2.4 million vocational transportation funds accounted for 33 percent of vocational transportation cost to the 129 recipient districts.[28] The total vocational travel cost for these districts in 2018 was approximately $7.3 million.

An OEA-administered survey asked superintendents to list the amount of local funding used for transporting CTE students in their district for the 2018 school year.

Local Funding Used For CTE Transportation. An OEA-administered survey asked superintendents to list the amount of local funding used for transporting career and technical education students in their district for the 2018 school year. OEA staff categorized the responses according to whether the district houses an ATC or LAVEC, or whether the district feeds into another district's CTE center.

[j] One FTE is defined as 6 contact hours.

More than 50 percent of superintendents from LAVEC districts indicated that local funding was used for transporting CTE students. Approximately 64 percent of districts housing ATCs indicated that local funding was used for vocational transportation, as did approximately 86 percent of districts that feed into ATCs.

For districts with a LAVEC, 54.5 percent of respondents indicated that local funding was used for transporting CTE students.[k] For districts that house an ATC, 63.6 percent of respondents indicated that they spent local funding on transporting CTE students.[l] However, for districts with neither a LAVEC nor ATC that fed students into CTE centers in other districts, a much higher proportion (85.7 percent) spent some amount of local funding on transportation for CTE students.[m]

According to the survey responses, districts housing ATCs spent more local dollars on average for vocational transportation than did LAVEC and ATC feeder districts.

Although the responding feeder districts were the most likely to spend local funds on transportation, they spent a lower average amount than ATC districts and LAVEC districts. In the responding feeder districts that spent any local funds on transportation, $23,163 was spent on average. Districts with an ATC that responded to the survey question spent $34,725.99 on average, and respondents with a LAVEC spent $29,134.98 on average.[n]

The survey responses also indicated that some students have long commutes to a CTE center, which can take away from valuable instructional time for those students.

The survey responses indicated that some students may have long commutes to a CTE center, which can take away from valuable instructional time for these students. One superintendent from the survey stated:

> Opportunities need to be available for all districts to participate in CTE programs where state funding is used. We are a small district and had previously utilized the Boone County ATC, but due to limited space we were unable to continue sending students. This is the closest ATC for our students and was still [a] 35-40 minute commute and cost them time away from class for being late/leaving early due to travel issues.

LAVEC Funding

Locally operated career and technical centers are not included in biennial budgets as a line item, but KDE has continued to distribute approximately $11.8 million each year to LAVECs.

Locally operated career and technical centers (CTCs) are referred to as local area vocational education centers in budget language and KDE in terms of funding. Prior to the merger of OCTE with KDE, LAVECs were included in the budget as a line item. Since the merger, funding allocations provided by the General Assembly for LAVECs are included in the annual KDE budget allocation. Therefore, KDE has no obligation to provide a specific amount of

[k] Twenty-two of 44 LAVEC superintendents responded to this survey question.
[l] Thirty-three of 53 ATC superintendents responded to this survey question.
[m] Forty-two of 71 superintendents that did not have an ATC or LAVEC responded to this survey question.
[n] Though these districts did spend different amounts on average, none of these group differences were statistically significant according to paired t-tests, most likely because of the small sample size.

funding annually to LAVECs; however, KDE has continued to distribute $11,843,500 each year.

The list of LAVECs changed between FY 2010 and FY 2012. Oldham County was removed from the list, and Grant, Muhlenberg, and Kenton Counties were added.

Prior to the merger of OCTE with KDE, the number of LAVECs fluctuated slightly. Oldham County was removed from the funded list in FY 2010 and has since delivered career and technical education in the district without LAVEC funding.[o] Muhlenberg County was added to the funded LAVEC school list in FY 2011, and Grant and Kenton Counties were added in FY 2012.[p]

Distribution Of LAVEC Funding

Statutory and regulatory formulas designed to compute the FTE counts to distribute LAVEC funding exist, but in 2014, KDE began using an internal formula for calculating FTE at LAVECs. In-person interviews with KDE staff determined that the changes were based upon equity concerns.

Statutory and regulatory formulas designed to compute the FTE counts to distribute LAVEC funding exist. Both KRS 157.069 and 705 KAR 2:140 are designed to allocate funding according to the cost of administering the programs. This led KDE to believe that LAVECs in resource-poor districts were not on a level playing field with LAVEC schools in resource-rich districts, which could provide higher-cost programs. In 2014, KDE began using an internal formula for calculating FTE at LAVECs. In-person interviews with KDE staff determined that the changes were based upon equity concerns.[29]

KRS 157.069 does not produce a coherent formula for computing FTE. Although the language in regulation does provide a formula for distributing these funds, KDE has chosen to use its own formula for distributing LAVEC funding since 2014.

LAVEC Funding Distribution Formulas. KRS 157.069 does not produce a coherent formula for computing FTE. Although the language in regulation does provide a formula for distributing these funds, KDE has chosen to use its own formula for distributing LAVEC funding since 2014. Table 2.3 shows the methodologies described in statute and regulation, as well as the current KDE methodology for determining LAVEC FTEs.

[o] Along with the Ignite Academy in Boone County, these districts deliver career and technical education without receiving LAVEC funding: Hardin County, Hopkins County, Laurel County, Oldham County, Owensboro Independent, Spencer County, and Taylor County.

[p] Grant and Kenton Counties were added to the LAVEC list based on budget language. Kenton County had had an ATC prior to switching to a LAVEC.

Table 2.3
Methods For Determining Student Full-Time Equivalents
Described In Statute, Regulation, And Current KDE Practice, 2019

Source Of Methodology	Description
KRS 157.069	(Category II and III program enrollment ÷ length of class) ÷ (6-hour instructional day)
705 KAR 2:140	((Number of students in Category II and III programs) × (number of hours enrolled)) ÷ (6-hour instructional day)
KDE	((Total attend hours per Category II and III programs) × (the weight for each category of program)) ÷ (6-hour instructional day)

Source: Kentucky Revised Statutes; Kentucky Administrative Regulations; In-person meeting. Kentucky Department of Education. July 18, 2019.

Recommendation 2.4

The General Assembly should change the local area vocational education center (LAVEC) categorical funding formula in KRS 157.069 to reflect the proper methodology of computing Category II and Category III LAVEC full-time equivalent students.

Recommendation 2.5

The Kentucky Board of Education should revise 705 KAR 2:140 to reflect the actual methodology used to distribute funding to local area vocational education centers.

There are 42 LAVECs that receive state-level funding; of those, 26 are housed at A1 high schools, and the remaining 16 are at stand-alone A2 technical education centers. Table 2.4 provides the categorical breakdown of FTE by LAVEC type for the 2018 school year.

FTE By Program Category. There are 42 LAVECs that receive state-level funding; of those, 26 are housed at A1 high schools, and the remaining 16 are at stand-alone A2 technical education centers. Table 2.4 provides the categorical breakdown of FTE by LAVEC type for the 2018 school year. Category 1 programs are defined as orientation or career exploration programs, and they are not funded from the LAVEC allocations; therefore, they are not included in the analyses. Category 2 programs, which are defined as technical skill programs, have a weight of 1.0 applied to the total FTE count for this category of programs. Category 3 programs are defined as high-cost technical programs and have a weight of 1.5 applied to the total FTE counts for these programs. The weighted FTE counts are then summed and divided into the total LAVEC funding allocation to produce the revenue per FTE.

Table 2.4
Categorical Breakdown Of FTE By LAVEC Type
School Year 2018

LAVEC Type	Number Of Schools	Category 2 FTE	Category 3 FTE	Grand Total FTE	Revenue Per FTE
A1	26	2120.52	2784.62	4905.14	$1,519.37
A2	16	1065.62	1824.20	2889.82	1,519.37
Total	42	3186.14	4608.82	7794.96	$1,519.37

Note: Category 3 FTE = calculated FTE × 1.5.
Source: Staff analysis of data from the Kentucky Department of Education.

Table 2.5 shows the amount of LAVEC funding by program category.

Funding By Program Category. Table 2.5 shows the amount of LAVEC funding by program category. During the 2018 school year, Category 3 programs accounted for approximately $7 million of the total funding provided to LAVECs, with Category 2 programs accounting for approximately $4.8 million. Category 3 programs received 59.1 percent of all LAVEC funds, and Category 2 programs received 40.9 percent of all LAVEC funds.

Table 2.5
LAVEC Funding By Program Category
School Year 2018

LAVEC Funding Category	Funding	Percent
Category 2	$4,840,928	40.9%
Category 3	7,002,572	59.1
Total	$11,843,500	100 %

Source: Staff analysis of data from the Kentucky Department of Education.

KDE distributes funds to LAVECs using a semester-lag formula. KDE stated that this decision was made in order to alleviate the impact of FTE fluctuations at LAVECs. This methodology does not comply with 705 KAR 2:140, sec. 5.

Timing Of LAVEC Funding Distribution. KDE distributes funds to LAVECs using a semester-lag formula. KDE stated that this decision was made in order to alleviate the impact of FTE fluctuations at LAVECs. Half of the funding for a given school year is based on the FTE counts for the final semester of the prior school year, and the remainder is based on the FTE counts during the first semester of the current school year. This methodology does not comply with 705 KAR 2:140, sec. 5, which requires final allocations of LAVEC funding to be determined on January 1, based on current-year FTE enrollment with adjustments made for new programs.

Recommendation 2.6

The Kentucky Department of Education should determine final allocations of local area vocational education center funding by January 1 of each year in accordance with 705 KAR 2:140, sec. 5(2), or the Kentucky Board of Education

should amend 705 KAR 2:140, sec. 5(2) to reflect current practices.

Fees Charged For CTE

Superintendents were asked to provide a fee schedule by program for classes associated with CTE.

Superintendents were asked to provide a fee schedule by program for classes associated with CTE.[q] The program areas included in the survey question were Agriculture, Business and Marketing, Construction Technology, Engineering Technology, Family and Consumer Sciences, Health Science, Information Technology, Manufacturing Technology, Media Arts, Transportation, and "Other" areas.

Table 2.6
Reported CTE Class Fees By Program Area, 2019

Program Area	Average Fee	Districts With Reported Fees	Number Of LAVECs With Reported Fees
Agriculture	$14.13	6	1
Business and Marketing	14.17	3	1
Construction Technology	20.00	1	0
Engineering Technology	23.00	5	2
Family and Consumer Sciences	26.35	11	4
Health Science	42.32	5	2
Information Technology	14.50	2	1
Manufacturing Technology	43.17	2	2
Media Arts	20.83	3	2
Transportation	0.00	0	0
Other	76.00	3	2

Note: A total of 19 districts reported charging class fees.
Source: OEA survey.

KDE shared the estimated FTE by category and estimated funding needed for a list of schools and pathways that have requested to be included in the LAVEC-funded group for the 2020 school year. Table 2.7 shows the estimated FTE counts and estimated funding needed for these unfunded schools and pathways.

Unfunded LAVEC Schools And Pathways. KDE shared the estimated FTE by category and estimated funding needed for a list of six schools that have requested to be included in the LAVEC-funded group for the 2020 school year. KDE also shared the same data for unfunded pathways in existing LAVECs. Table 2.7 shows the estimated FTE counts and estimated funding needed for these unfunded schools and pathways. These data show that, for these programs to be funded, LAVEC funding would have to increase by more than $2.7 million annually.[r]

[q] ATCs do not charge course fees.
[r] The funding estimates for unfunded LAVECs do not include Taylor County or the Ignite Academy.

Table 2.7
Total Unfunded LAVEC Schools And Pathways
School Year 2020

Type	Category 2 FTE	Category 3 FTE	Total Weighted FTE	Funding Per FTE	Funding Needed
Unfunded schools	257.4	664.6	922.0	$1,450.60	$1,337,537
Unfunded pathways	538.5	415.3	953.8	1,450.60	1,383,550
Total	795.9	1079.9	1875.8	$1,450.60	$2,721,086

Note: Figures may not sum due to rounding. There were two more schools included on the list of unfunded schools during a presentation by KDE at the Kentucky Career and Technical Education Task Force meeting on August 21, 2019. The FTE and funding needed for these schools was not provided in the data shared by KDE.
Source: Staff analysis of data from the Kentucky Department of Education.

Recommendation 2.7

The Kentucky Department of Education should fund new career and technical education programs at existing local area vocational education centers in accordance with 705 KAR 2:140, sec. 5(2), or the Kentucky Board of Education should amend 705 KAR 2:140, sec. 5(2) to reflect current practices.

In June 2015, Estill County had its district facility plan for constructing an area CTE facility approved in compliance with 702 KAR 4:180 and 702 KAR 4:160. The estimated cost of construction was approximately $9.2 million at the time. The Estill County Board of Education (BOE) was included in the second round of awardees for the Work Ready Skills Initiative (WRSI) grant established by executive order in 2016.

Unfunded Estill County CTE Project. In June 2015, Estill County had its district facility plan for constructing an area CTE facility approved in compliance with 702 KAR 4:180 and 702 KAR 4:160.[30] The estimated cost of construction was approximately $9.2 million at the time. The Estill County Board of Education (BOE) was included in the second round of awardees for the Work Ready Skills Initiative (WRSI) grant established by executive order in 2016, and it was the recipient of $5.7 million of those funds in September 2017 for the area CTE center project. The supporting documentation pertaining to the second-round awardees stated that the Estill County BOE would be responsible for securing $4.8 million in matching funds for the facility that would train an estimated 750 students and 200 adults in the following employment sectors: advanced manufacturing; health care; information technology and business services; construction trades; and transportation and logistics.[31]

Districts are required to get KDE approval before starting any construction projects. Estill County initiated the approval process by submitting a BG-1 project application in June 2018.

Districts are required to get KDE approval before starting any construction projects. Estill County initiated the approval process by submitting a BG-1 project application in June 2018, and the KDE approved BG-1 in March 2019 with the following contingencies:

- Operating funds for the project are secured by April 2020, through legislative act or otherwise. Also the Estill County BOE general fund balance must be able to support the new facility.

- The $5.7 million in WRSI grant funds are in full effect under the stipulation that Estill County BOE remains in compliance with the agreement with the Cabinet for Education and Workforce Development for use of these funds.[32]

The BG-1 approval document states that if the Estill County BOE does not comply with contingencies for the grant, then KDE may rescind approval of the project and take appropriate action. The funding needed to operate the CTE center is approximately $610,000 per year.

The BG-1 approval document states that if the Estill County BOE does not comply with these contingencies, then KDE may rescind approval of the project and take appropriate action. The KDE approval allowed the district to break ground and start construction even though the district has to get operating funds prior to April 2020 and KDE says it can rescind the approval after the building is under construction. The funding needed to operate the CTE center is approximately $610,000 per year. Estill County ended FY 2018 with a fund balance of a little more than $2 million.

KDE did not include the Estill County CTE facility in its 2020-2022 budget request, and the Estill County BOE has not requested to be included on the unfunded LAVEC schools list.

KDE did not include the Estill County CTE facility in its 2020-2022 budget request, and the Estill County BOE has not requested to be included on the unfunded LAVEC schools list. According to KDE staff, the Estill County BOE wants the new facility to be added to the list of funded ATCs, but KDE does not have the authority to approve the addition of ATC funding, as it does for LAVEC funding.[33]

The Estill County school district had a groundbreaking ceremony for the facility June 14, 2019.

The Estill County school district had a groundbreaking ceremony for the facility June 14, 2019.[34]

The Estill County BOE has secured enough funding to construct the new facility, but it will have to await action from the 2020 legislative session to determine whether it will receive operational funding.

In July 2019, the federal Economic Development Administration announced it would award the Estill County BOE a $4 million grant to help build what is being referred to as an area technology center.[35] The combination of these funds with the WRSI grant funds and other local funding sources suggests that the Estill County BOE has secured funding to cover estimated construction costs, but it will have to await action from the 2020 legislative session to determine whether it will receive operational funding.

Work Ready Skills Initiative

The Work Ready Skills Initiative was created in August 2016 with the goal of creating and sustaining partnerships between local employers, educators, and communities to ensure that skills learned in CTE by students and adults meet demands of employers in priority sectors.

The Work Ready Skills Initiative was created by executive order in August 2016 with the goal of creating and sustaining partnerships between local employers, educators, and communities in order to ensure that the skills learned in CTE by students and adults meet the demands of employers in priority sectors in Kentucky.[s] The

[s] The priority sectors listed from the Kentucky Work Ready Skills Initiative Webinar were advanced manufacturing; health science; transportation; business and information technology; and construction.

initiative was intended to upgrade CTE facilities and equipment for select projects that included the participation of a local employer, an education agency, and other local and regional partners.[36]

The General Assembly funded the initiative and awarded $100 million in state bonds distributed to two rounds of applicants.

The General Assembly funded the initiative and awarded $100 million in state bonds distributed to two rounds of applicants.[t] The first round of funding totaled approximately $66 million and was distributed to 25 recipients that included select ATCs, LAVECs, local school districts, and KCTCS schools. The second round of funding totaled $33 million and was distributed to 15 applicants.[37]

The WRSI Advisory Committee provides the administrative function for the initiative.

The WRSI Advisory Committee provides the administrative function for the initiative. The committee includes the secretary of the Education and Workforce Development Cabinet, the secretary of the Labor Cabinet, the chair of the Kentucky Workforce Innovation Board, three employers nominated by the governor, one member nominated by the speaker of the Kentucky House of Representatives, and one nominated by the president of the Kentucky Senate.[38]

New Skills For Youth Kentucky

KDE received a $100,000 grant as part of the New Skills for Youth Initiative (NSFY) funded by J.P. Morgan Chase & Co. These funds represented the first phase of NSFY funding received by KDE.

In May 2016, KDE received a $100,000 grant as part of the New Skills for Youth Initiative (NSFY) funded by J.P. Morgan Chase & Co. These funds represented the first phase of NSFY funding received by KDE. The application for these funds centered on six career readiness objectives developed by KDE.[39]

The second phase of NSFY funding totaled $2 million and was received by KDE in January 2017. These funds were packaged as planning grants and have been distributed through a competitive grant process to three cohorts.

The second phase of NSFY funding totaled $2 million and was received by KDE in January 2017. These funds were packaged as planning grants and have been distributed through a competitive grant process to three cohorts. The funds are targeted to incentivize the opportunity to develop regional career academies. As of May 2019, there were 11 planning grant recipients across the three cohorts. Each of the recipients for these planning grants was eligible to receive up to $115,000.

[t] According to 2018 district-level annual financial reports, recipient school districts coded an additional $8.5 million of these funds.

Chapter 3

The Cost Of Career And Technical Education

Introduction

Through the Kentucky Career and Technical Education Task Force, policy makers in Kentucky are considering how career and technical centers should be structured and funded. Kentucky funds CTE classes only if a LAVEC or state-operated ATC offers five or more CTE career pathways.

Through the Kentucky Career and Technical Education Task Force, policy makers in Kentucky are considering how career and technical centers should be structured and funded. To better understand how CTE is structured, one must understand the total cost for CTE and how expenditures are determined. Kentucky funds CTE classes only if a LAVEC or state-operated ATC offers five or more CTE career pathways. In addition, state funding for LAVECs and state-operated ATCs indicates considerable variance between centers.

Districts with LAVECs pay half the cost to operate these programs from local funding sources, while the sample of districts that house state-operated ATCs contribute little to nothing in terms of local funding for operations.

This chapter shows that a sample of districts with LAVECs pay half the cost to operate these programs from local funding sources, while the sample of districts that house state-operated ATCs contribute little to nothing in terms of local funding for operations. This chapter also highlights the differences between ATCs in terms of per-pupil expenditures.

Inequities exist in CTE salaries paid by districts and the state. For beginning teachers, the majority of districts paid their CTE teachers less than beginning ATC teachers. For teachers with 20 years of experience most districts paid their CTE teachers more than similarly experienced teachers at ATCs.

Inequities also exist in CTE salaries paid by districts and the state. There are only two districts that pay Rank III beginning CTE teachers more than what they would make working at an ATC. Teachers with 20 years of experience make more working for a district than they would in an ATC in 117 districts. There are differences between salaries of teachers in districts with ATCs and salaries of ATC teachers. For example, a beginning CTE teacher who is hired in Boone County will make $3,000 more per year working at the ATC than as a CTE teacher employed by Boone County. However, teachers with 20 years of experience make $10,000 per year more working at Boone County than teachers working at the ATC.

This chapter compares the FY 2018 expenses of two ATCs to those of two comparable LAVECs. This chapter also reports on the total number of students enrolled at each of the centers, calculates per-pupil expenses by revenue funding streams, and calculates spending per student FTE.

As stated in Chapter 2, Kentucky has state-operated career and technical centers called ATCs, and districts have locally operated career and technical education centers called LAVECs, which are funded differently. This chapter compares the FY 2018 expenses of two ATCs to those of two comparable LAVECs. This chapter also reports on the total number of students enrolled at each of the centers, calculates per-pupil expenses by revenue funding streams, and calculates spending per student FTE. Because KDE has two different ways of calculating FTE for state-run and locally run

career and technical centers, caution should be used when comparing per-FTE cost between ATCs and LAVECs. In addition, this chapter of the report includes two comparisons of ATC expenditures. One analysis compares the ATCs with the highest and lowest expenditures per FTE, and the other compares two multidistrict ATCs with satellite programs.[a]

This chapter also compares the cost of educating a student at an ATC to the cost of a student attending a LAVEC.

This chapter also compares the cost of educating a student at an ATC to the cost of a student attending a LAVEC. The analysis shows that few ATC centers have special education teachers or instructional aides in their buildings compared to LAVECs.

The chapter examines the operational costs associated with opening a new career and technical program, as well as career and technical facilities with unmet construction need.

In addition the chapter examines the operational costs associated with opening a new career and technical program, as well as career and technical facilities with unmet construction need. Other topics of analysis in Chapter 3 include dual credit cost, CTE class sizes compared to academic class sizes, and the cost of certifications for CTE classes.

CTE Expenditures

When reviewing expenditures on district AFRs and the number of CTE teachers on professional staffing data reports, OEA staff found several coding errors that make it impossible to report the total cost and number of teachers for CTE at the district level.

In districts, the board allocates state, local, and federal dollars to CTE schools and programs as part of its budgeting process for all schools. When reviewing expenditures on district AFRs and the number of CTE teachers on PSDs, OEA staff found several coding errors that make it impossible to report the total cost and number of teachers for CTE at the district level. Many of the errors include KDE not providing adequate guidance to districts. The errors found in the data include the following:

- The KDE chart of accounts requirements for capturing ROTC program costs are different from other CTE costs.
- The KDE chart of accounts requirements for capturing SBDM program costs mask the total funding for CTE paid from district-level funds.
- KDE is not reporting the revenues and expenditures for ATCs on the finance survey (F-33) to the National Center for Education Statistics.
- KDE and districts are not properly reporting all CTE teachers.
- Districts are inconsistent in reporting expenditures at school location codes on AFRs and PSDs.
- Districts are not coding CTE expenditures correctly to the 300 program series on AFRs.

[a] Some ATCs have satellite programs that assign CTE teachers to schools in feeder districts. This arrangement increases ATC enrollment and saves on transportation costs.

This chapter focuses on how much was spent in FY 2018 on ATCs and provides detailed comparisons between ATCs, and between a sample of ATCs and districts receiving LAVEC funding for CTE.

A detailed explanation of these coding issues can be found in Appendix D. Because of these discrepancies, this chapter focuses on how much was spent in FY 2018 on ATCs, and provides detailed comparisons between ATCs, and between a sample of ATCs and districts receiving LAVEC funding for CTE.

Recommendation 3.1

The Kentucky Department of Education (KDE) should review the chart of accounts and change how expenditures paid by ROTC, school-based decision-making councils, and school boards are captured so that all schools are reporting career and technical education expenditures to program series of 300. In addition, KDE should work with district staff to ensure that all career and technical education expenditures are coded correctly on the annual financial reports.

Recommendation 3.2

The Kentucky Department of Education (KDE) should ensure that districts' A2 and area technology center (ATC) career and technical education school expenditures are coded to a KDE A2 or ATC location code or a district-assigned school number.

Recommendation 3.3

The Kentucky Department of Education (KDE) should work with districts to ensure that all career and technical education (CTE) teaching and administrative staff are coded correctly on the professional and classified staff data reports. In addition, when reporting the total number of CTE staff to the United States Department of Education, KDE should include the total number of CTE teachers, administrators, and other staff working at state-run area technology centers.

Area Technology Center Expenditures

Table 3.1 includes data from expense reports submitted to OEA by KDE. These data represent total expenditures for all ATCs during the 2018 school year.

Table 3.1 includes data from expense reports submitted to OEA by KDE. These data represent total expenditures for all ATCs during the 2018 school year. The SEEK portion accounts for the state-level funding provided by the General Assembly according to the biennial budgets for ATCs. As seen in Chapter 2, the total budgeted SEEK allocation has not changed much since the merger of the Office of Career and Technical Education with KDE. Overall, the SEEK allocation accounted for approximately 40 percent of total ATC expenditures in 2018.

Table 3.1
Area Technology Center Expenditures By Revenue Source By Student And FTE Counts
School Year 2018

Category	Total Expenses	General Fund	SEEK	Perkins	Private Donations	Agency Receipts
Expenses	$42,755,213	$24,246,889	$16,978,448	$1,174,067	$124,630	$231,178
Per student	1,918	1,088	762	53	6	10
Per FTE	7,402	4,198	2,939	203	22	40
Percentage		56.71%	39.71%	2.75%	0.29%	0.54%

Note: FTE = full-time equivalent student. The school year 2018 ATC student count was 22,291, and the total number of FTE was 5,776.26. The 20 percent SEEK distribution to districts that house the ATCs is not included in the SEEK amount listed in this table because these expenditures were not included in the expenditures reports submitted by KDE. Figures are rounded for per-student and per-FTE amounts.
Source: Data provided by the Kentucky Department of Education.

The SEEK revenue allocation to ATCs is distributed by an FTE formula as described in 702 KAR 1:130. The revenue per FTE student attending an ATC is standardized across these centers, but an analysis of expenditures using actual student counts shows there was considerable variation in SEEK expenditures per student.

SEEK. The SEEK revenue allocation to ATCs is distributed by an FTE formula as described in 702 KAR 1:130. The revenue per FTE student attending an ATC is standardized across these centers, but an analysis of expenditures using actual student counts shows there was considerable variation in SEEK expenditures per student. SEEK expenditures per student ranged from approximately $270 to more than $2,300. Average SEEK expenditures per student were approximately $762 in 2018. Table 3.2 shows that there were 25 ATCs with per-student SEEK expenditures above the state average. SEEK expenditures at ATCs that were above the state average were an average of $1,042 per student. At the ATCs that had SEEK expenditures below the state average, the per-pupil SEEK expenditures averaged $582 per student.

Table 3.2
Per-Pupil SEEK Expenditures By ATC Funding Level
School Year 2018

SEEK Expenditure Level	Total SEEK Expenditures	Number Of Students	Number Of ATCs	Per-Pupil SEEK Expenditure Average
Above state average	$9,080,655	8,718	25	$1,042
Below state average	7,897,793	13,573	28	582

Note: SEEK = Support Education Excellence in Kentucky; ATC = area technology center. Average SEEK expenditures per student were approximately $762 in school year 2018.
Source OEA analysis of data from the Kentucky Department of Education.

Approximately 57 percent of school year 2018 ATC expenditures were paid from the KDE general fund. The general fund expenditures for ATCs represent supplemental funding paid by KDE.

General Fund. Approximately 57 percent of school year 2018 ATC expenditures were paid from the KDE general fund. The general fund expenditures for ATCs represent supplemental funding paid by KDE. This amount of funding closely matches the general fund revenue provided by the Education and Workforce Development Cabinet to ATCs prior to the merger of KDE and OCTE.

Expenditures paid with KDE general fund dollars are not formula driven and thus were not distributed according to the overall student counts or FTE counts for the individual ATCs. These funds are distributed at the full discretion of KDE.

Expenditures paid with KDE general fund dollars are not formula driven and thus were not distributed according to the overall student counts or FTE counts for the individual ATCs. These funds are distributed at the full discretion of KDE, and there is no evidence that KDE publicly reports these expenditures at the ATC level. Staff analysis concluded that expenditures paid by KDE from the general fund were primarily used for salaries and benefits for ATC teachers and administrators during the 2018 school year.

Student counts were used to compute a per-student amount of KDE general fund dollars used by each ATC. This analysis shows that the distribution of these funds is not equitable because of the considerable amount of variation in per-student amounts across the ATCs.

For this report, student counts were used to compute a per-student amount of KDE general fund dollars used by each ATC. This analysis shows that the distribution of these funds is not equitable because of the considerable amount of variation in per-student amounts across the ATCs. The ATC expenditures paid by the KDE general fund range from $309 to $3,100 per student. The average across all 53 ATCs was $1,087 per student. A total of 31 ATCs had per-student amounts above the average; the average amount for these ATCs was approximately $1,427 per student. The mean general fund expenditure level for the remaining 22 ATCs was approximately $805 per student.

Table 3.3
Per-Pupil General Fund Expenditures By ATC Funding Level
School Year 2018

General Fund Expenditure Level	Total General Fund Expenditures	Number Of Students	Number Of ATCs	Per-Pupil General Fund Expenditures
Above state average	$14,462,771	10,137	31	$1,427
Below state average	9,784,118	12,154	22	805

Note: ATC = area technology center. The average general expenditure level across all 53 ATCs was $1,087 per student in school year 2018.
Source OEA analysis of data from the Kentucky Department of Education.

Federal dollars from Carl D. Perkins funds accounted for less than 3 percent of total ATC expenditures in school year 2018.

Federal. Federal dollars from Carl D. Perkins funds accounted for less than 3 percent of total ATC expenditures in school year 2018. Per-student Perkins funds expenditures were approximately $53 per student across all ATCs in that year.

The remaining 1 percent of ATC expenditures were paid for through private donations and agency receipts.

Other Expenditures. The remainder of ATC expenditures were paid for through private donations and agency receipts. Expenditures from these sources accounted for less than 1 percent of total ATC expenditures in school year 2018.

Recommendation 3.4

The Kentucky Board of Education should promulgate regulations concerning the distribution of area technology center (ATC) funding. These regulations should address both

general fund and Support Education Excellence in Kentucky funding for ATCs.

Highest Per-Pupil FTE ATC Compared To Lowest Per-Pupil FTE ATC

Table 3.4 compares the expenses at the Meade County ATC with the expenses at the Martin County ATC by funding source.

The Martin County ATC had the highest expenditures per FTE during the 2018 school year, and the Meade County ATC had the lowest. Table 3.4 compares the expenses at the Meade County ATC with the expenses at the Martin County ATC by funding source. Agency funds include expenditures from the ATC from revenue generated internally.[b]

KDE allocates the KY Tech share of Secondary Vocational Funds to ATCs by FTE. Total state expenditures per FTE at the Martin County ATC ($11,171) were $7,026 higher than those for the Meade County ATC ($4,145).

KDE allocates the KY Tech share of Secondary Vocational Funds to ATCs by FTE. Total state expenditures per FTE at the Martin County ATC ($11,171) were $7,026 higher than those for the Meade County ATC ($4,145); however, when computed per student, the Martin County ATC spends $1,180 more per pupil from state sources than the Meade County ATC.

OEA found that KDE also counted students who attend local CTE programs housed at the Meade County ATC. There are a total of nine ATCs that have at least one locally operated center housed at the ATC.

There were 288 students who attended the Martin County ATC in school year 2018. This equated to 60.12 FTE students. There were 634 students who attended the Meade County ATC in school year 2018. This equated to 176.28 FTE students. Upon further examination, OEA found that KDE also counted students who attend local CTE programs housed at the Meade County ATC. There are a total of nine ATCs that house at least one locally operated center. KDE is also paying for a math teacher housed in the Martin County ATC. Martin County pays $10,000 and KDE pays $47,000 of the salary for this teacher. This increased Martin County's per-pupil expenditures. There were other non-CTE teachers being paid out of the state CTE funding before CTE was moved to KDE. However, these teachers had continuing status, and as they retired or moved into other positions, KDE has replaced them. By including the district staff working at the Meade County ATC, more revenue was allocated for the 20 percent of funds that is transferred to the district to spend on retirement of debt service and building maintenance. This finding will be described later in the chapter.

[b] Sources of internally generated income could be a professional development offering after school hours or an ATC auto mechanics program working on outside vehicles for a fee.

Table 3.4
Martin County ATC And Meade County ATC Expenditures By Funding Source
School Year 2018

ATC	FTE Count	Student Count	Funding Source	Total Expenditures	Expenditures Per FTE	Expenditures Per Student
Martin County	60.12	288	State	$671,604	$11,171	$2,332
			Federal	20,928	348	73
			Agency	0	0	0
			Total	692,532	11,519	2,405
Meade County	176.28	634	State	730,649	4,145	1,152
			Federal	17,073	1,497	27
			Agency	173	1	0
			Total	747,895	5,643	1,179

Source: OEA staff analysis of data from the Kentucky Department of Education.

Expenditures for staff salaries and benefits for ATCs are calculated and deducted from the total state funding. Then all operational expenditures are deducted. Any remaining funds are distributed based on what KDE determines as needs for other operational expenses for each ATC.

In discussions with KDE staff on how state funds are distributed to the ATCs, it was determined that expenditures for staff salaries and benefits are first calculated and deducted from the total state funding. Then all operational expenditures are deducted. Any remaining funds are distributed based on what KDE determines as needs for other operational expenses for each ATC. KDE does not make ATC principals submit an annual needs report to determine which ATCs have the greatest operational needs.

ATC Satellite Programs

In some instances, instead of transporting students to an ATC, KDE will approve a satellite program at a district or other off-campus location, such as a hospital or community college campus. ATC satellite campuses serve only students who attend districts that are served by ATCs. These satellite campuses reduce transportation costs and improve student access to in-demand CTE programs. The state does not fund these satellite programs for LAVECs.

Some ATCs serve only the students in their district and others also serve students from neighboring counties. In some instances, instead of transporting students to an ATC, KDE will approve a satellite program at a district or other off-campus location, such as a hospital or community college campus. A satellite program places an ATC teacher in a feeder district to teach courses for a specific ATC program. Appendix E shows that there are 16 ATCs that use a total of 26 satellite teachers. ATC satellite campuses serve only students who attend districts that are served by ATCs. These satellite campuses reduce transportation costs and improve student access to in-demand CTE programs. The ATC satellite campuses also allow certain districts to increase their course offerings to students. KDE pays the cost of the satellite program. An equity issue may arise as these fully funded satellite campuses are available only to ATC districts. If a LAVEC district were to have a need for a CTE program, under the current funding mechanism, the LAVEC district would have to fund that program using district funds.

The Carroll County ATC and the Morgan County ATC both have satellite campuses. This analysis compares the expenditures paid by KDE for each.

Comparison Of ATC Funding At Two Districts With Satellite Campuses. The Carroll County ATC serves students from Carroll County, Gallatin County, Henry County, Owen County, and Trimble County High Schools. The Morgan County ATC has students attending from high schools in Elliott County, Menifee County, Morgan County, and Rowan County.

The Carroll County ATC has a health sciences satellite program at Owen County High School, as well as an information technology satellite at Henry County High School. The Morgan County ATC has a health sciences satellite program at Rowan County Senior High School.

Owen County has a satellite program, and Owen County students attend the Carroll County ATC facility. There were a large number of students in Owen County interested in taking a health sciences pathway, but there were not enough slots for health sciences in the Carroll County ATC for Owen County students. Because of this need, KDE placed a health sciences CTE teacher in Owen County High School. This allowed Owen County students to enroll in health science pathways. Henry County has a Carroll County ATC satellite program in information technology. Rowan County has a Morgan County ATC satellite program in health sciences. Table 3.5 describes the satellite ATC campuses of the Carroll County and Morgan County ATCs.

Table 3.5
Carroll County ATC And Morgan County ATC Satellite Programs
FY 2018

District	Program	Estimated Enrollment	FTE
Carroll County	Health Sciences – Owen	81	11.14
Carroll County	Information Technology – Henry	42	17.60
Morgan County	Health Sciences – Rowan	116	19.02

Note: FTE = full-time equivalent student. Estimated enrollment is based on the fall 2019 school year.
Source: OEA analysis of data from the Kentucky Department of Education.

Table 3.6 compares the cost of two ATCs with satellite programs that have students from outside the district. Despite the similarities of the two programs, there are still disparities in their funding.

Table 3.6 compares the cost of two ATCs with satellite programs that have students from outside the district. Despite the similarities of the two programs, there are still disparities in their funding. KDE spends $8,957 per FTE for the Morgan County ATC and $5,251 per FTE for the Carroll County ATC. When comparing the Morgan County and Carroll County ATCs on expenditures per student rather than per FTE, they are more similar; however, KDE is spending 14 percent ($237) more per student at Morgan County than at Carroll County.

Table 3.6
Carroll County ATC And Morgan County ATC Expenditures By Funding Source
FY 2018

ATC	FTE Count	Student Count	Funding Source	Total Expenditures	Expenditures Per FTE	Expenditures Per Student
Morgan County	96.6	467	State	$865,257	$8,957	$1,853
			Federal	24,175	250	52
			Agency	0	0	0
			Total	889,432	9,207	1,905
Carroll County	161.598	531	State	848,491	5,251	1,598
			Federal	32,739	203	62
			Agency	4,392	27	8
			Total	$885,622	$5,481	$1,668

Note: ATC = area technology center; FTE = full-time equivalent student.
Source: OEA staff analysis of data from the Kentucky Department of Education.

The discrepancy in the per-pupil and per-FTE spending at the Carroll County and Morgan County ATCs may be due to the higher cost of programs at the Morgan County ATC.

Differences In ATC Funding Between ATCs. KDE funding for LAVECs takes into account the differences between high-cost and low-cost programs. KDE funding for ATCs is distributed solely based on FTE hours and does not take into account the differences between high-cost and low-cost programs. The discrepancy in the per-pupil and per-FTE spending at the Carroll County and Morgan County ATCs may be due to the higher cost of programs at the Morgan County ATC.

ATC Expenditures Compared To CTC Expenditures

For this analysis, staff picked two ATCs and two LAVECs that offered a similar distribution of higher-cost and lower-cost programs. This analysis shows that LAVECS are receiving less state funding per pupil than ATC centers.

For this analysis, staff picked two ATCs and two LAVECs that offered a similar distribution of higher-cost and lower-cost programs. This analysis shows that LAVECS are receiving less state funding per pupil than ATC centers. In addition, ATC centers are fully funded by the state, whereas districts that have a LAVEC have to support their program using district general fund dollars. These examples show that the district general fund dollars are approximately $1 million.[c]

Per-pupil expenditures at the Marshall County LAVEC and the Lincoln County ATC were compared.

Marshall County Vs. Lincoln County. Although overall per-pupil expenditures were higher at the Marshall County LAVEC, Marshall County spent approximately $900,000 from the district's

[c] These general fund expenditures are conservative. Both of the LAVEC districts pay for the electric bills at the A2 schools in the example, and these utility expenditures are coded to the district rather than to the LAVEC building. The ATC utility costs are paid with state dollars, even though the district owns these buildings. The electricity cost is approximately $40,000 a year at each building.

general fund and received a one-time WRSI grant.[d] As shown in Table 3.7, the Marshall County LAVEC spent $595 per pupil in 2018 from state LAVEC funding and KDE Teachers' Retirement System (TRS) and health insurance on-behalf amounts. The Lincoln County ATC spent the KDE general fund, KDE SEEK fund, and KDE 20 percent vocational funds in the amount of $2,276 per pupil. Marshall County LAVEC received $1,681 per pupil less from state funds than the Lincoln County ATC.

Marshall County also sends a special education teacher and instructional assistant to the Marshall County LAVEC, but there are no expenses coded to the Lincoln County ATC for special education from the KDE expenditures reports, or among district expenditures on AFRs.

Marshall County also sends a special education teacher and instructional assistant to the Marshall County LAVEC to collaborate with the regular teacher and ensure that the individualized education plans are being followed and that accommodations are provided in the CTE classrooms. There are no expenses coded to the Lincoln County ATC center for special education from the KDE expenditures reports, or among district expenditures on AFRs.

Table 3.7
Marshall County CTC And Lincoln County ATC Expenditures
By Fund, Per Pupil And Per FTE
School Year 2018

	Marshall County LAVEC			Lincoln County ATC		
Fund	**Expenditures**	**Per Pupil**	**Per FTE**	**Expenditures**	**Per Pupil**	**Per FTE**
KDE general fund	$0	$0	$0	$425,134	$1,535	$7,588
KDE SEEK	0	0	0	163,772	591	2,923
KDE 20% vocational	0	0	0	41,685	150	744
LAVEC grant	92,562	162	2,762	0	0	0
KDE pays on-behalf	247,705	433	7,390	0	0	0
District general fund	920,925	1,610	27,476	0	0	0
Work ready skills	326,999	572	9,756	0	0	0
Construction fund	22,150	39	661	0	0	0
Perkins	15,900	28	474	16,272	59	290
Activity/agency funds	2,143	4	64	740	3	13
IDEA B	81	1	2	0	0	0
Total	$1,628,467	$2,847	$48,585	$647,603	$2,338	$11,559

Note: CTC = local career and technical center; ATC = area technology center; FTE = full-time equivalent student. The Marshall County LAVEC served 572 students, which equated to 33.52 FTE. The Lincoln County ATC served 277 students, which equated to 56.03 FTE. Figures may not sum due to rounding.
Source: OEA analysis of data from the Kentucky Department of Education and phone conversations with districts.

[d] With the WRSI grant, the district was able to purchase six new beds, two electrocardiogram mannequins, an infant mannequin, a catheter model, and other supplies for health science classes. The LAVEC also purchased welding equipment, a forklift, a storage building, shop tools, and dual-axle trailers.

Table 3.8 is another comparison of expenditures at a LAVEC and an ATC broken out by funding source.

Fayette County Vs. Madison County. Table 3.8 is another comparison of expenditures at a LAVEC and an ATC broken out by funding source. In this example, the Southside LAVEC in Fayette County received state funding from a LAVEC grant, and KDE paid for the TRS and insurance for these teachers. This amounted to the state picking up $915 per pupil from state funds. However, the Madison County ATC received the KDE general fund dollars, KDE SEEK funds, and KDE 20 percent vocational funds. State funds per pupil in Madison County accounted for $1,832 worth of expenditures in 2018—a difference of $917 per pupil.

Fayette County spent approximately $1.3 million additionally out of its general fund dollars, whereas Madison County spent approximately $1,500 from its general fund on the ATC.

Fayette County spent approximately $1.3 million additionally out of its general fund dollars, whereas Madison County spent approximately $1,500 from its general fund on the ATC. In addition, Fayette County is also providing special education instruction at the LAVEC, whereas the Madison County ATC has no expenditures coded to special education. Only 6 of the 53 ATC centers have special education expenditures coded on AFRs in the 2018 school year.

Table 3.8
Fayette County Southside CTC And Madison County ATC
Expenditures By Fund, Per Pupil And Per FTE
School Year 2018

	Fayette County LAVEC			Madison County ATC		
Fund	**Expenditures**	**Per Pupil**	**Per FTE**	**Expenditures**	**Per Pupil**	**Per FTE**
KDE general fund	$0	$0	$0	$580,805	$935	$3,533
KDE SEEK	0	0	0	452,750	729	2,754
KDE 20% vocational	0	0	0	104,434	168	635
LAVEC grant	371,655	536	1,443	0	0	0
KDE pays on-behalf	262,841	379	1,021	0	0	0
District general fund	1,293,406	1,864	5,023	1,450	2	9
Perkins	19,354	28	75	46,687	75	284
Activity/agency funds	0	0	0	11,177	18	68
Private donations	0	0	0	2,930	5	18
KTIP/KETS/PD	3,938	6	15	0	0	0
Total	$1,951,194	$2,813	$7,577	$1,200,233	$1,932	$7,301

Note: The KDE 20 percent vocational funds match what KDE distributed to the district instead of what was recorded on the AFR. The Southside CTC served 694 students, which equated to 257.50 FTE. The Madison County ATC served 621 students, which equated to 164.39 FTE.
Source: OEA analysis of data from the Kentucky Department of Education and phone conversations with districts.

ATC Districts' 20 Percent Vocational SEEK Expenditures

School facilities are funded based on fund 310 (capital outlay) and fund 320 (Facilities Support Program of Kentucky). Districts also receive facility funding based on how much the district has in facility needs.

School facilities are funded based on fund 310 (capital outlay) and fund 320 (Facilities Support Program of Kentucky).[e] [f] Districts also receive facility funding based on how much the district has in facility needs; this is referred to as the School Facilities Construction Commission funds.

A district that owns the ATC building in its county also receives 20 percent of the SEEK vocational funds to be used for building maintenance and retirement of debt service on that building in accordance with 702 KAR 1:130. This funding is not given to LAVEC districts.

A district that owns the ATC building in its county also receives 20 percent of the SEEK vocational funds to be used for building maintenance and retirement of debt service on that building in accordance with 702 KAR 1:130.[g] This funding is not given to LAVEC districts. Approximately $643,162 (25 percent) of the $2.6 million of the 2018 ATC 20 percent vocational SEEK expenditures were for SBDM and non-SBDM instructional expenses—which are not permitted by 702 KAR 1:130. Some of these noncompliant expenditures included salaries, telephone expenses, travel, and field trips.[h]

Career And Technical Facilities

Some districts have built new centers or remodeled or renovated the buildings, while others have never had any major remodeling since the building was built.

Some districts have built new centers or remodeled or renovated the buildings, while others have never had any major remodeling since the building was built. The oldest ATC building was built in 1960 in Pike County (Millard ATC). However, it was remodeled in 1979. In addition to this building, Pike County has the oldest ATC that has never had any major renovations or a new building—Belfry ATC—which was built in 1962. Appendix F lists the name of each ATC building, the year it was built, and when any major renovations or new construction were last completed.

[e] For fund 310, each district receives $100 per adjusted average daily attendance.
[f] For fund 320, districts put at least a 5-cent equivalent tax per $100 of property assessed, which is equalized by state funds at 150 percent of statewide average per-pupil assessments. Fund 320 also includes the extra funded nickels, such as growth nickel, second growth nickel, recallable, etc.
[g] This regulation was last amended in 1991 when ATCs were under Workforce Development Cabinet and not under KDE.
[h] As discussed earlier in this chapter, KDE is not only counting the funded students attending the ATCs; they are also including any district-funded students attending the ATC in their FTE counts. In addition, KDE is allowing some districts to carry forward these funds to save up for a large expenditure, such as a new roof. In addition, KDE allowed one district to put a new roof on its ATC out of general fund dollars, and KDE is allowing this district to transfer its ATC vocational funds into the general fund each year until all expenditures are recouped.

HB 303, of the 2016 regular session, provided $4 million to KDE to develop a maintainable database of the condition of K-12 public school buildings. As of the publication of this report, KDE had not finished the facility database.

HB 303, of the 2016 regular session, provided $4 million to KDE to develop a maintainable database of the condition of K-12 public school buildings. This database is to be continuously updated as facility construction, renovation and repair projects are completed. The database also should include the year built, number of additions, gross square footage, school attendance, capacity, and a condition index describing the physical condition of the building. As of the publication of this report, KDE had not finished the facility database.

ATC And CTC Unmet Facility Needs

Districts are required to update their facility plan every 4 years, or the district can request a waiver from KDE to keep the same plan for up to 4 more years if the plan has not changed.

Districts are required to update their facility plan every 4 years, or the district can request a waiver from KDE to keep the same plan for up to 4 more years if the plan has not changed. Pursuant to 702 KAR 4:180, the laws that govern the facility planning process are outlined in KDE's published document called the *School Facilities Planning Manual.*

The facility plan lists any new construction that a district may need, and any updated projects to existing facilities. Table 3.9 shows that the total unmet need for CTE facilities was approximately $394 million as of February 2019.

The facility plan lists any new construction that a district may need, and any updated projects to existing facilities. OEA staff reviewed the approved district facility plans posted on the KDE website from January to February 2019 to calculate the cost for career and technical schools. Table 3.9 shows that 25 districts need new career and technical buildings, and the estimated total cost for these new facilities was $183 million. In addition, another 66 districts have career and technical facility upgrades that total $211 million.

Table 3.9
District Facility Needs For Career And Technical Buildings
February 2019

Type Of Need	Number Of Districts	Total Cost
New construction	25	$182,987,290.34
Existing facility upgrades	66	210,637,232.96
Total		$393,624,523.30

Source Staff analysis of data from the Kentucky Department of Education.

Teacher Salaries

Staffing is more complex for CTE programs than for non-CTE programs because of differences in certification, and the fact that the salary in the teaching job may be lower than what teachers can earn working in industry.

Staffing for CTE programs is a little more complex than staffing for non-CTE programs. Many CTE teachers are not traditionally certified and are either self-employed or working in industry before they enter the teaching profession. The salary in the teaching job may be lower than what they can earn working in industry. Kentucky has alternative certification and emergency

certification pathways for CTE teachers to help address the overall CTE teacher shortages.

Because of the two different types of career and technical centers in K-12 education, KDE pays ATC teachers on a state salary schedule. LAVEC teachers are paid according to districts' salary schedules. As of the 2018 school year, ATC teachers worked at least 190 days and district CTC teachers worked at least 185 days.

Because of the two different types of career and technical centers in K-12 education, ATC teachers are paid by KDE on a state salary schedule. LAVEC teachers are paid according to districts' salary schedules. In 2017, the Kentucky Board of Education amended 780 KAR 3:080 to alter the school calendar for the number of days a teacher and a principal worked in state-operated career and technical centers. It also amended their term from 10.5 months in a school year to 12 months, as in a school district. As of the 2018 school year, ATC teachers worked at least 190 days and district CTC teachers worked at least 185 days.

Table 3.10 compares annual salaries, and Table 3.11 compares salaries by their daily rates.

Table 3.10 compares the annual salary of an ATC teacher to that of a district CTE teacher. Table 3.11 compares teachers' salaries by their daily rates.

A teacher who is hired as a beginning teacher at an ATC is more likely to have a larger salary than a beginning teacher hired in a local district. A CTE teacher with 20 years of experience is more likely to have a higher salary at a local school district than with the state.

Inequities also exist in CTE salaries paid by the district and the state. A teacher who is hired as a beginning teacher at an ATC is more likely to have a larger salary than a beginning teacher hired in a local district. A CTE teacher with 20 years of experience is more likely to have a higher salary at a local school district than with the state. There were 117 districts (68 percent) that paid more than an ATC teacher with a Rank III with 20 years of experience, 140 districts (81 percent) that paid more than a Rank II, and 151 (88 percent) that paid more than a Rank I.

Table 3.10 shows the salary schedules of three districts that also have LAVECs compared to the ATC salaries by rank and years of experience.

Table 3.10 shows the salary schedules of three districts that also have LAVECs. A CTE teacher who is hired in Boone County will make $3,000 more per year working at the ATC instead of Boone County; however, a teacher with 20 years of experience would make $10,000 more per year more working at the Boone County instead of the ATC. The results for Floyd, Fulton, and Pulaski Counties mirror the results for Boone County.

Table 3.10
Salary Schedules By Rank And Years Of Experience
For Selected Districts And KDE ATC Teachers
School Year 2018

	0 Years			20 Years		
Teacher Hiring Authority	**Rank III**	**Rank II**	**Rank I**	**Rank III**	**Rank II**	**Rank I**
KDE ATC	$41,750	$44,840	$47,799	$47,114	$51,825	$57,007
Boone County	39,359	41,983	45,709	57,149	60,985	64,823
Floyd County	37,771	41,930	46,053	49,561	53,736	57,877
Fulton County	35,168	39,278	43,329	46,808	51,041	55,245
Pulaski County	36,628	37,890	41,726	48,574	52,854	57,167

Note: Boone and Floyd County teachers work 187 days a year, and Fulton and Pulaski work 185 days per year. KDE CTE teachers work 190 days per year.
Source: Staff analysis of data from the Kentucky Department of Education.

Because teachers are paid on a daily rate and ATC teachers work 190 days and teachers in school districts work 185 to 187 days, it is important to show the daily rate of pay as well. Table 3.11 compares ATC daily rates with local CTE teachers' daily rates.

Because teachers are paid on a daily rate and ATC teachers work 190 days and teachers in school districts work 185 to 187 days, it is important to show the daily rate of pay as well. Table 3.11 compares ATC daily rates with local CTE teachers' daily rates. When looking at daily rates, a CTC teacher with 0 years of experience will be paid less than a similarly situated ATC teacher. At the selected districts, with the exception of Rank I teachers at Fulton County, teachers with 20 years' experience have a higher daily rate at local districts than at ATCs.

Table 3.11
Salary Schedules By Daily Rate, Rank, And Years Of Experience
For Selected Districts And KDE ATC Teachers
School Year 2018

	0 Years			20 Years		
Employer	**Rank III**	**Rank II**	**Rank I**	**Rank III**	**Rank II**	**Rank I**
KDE ATC	$220	$236	$252	$248	$273	$300
Boone County	210	225	244	306	326	347
Floyd County	202	224	246	265	287	310
Fulton County	190	212	234	253	276	299
Pulaski County	198	205	226	263	86	309

Note: Boone and Floyd County teachers work 187 days a year, and Fulton and Pulaski work 185 days per year. KDE CTE teachers work 190 days per year.
Source: Staff analysis of data from the Kentucky Department of Education.

Class Size

The combination of lower student-to-teacher ratios in some CTE courses and equipment costs can make some CTE courses more costly to administer than traditional academic courses.

High school academic courses usually have higher student-to-teacher ratios than CTE courses. Students attending CTE courses generally have more equipment in their classrooms, and teachers must supervise these students as they are using the equipment. The

combination of those two factors can make some CTE courses more costly to administer than traditional academic programs. One respondent to the OEA superintendent survey stated:

> There is a higher cost for career and technical education classes so they should be funded at a higher amount. There are certifications, tests, and other components which make the classes cost more.

Another factor to consider is whether equipment used in CTE courses is up to date relative to what is actually used in industry.

Another factor to consider pertaining to equipment used in CTE programs is whether the equipment used in these CTE courses is up to date relative to what is actually used in those industry sectors. In an open-ended survey response, a superintendent stated that

> when I meet with industry leaders they note that the equipment at the ATC is so old compared to what they are using in their company. On a side note ... our community appreciates the ATC and recognizes the importance it plays for regional business/industry.

Table 3.12 shows the average number of students in each class listed for a sample of CTE courses compared to a sample of academic courses for the 2019 school year.

KRS 157.360 sets the number of pupils enrolled in a class for students in grades 7 to 12 at no more than 31 students per class. Table 3.12 shows the average number of students in each class listed for the 2019 school year. The average number of pupils per class was lower in the selected CTE courses than in the selected academic courses. The largest class sizes for the CTE courses were all at or below the number of pupils per class allowed by KRS 157.360.

Table 3.12
Average Class Size For Selected CTE And Academic Courses
School Year 2019

	Course	Average Pupils Per Class	Largest Class Size
Selected CTE courses	Air Conditioning Technology	19	24
	Automotive Technology	12	18
	Electrical Construction	15	26
	Construction Carpentry Technology	19	25
	Welding	14	16
Selected academic courses	Algebra I	24	51
	Geometry	25	77
	English I	25	42
	English II	25	42

Note: Minimum class size of 11 or more was used in the average pupils per class for academic classes to ensure that credit recovery and alternative classes were not included.
Source: Data from the Kentucky Department of Education.

Because of the cost of equipment and lower student-to-teacher ratios, CTE completers cost more to educate than regular education students.

Students who graduate from high school taking a minimum of four credits in CTE pathways are considered CTE completers. Because of the cost of equipment and lower student-to-teacher ratios, CTE completers cost more to educate than regular education students.

Career And Technical Program Cost

LAVEC and ATC budgets are spent mostly on salaries and benefits; very little is left over to purchase equipment and materials.

LAVEC and ATC budgets are spent mostly on salaries and benefits; very little is left over to purchase equipment and materials. Equipment and materials can be purchased with federal, state, or local funds. Equipment and materials can also be donated by businesses, manufacturers, and even student fund-raising events.

The startup cost for a new CTE pathway ranges from very little to more than $300,000. Table 3.13 includes some examples of what it would cost a school to add a new career and technical program.

Program Startup Cost

The startup cost for a new CTE pathway ranges from very little to more than $300,000. Table 3.13 includes some examples of what it would cost a school to add a new career and technical program. In these examples, to add the truck service technology technician class would cost the district $324,998. In comparison, a district could add agricultural power, structural, and technical systems for $98,633.

Table 3.13
Estimated New Career And Technical Program Cost
FY 2019

	Agricultural Power, Structural, And Technical Systems	Culinary And Food Service	Digital Design And Game Development	Truck Service Technology Technician
Equipment	$30,600	$130,000	$49,030	$266,300
Midyear teacher salary	49,433	49,433	49,433	49,433
Materials	8,100	5,000	0	2,000
Teacher certification	0	0	0	165
Program certification	500	0	0	1,700
Equipment inspection	0	0	0	600
Increased utility cost	10,000	10,000	1,000	4,800
Total	$98,633	$194,433	$99,463	$324,998

Source: OEA analysis conducted on data supplied by KDE.

Appendix A

Career And Technical Education Access By District

Table A.1
Career And Technical Education Access Category By District

District	ATC	ATC Feeder	LAVEC	LAVEC Feeder	District-Funded CTE Program	Comprehensive High School Only	N/A
Adair County		✓					
Allen County			✓				
Anchorage Independent							✓
Anderson County		✓					
Ashland Independent						✓	
Augusta Independent		✓					
Ballard County			✓				
Barbourville Independent		✓					
Bardstown Independent		✓					
Barren County	✓						
Bath County		✓	✓				
Beechwood Independent		✓		✓			
Bell County	✓						
Bellevue Independent		✓					
Berea Independent		✓					
Boone County	✓				✓		
Bourbon County		✓					
Bowling Green Independent		✓	✓				
Boyd County			✓				
Boyle County		✓					
Bracken County		✓					
Breathitt County	✓						
Breckinridge County	✓						
Bullitt County	✓						
Burgin Independent		✓					
Butler County	✓						
Caldwell County	✓						
Calloway County		✓					
Campbell County	✓						
Campbellsville Independent		✓					
Carlisle County		✓					
Carroll County	✓						
Carter County			✓				

District	ATC	ATC Feeder	LAVEC	LAVEC Feeder	District-Funded CTE Program	Comprehensive High School Only	N/A
Casey County	✓						
Caverna Independent		✓					
Christian County			✓				
Clark County	✓						
Clay County	✓						
Clinton County	✓						
Cloverport Independent		✓					
Corbin Independent	✓						
Covington Independent			✓				
Crittenden County		✓					
Cumberland County		✓					
Danville Independent		✓					
Daviess County						✓	
Dawson Springs Independent		✓					
Dayton Independent		✓					
East Bernstadt Independent							✓
Edmonson County		✓	✓				
Elizabethtown Independent						✓	
Elliott County		✓					
Eminence Independent		✓					
Erlanger-Elsmere Independent		✓					
Estill County		✓					
Fairview Independent		✓					
Fayette County			✓				
Fleming County			✓				
Floyd County	✓						
Fort Thomas Independent		✓					
Frankfort Independent						✓	
Franklin County			✓				
Fulton County	✓						
Fulton Independent		✓					
Gallatin County		✓					
Garrard County	✓						
Glasgow Independent		✓					
Grant County			✓				
Graves County		✓					
Grayson County			✓				
Green County	✓						
Greenup County	✓						
Hancock County		✓					
Hardin County					✓		

District	ATC	ATC Feeder	LAVEC	LAVEC Feeder	District-Funded CTE Program	Comprehensive High School Only	N/A
Harlan County		✓					
Harlan Independent		✓					
Harrison County	✓						
Hart County		✓					
Hazard Independent						✓	
Henderson County			✓				
Henry County		✓					
Hickman County		✓					
Hopkins County					✓		
Jackson County	✓						
Jackson Independent		✓					
Jefferson County			✓				
Jenkins Independent		✓					
Jessamine County			✓	✓			
Johnson County			✓				
Kenton County			✓				
Knott County	✓						
Knox County	✓						
LaRue County						✓	
Laurel County					✓		
Lawrence County			✓				
Lee County	✓						
Leslie County	✓						
Letcher County	✓						
Lewis County			✓				
Lincoln County	✓						
Livingston County		✓	✓				
Logan County	✓						
Ludlow Independent							
Lyon County		✓					
Madison County	✓						
Magoffin County			✓				
Marion County	✓						
Marshall County			✓				
Martin County	✓						
Mason County	✓						
Mayfield Independent	✓						
McCracken County		✓					
McCreary County			✓				
McLean County						✓	
Meade County	✓						

District	ATC	ATC Feeder	LAVEC	LAVEC Feeder	District-Funded CTE Program	Comprehensive High School Only	N/A
Menifee County		✓					
Mercer County	✓						
Metcalfe County		✓					
Middlesboro Independent		✓					
Monroe County	✓						
Montgomery County	✓						
Morgan County	✓						
Muhlenberg County			✓				
Murray Independent	✓						
Nelson County	✓						
Newport Independent			✓				
Nicholas County		✓					
Ohio County	✓						
Oldham County					✓		
Owen County		✓					
Owensboro Independent					✓		
Owsley County		✓					
Paducah Independent	✓						
Paintsville Independent						✓	
Paris Independent		✓					
Pendleton County		✓					
Perry County						✓	
Pike County	✓						
Pikeville Independent		✓					
Pineville Independent		✓					
Powell County			✓				
Pulaski County	✓						
Raceland-Worthington Independent		✓					
Robertson County		✓					
Rockcastle County	✓						
Rowan County		✓					
Russell County	✓						
Russell Independent	✓						
Russellville Independent		✓					
Science Hill Independent							✓
Scott County			✓	✓			
Shelby County	✓						
Silver Grove Independent		✓					
Simpson County			✓				
Somerset Independent		✓					
Southgate Independent							✓

District	ATC	ATC Feeder	LAVEC	LAVEC Feeder	District-Funded CTE Program	Comprehensive High School Only	N/A
Spencer County		✓			✓		
Taylor County		✓			✓		
Todd County		✓					
Trigg County		✓	✓				
Trimble County		✓					
Union County			✓				
Walton-Verona Independent		✓					
Warren County	✓						
Washington County		✓					
Wayne County	✓						
Webster County	✓						
West Point Independent							✓
Whitley County		✓					
Williamsburg Independent		✓					
Williamstown Independent						✓	
Wolfe County		✓					
Woodford County				✓			
Total	52	72	32	4	8	10	5

Note: There are 53 ATCs in 52 districts. Pike County has two ATCs. There are 42 LAVECs in 32 districts. ATC = area technology center; LAVEC = local area vocational education center; CTE = career and technical education.
Source: Kentucky Department of Education.

Appendix B

OEA-Administered Surveys

Superintendent Survey

The Education Assessment and Accountability Review Subcommittee of the Legislative Research Commission has directed its Office of Education Accountability (OEA) to study aspects of career and technical education. This survey looks at two areas: 1) CTE enrollment and subsequent employment by industry sector, and, 2) revenue and expenditures. As part of its work, OEA is surveying superintendents and principals of comprehensive high schools, state-operated area technology centers, and locally operated career and technical centers.

This survey should take about 20 minutes to complete. We would appreciate your answers no later than April 25, 2019. All comments obtained from this survey will be confidential. If you have questions, please contact Bart Liguori at Bart.Liguori@lrc.ky.gov or 502-564-8167.

Thank you for participating in our survey. Your feedback is important.

Superintendent Survey Questions

Respondent Information
1. Name and title of individual completing survey
2. District name

CTE Survey - Superintendent
3. Does your district receive state funding for career and technical education?

Yes
No

4. If your district does not receive state funding for career and technical education, has your district requested funding?

Yes
No
Amount(s) and date(s) of career and technical education funding requested

5. If your district has requested state funding for career and technical education, please list the amount of funding requested and when the funding was requested.

Local grants
Foundation funding
Endowment
Industry partnerships
Other- please specify source(s) and list amount(s) of funding

6. Please list the amount of any local funding or in-kind donations used for career and technical education from the following sources for the 2017-2018 school year.

7. Please list the amount of local funding used for transporting career and technical education students in your district for the 2017-2018 school year.

8. If your district collected fees associated with career and technical education, please provide the fee schedule by program for the 2017-2018 school year.

9. Please provide the total funding amounts for career and technical dual credit offerings per the following sources in your district for the 2017-2018 school year.

Local funding sources- grants, foundation funding, endowments, industry partnerships, etc.
Parent and student payments
Other- please specify source(s) and amount(s)

Currently there are two primary funding mechanisms for career and technical education centers in Kentucky.

- ATCs- centrally managed and operated by the Kentucky Department of Education. Receive state funding from Support Education Excellence in Kentucky (SEEK) funding and the KDE General Fund.

- CTCs- managed and operated by local school districts. Receive a share of the Local Area Vocational Education Center (LAVEC) funding from the KDE General Fund, but also rely heavily on local funding sources for purchases and operational costs.

10. Which of the following options best describes your view concerning state CTE funding in Kentucky?

Keep the current funding mechanisms for ATCs and CTCs
Change portions of the current funding mechanisms
Make major alterations to the current funding mechanisms
Don’t know
Other (please specify)

11. Please explain changes needed concerning state funding mechanisms for career and technical education.

12. Please provide any comments or suggestions concerning state funding for career and technical education.

CTE Principal Surveys

OEA distributed surveys to principals at ATCs, LAVECs, and comprehensive high schools. The original survey asked questions pertaining to two areas: 1) CTE enrollment and subsequent employment by industry sector and 2) CTE revenues and expenditures. This report focuses only on the questions and responses for revenues and expenditures.

ATC Principal Survey

The Education Assessment and Accountability Review Subcommittee of the Legislative Research Commission has directed its Office of Education Accountability (OEA) to study aspects of career and technical education. This survey looks at two areas: 1) CTE enrollment and subsequent employment by industry sector and 2) revenue and expenditures. As part of its work, OEA is surveying principals of comprehensive high schools, state-operated area technology centers, and locally operated career and technical centers. This survey should take about 30 minutes to complete.

We would appreciate your answers no later than April 25, 2019. All comments obtained from this survey will be confidential. If you have questions, please contact Bart Liguori at Bart.Liguori@lrc.ky.gov or 502-564-8167.

Thank you for participating in our survey. Your feedback is important.

Respondent Information
1. Name and title of individual completing survey
2. District name
3. Area technology center (ATC)
4. If you did not find the name of your school listed in the dropdown menu, please enter it in this box.

[Questions 5 – 17 of the ATC principal survey sought information pertaining to another OEA report entitled *Career And Technical Enrollment And Subsequent Employment By Sector*]

CTE Finance - ATC

18. Which programs offered by your school are in most need of equipment updates?

Program	Hardly Any Equipment Up-To-Date	Some Equipment Up-To-Date	Most Equipment Up-To-Date	N/A
Agriculture				
Business and Marketing				
Construction Technology				
Engineering Technology				
Family and Consumer Sciences				
Health Science				
Information Technology				
Manufacturing Technology				
Media Arts				
Transportation				
Other (please specify)				

19. Does travel to and from the ATC discourage eligible students from attending your school?

Yes
No
Don't know

20. On average, how much time per day do students from feeder schools spend travelling to and from the ATC?

One-way
Round-trip

21. Please provide the total funding amounts for career and technical dual credit offerings per the following sources in your district for the 2017-2018 school year.

Local funding sources - grants, foundation funding, endowments, industry partnerships, etc.
Parent and student payments
Other- please specify source(s) and amount(s)

Currently there are two primary funding mechanisms for career and technical education centers in Kentucky.

- ATCs- centrally managed and operated by the Kentucky Department of Education. Receive state funding from Support Education Excellence in Kentucky (SEEK) funding and the KDE General Fund.
- CTCs- managed and operated by local school districts. Receive a share of the Local Area Vocational Education Center (LAVEC) funding from the KDE General Fund, but also rely heavily on local funding sources for purchases and operational costs.

22. Which of the following options best describes your view concerning state CTE funding in Kentucky?

Keep the current funding mechanisms for ATCs and CTCs
Change portions of the current funding mechanisms
Make major alterations to the current funding mechanisms
Don't know
Other (please specify)

23. Please explain changes needed concerning state funding mechanisms for career and technical education.

24. Please provide any comments or suggestions concerning state funding for career and technical education.

CTC Principal Survey

The Education Assessment and Accountability Review Subcommittee of the Legislative Research Commission has directed its Office of Education Accountability (OEA) to study aspects of career and technical education. This survey looks at two areas: 1) CTE enrollment and subsequent employment by industry sector and 2) revenue and expenditures. As part of its work, OEA is surveying principals of comprehensive high schools, state-operated area technology centers, and locally operated career and technical centers.

This survey should take about 30 minutes to complete.

We would appreciate your answers no later than April 25, 2019. All comments obtained from this survey will be confidential. If you have questions, please contact Bart Liguori at Bart.Liguori@lrc.ky.gov or 502-564-8167.

Thank you for participating in our survey. Your feedback is important.

Respondent Information
1. Name and title of individual completing survey
2. District name
3. Locally operated career technical center (CTC)
4. If you did not find the name of your school listed in the dropdown menu, please enter it in this box.

[Questions 5 – 17 of the CTC principal survey sought information pertaining to another OEA report entitled *Career And Technical Enrollment And Subsequent Employment By Sector*]

CTE Finance - CTC

18. Which programs offered by your school are in most need of equipment updates?

Program	Hardly Any Equipment Up-To-Date	Some Equipment Up-To-Date	Most Equipment Up-To-Date	N/A
Agriculture				
Business and Marketing				
Construction Technology				
Engineering Technology				
Family and Consumer Sciences				
Health Science				
Information Technology				
Manufacturing Technology				
Media Arts				
Transportation				
Other (please specify)				

19. Has your school been denied state funding for career and technical education in any of the last 10 school years?

Yes
No
If yes, please explain:

20. If your school has requested state funding for career and technical education, please list the amount of funding requested and when the funding was requested.

21. Are students transported to and from the CTC?
Yes
No

22. Please list the amount of local funding used for transporting career and technical education students in your district for the 2017-2018 school year.

23. On average, how much time per day do students from feeder schools spend travelling to and from the CTC?

One-way
Round-trip

24. Does travel to and from the CTC discourage eligible students from attending your school?

Yes
No
Don’t know

25. Please provide the total funding amounts for career and technical dual credit offerings per the following sources in your district for the 2017-2018 school year.

Local funding sources - grants, foundation funding, endowments, industry partnerships, etc.
Parent and student payments
Other - please specify source(s) and amount(s)

Currently there are two primary funding mechanisms for career and technical education centers in Kentucky.

- ATCs- centrally managed and operated by the Kentucky Department of Education. Receive state funding from Support Education Excellence in Kentucky (SEEK) funding and the KDE General Fund.
- CTCs- managed and operated by local school districts. Receive a share of the Local Area Vocational Education Center (LAVEC) funding from the KDE General Fund, but also rely heavily on local funding sources for purchases and operational costs.

26. Which of the following options best describes your view concerning state CTE funding in Kentucky?

Keep the current funding mechanisms for ATCs and CTCs
Change portions of the current funding mechanisms
Make major alterations to the current funding mechanisms
Don't know
Other (please specify)

27. Please explain changes needed concerning state funding mechanisms for career and technical education.

28. Please provide any comments or suggestions concerning state funding for career and technical education.

Comprehensive High School Principal Survey

The Education Assessment and Accountability Review Subcommittee of the Legislative Research Commission has directed its Office of Education Accountability (OEA) to study aspects of career and technical education. This survey looks at two areas: 1) CTE enrollment and subsequent employment by industry sector and 2) revenue and expenditures. As part of its work, OEA is surveying principals of comprehensive high schools, state-operated area technology centers, and locally operated career and technical centers.

This survey should take about 30 minutes to complete.

We would appreciate your answers no later than April 25, 2019. All comments obtained from this survey will be confidential. If you have questions, please contact Bart Liguori at Bart.Liguori@lrc.ky.gov or 502-564-8167.

Thank you for participating in our survey. Your feedback is important.

Respondent Information
1. Name and title of individual completing survey
2. District name
3. Comprehensive high school
4. If you did not find the name of your school listed in the dropdown menu, please enter it in this box.

[Questions 5 – 17 of the comprehensive high school survey sought information pertaining to another OEA report entitled *Career And Technical Enrollment And Subsequent Employment By Sector*]

CTE Finance – Comprehensive High School

18. Which programs offered by your school are in most need of equipment updates?

Program	Hardly Any Equipment Up-To-Date	Some Equipment Up-To-Date	Most Equipment Up-To-Date	N/A
Agriculture				
Business and Marketing				
Construction Technology				
Engineering Technology				
Family and Consumer Sciences				
Health Science				
Information Technology				
Manufacturing Technology				
Media Arts				
Transportation				
Other (please specify)				

19. Has your school been denied state funding for career and technical education in the last 10 years?

Yes
No
If yes, please explain:

20. If your school has requested state funding for career and technical education, please list the amount of funding requested and when the funding was requested.

21. If your school has a limited number of openings at an ATC, would your students benefit from having a satellite ATC instructor at your school?

Yes
No

22. Please list the amount of local funding used for transporting career and technical education students in your district for the 2017-2018 school year.

23. On average, how much time per day do your students spend traveling to receive career and technical education?

One-way
Round-trip

24. Please provide the total funding amounts for career and technical dual credit offerings per the following sources in your district for the 2017-18 school year.

Local funding sources - grants, foundation funding, endowments, industry partnerships, etc.
Parent and student payments
Other - please specify source(s) and amount(s)

Currently there are two primary funding mechanisms for career and technical education centers in Kentucky.

- ATCs- centrally managed and operated by the Kentucky Department of Education. Receive state funding from Support Education Excellence in Kentucky (SEEK) funding and the KDE General Fund.
- CTCs- managed and operated by local school districts. Receive a share of the Local Area Vocational Education Center (LAVEC) funding from the KDE General Fund, but also rely heavily on local funding sources for purchases and operational costs.

25. Which of the following options best describes your view concerning state CTE funding in Kentucky?

Keep the current funding mechanisms for ATCs and CTCs
Change portions of the current funding mechanisms
Make major alterations to the current funding mechanisms
Don’t know
Other (please specify)

26. Please explain changes needed concerning state funding mechanisms for career and technical education.

27. Please provide any comments or suggestions concerning state funding for career and technical education.

Appendix C

Timeline Of Selected CTE Events In Kentucky CTE

Table C.1
Selected Events Impacting Career And Technical Education In Kentucky
1917 To 2018

Year	Event
1917	Smith-Hughes Act: Provided grants to states for support for vocational education. This provided the formal beginning of vocational education in Kentucky including agriculture, home economics, and industrial education in high schools.
1938	The Kentucky General Assembly established two schools: • Mayo State Vo-Tech School, Paintsville • West Kentucky Vocational Training School for Negroes, Paducah
1940s	Local districts started other schools to take advantage of the Veteran's Training Act programs.
1944	The General Assembly created the Northern Kentucky State Vocational School.
1946	George-Barden Act: Expanded federal support for vocational education.
1954	The General Assembly created the Foundation Program, which provided "bonus" classroom units for funding vocational education classes.
1958	The National Defense Education Act provided assistance to state and local school systems for strengthening instruction in science, mathematics, foreign languages, and other critical subjects; improvement of state statistical services; guidance, counseling, and testing services and training institutes; higher education student loans and fellowships; experimentation and dissemination of information on more effective use of television, motion picture, and related media for education purposes; and vocational education for technical occupations, such as data processing, necessary to the national defense.
1962	Seven local districts requested legislative action to move the following schools to be operated by the State Board of Education: • Ashland Area Vocational School, Ashland • Harlan Area Vocational School, Harlan • Hazard Area Vocational School, Hazard • Jeffersontown Area Vocational School, Jeffersontown • Madisonville Area Vocational School, Madisonville • Somerset Area Vocational School, Somerset • West Area Vocational School, Bowling Green
1962-1964	Several area vocational education centers were constructed with 100 percent local funds but began operations as extension centers of the state-operated schools: • Union County AVEC, Morganfield (completed 1964) • Morgan County AVEC, West Liberty (completed 1960) • Garth AVEC, West Liberty (completed 1960) • Millard AVEC, Pike County (completed 1965) • Knox County AVEC, Barbourville (completed 1962)
1963	Manpower Development and Training Act: Provided training in new and improved skills for the unemployed and underemployed.
1963	Vocational Education Act of 1963: Increased federal support of vocational education, including support of residential vocational schools, vocational work study programs and research, training, and demonstrations in vocational education. This Act was inspired by Kentucky's model of 58 vocational education centers and was sponsored by Representative Carl D. Perkins, US House Education chairman. Higher Education Facilities Act: Authorized grants and loans for classrooms and laboratories in public community colleges and technical institutes as well as for undergraduate and graduate facilities in other institutions of higher education

Year	Event
1964	The Economic Opportunity Act authorized grants for college work-study programs for students of low-income families; established a Job Corps program and authorized support for work training programs to provide education and vocational training and work experience for unemployed youth; provided training and work experience opportunities in welfare programs; authorized support of education and training activities and community action programs including Head Start, Follow Through, and Upward Bound; authorized the establishment of the Volunteers in Service to America, commonly called VISTA.
1965	The Lafayette Area Vocational School, Lexington, became a state school known as Central Kentucky Vocational-Technical School. Establishment of the Appalachian Regional Commission, initially containing 49 counties in eastern Kentucky, which were now eligible for federal construction funds up to 80 percent of the construction and equipment cost.
1966	The Owensboro Area Vocational School, Owensboro, transferred to state control.
1968	Federal vocational education amendments: Changed the basic formula for allotting federal funds, provided for a National Advisory Council on Vocational Education, expanded vocational education services to meet the needs of the disadvantaged, and required the collection and dissemination of information on programs administered under the Federal Vocational Education Act.
1970s	Secondary enrollment in state-operated facilities declined, and local administrators were encouraged to enroll adults in slots previously reserved for secondary students in area centers.
1972	Federal education amendments established a National Institute of Education; provided general aid for institutions of higher education and federal matching grants for state student incentive grants; established a National Commission on Financing Postsecondary Education, a State Advisory Council on Community Colleges, and a Bureau of Occupational and Adult Education; provided state grants for the design, establishment, and conduct of postsecondary occupational education; and created a bureau-level Office of Indian Education.
1973	Comprehensive Employment and Training Act (CETA): Consolidated previous labor and public service programs; authorized funds for employment counseling, supportive services, classroom training, training on the job, work experience, and public service employment; incorporated essential principles of revenue sharing, giving state and local governments more control over use of funds and determination of programs.
1974	The Kentucky General Assembly eliminated the bonus value of vocational classroom units with a deduction in the calculation. Federal education amendments: Established the National Center for Educational Statistics; continued research activities under the Education for the Handicapped Act.
1975	Education for All Handicapped Children Act: provided free, appropriate public education to children with disabilities; provided funds to integrate children with disabilities into regular schools and classes to the maximum extent possible.
1976	Federal education amendments extended and revised the Vocational Education Act of 1963 and the Vocational Education Amendments of 1968; permitted more latitude to states in the use of funds by consolidation of programs into the basic grant, except for special programs for the disadvantaged, consumer and homemaking education, bilingual vocational training, and emergency assistance for remodeling and renovating vocational education facilities.
1977	Career Education Incentive Act: Assisted states and local education agencies and institutions of postsecondary education in making preparation for work a major goal of all who teach and all who learn. Governor Julian Carroll established a State Board for Occupational Education as a part of the Kentucky Department of Education.
1978	The General Assembly confirmed the Occupational Board. Comprehensive Employment and Training Amendments of 1978: Provided for continuation of the Comprehensive Employment and Training Act of 1973 and the Manpower Development and Training Act of 1962; ensured coordination and cooperation among all federal, state, and local private and public agencies involved in the vocational education and training of workers.
1980s	Twelve schools formerly operated by the Kentucky Department of Education in these districts were contracted to local control: Allen County, Ballard County, Boyd County, Carter County, Covington Independent, Fayette County, Franklin County, Grayson County, Lewis County, Marshall County, and Union County.

Year	Event
1982	Authority for the Kentucky Occupational Board was repealed.
1982	Jobs Training Partnership Act (JTPA) replaced CETA, put new emphasis on directing money through local private industry councils, eliminated much of the public works employment, and emphasized helping underemployed and displaced workers.
1984	Carl D. Perkins Act: Replaced the 1976 amendments on vocational education; emphasized services to students with disabilities; removed regular money for maintenance of programs; emphasized program improvement; opened up opportunity for community-based organizations to participate; and earmarked money for special categories, such as programs in correctional facilities.
1985	The General Assembly granted Jefferson County a special appropriation for equipment.
1986	A line-item general fund appropriation was included in the Kentucky Department of Education budget to provide supplemental funds to the following districts operating departments and area centers: Bowling Green Independent, Edmonson County, Fleming County, Jefferson County, Lawrence County, Magoffin County, McCreary County, Newport Independent, Powell County, Simpson County, and those that had been transferred from the Kentucky Department of Education to local control.
1988	The Kentucky General Assembly created a State Board for Adult, Vocational Education, and Vocational Rehabilitation.
1990	The Kentucky Education Reform Act was passed and created expectations for locally operated secondary schools, but it did not address the issue for state-operated secondary programs, and it included funding for the state-operated programs in the Support Education Excellence in Kentucky program.
1992	The General Assembly adopted an average daily attendance deduct of 0.30 for students attending a state-operated vocational school or center for the time spent there.
1992-1998	State and federal initiatives focused on Tech Prep and High Schools That Work.
1997	The General Assembly adopted the Postsecondary Improvement Act, which created the Kentucky Community and Technical College System. This system assumed governance of the state vocational technical schools in 1998 but permitted some secondary students (through agreement with the Cabinet for Workforce Development) to be served in the technical colleges.
1998	The General Assembly created the School-to-Careers program with limited funding for programs in local school districts.
1998	The General Assembly adopted language in the budget bill to permit participation of state operated area technology centers in the Education Technology Program and to describe procedures for a local district to request the transfer of a state-operated center to the control of a local board of education and how funds were to be transferred.
2000	Christian County and Henderson County Boards of Education assumed control of their area centers.
2000	The General Assembly eliminated the vocational education deduct for students attending state-operated programs.
2000	The General Assembly increased set-aside funds for supplementing costs to local school districts for operating area technology centers or vocational departments and established formula requirements in the budget bill.
2001	The General Assembly adopted HB 185, which specified the purposes of vocational education, required a study of funding, and specified a funding formula for distribution of supplemental funds to selected school districts, previously stated in the budget bill.
2007	The Oldham County Board of Education assumed control of its area center. Bath, Jessamine and Johnson Counties received funding as local area vocational education centers.
2010	Floyd County ATC, Letcher County ATC, and Montgomery County ATC received funds for vocational school buildings. The General Assembly appropriated funding for select LAVECs. Oldham County no longer received LAVEC funding.
2011	The Muhlenberg County Board of Education assumed control of its area center. Scott County received funding as a LAVEC.
2012	The Kenton County Board of Education assumed control of its area center. Grant County received funding as a LAVEC.

Year	Event
2012	An executive order moved the Office of Career and Technical Education from the Education and Workforce Development Cabinet to the Kentucky Department of Education.
2014	The General Assembly appropriated $250,000 for a regional collaborative career academy, a collaborative effort of Carroll County Schools, Gallatin County Schools, Henry County Schools, Owen County Schools, and Trimble County Schools. This regional collaborative academy became the iLEAD Academy.
2016	An executive order created the Work Ready Skills Initiative Fund. The fund has awarded $100 million in statewide bonds to 40 applicants. The initiative was passed and funded by the General Assembly and is administered by the Kentucky Education and Workforce Development Cabinet with support from the Cabinet for Economic Development. It is overseen by a board that includes the secretary of the Education and Workforce Development Cabinet, the secretary of the Labor Cabinet, the chair of the Kentucky Workforce Innovation Board, three employers nominated by the governor, one member nominated by the speaker of the Kentucky House of Representatives, and one member nominated by the president of the Kentucky Senate.
2016-2017	The Kentucky Department of Education was awarded $2.1 million through the New Skills For Youth Initiative. The initiative incentivizes the opportunity for local districts to transition state-operated area technical centers and locally operated technical centers into regional academies.
2018	The Strengthening Career and Technical Education for the 21st Century Act (Perkins V) replaced the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins IV).
2019	The Kentucky General Assembly formed the Kentucky Career and Technical Education Task Force. The CTE Task Force was created • to study the existing delivery, organization structure, and funding mechanisms of career and technical education in Kentucky, including but not limited to area career and technical centers, local school district-operated career and technical centers, comprehensive high schools, regional academies, and the Kentucky Community and Technical College System; • to identify promising career and technical education practices from research and other states; • to study the need for and feasibility of a vocational teacher ranking system that allows for occupational experience and training as alternatives to college training, that is uniformly applied to all teachers within a vocational certification field, and that encourages vocational teachers to remain in the classroom; and • to submit strategies for the future of career and technical education in Kentucky. The first meeting was held June 18, 2019.

Source: Kentucky. Education and Workforce Development Cabinet. *Work Ready Skills Initiative*. n.d. Web. Accessed Sept. 4, 2019; Kentucky. Legislative Research Commission. Subcommittee On Vocational Education Of The Interim Joint Committee On Education. A Study Of Secondary Career And Technical Education. Research Report No. 315. Frankfort: LRC, 2003; staff analysis of Kentucky budgets passed by the General Assembly.

Appendix D

Career And Technical Data Issues Related To District Annual Financial Reports, Professional Staffing Data, And Federal Reporting From The Kentucky Department Of Education

While analyzing data for this report, OEA staff found several issues with the data that make it impossible to report the total amount of spending on career and technical education or the number of CTE teachers in Kentucky. This appendix discusses each of the errors found during the course of this study.

Annual Financial Reports

Districts' revenues and expenditures are captured and reported to the Kentucky Department of Education each fiscal year on annual financial reports (AFRs). These reports are custom designed to summarize data from the MUNIS software and transfer the data to KDE. Districts are required to follow the uniform financial account system detailed in the Kentucky Education Technology System (KETS) district administrative system chart of accounts and chart of accounts descriptions in accordance with 702 KAR 3:120. The National Center for Education Statistics (NCES) designs a handbook for state school systems to use in recording financial accounting data, and KDE's chart of account mostly mirrors this handbook.
Districts record expenditures to a specific organization code (org code) that gives more information about a specific expense. The org code will also include the fund the expense is coded to: general fund, special revenue fund, building fund, etc. In addition the org code will give the location of the expense, such as a specific elementary school, middle school, A2 career and technical center, ATC, or central office. These location codes are assigned by KDE and are important in determining how much money is being spent at each school in a district.

Program Code Issues

The chart of accounts includes a program code that is nested within the org code. The program code captures how much is spent on regular education (100 program codes), special education (200 program codes), vocational and technical programs (300 program codes), etc. Districts are to record any expenditure related to vocational and technical programs in the 300 series of the program codes. Selected examples of CTE program codes established in the chart of accounts are listed in Table D.1.

Table D.1
Selected Examples Of Career And Technical Education Program Codes Included In Kentucky Department Of Education Chart Of Accounts 2019

Program Description	Program Code
Career and Technical Education Programs	300
Agriculture	310
Health Science	330
Construction Technology	373
Manufacturing Technology	374

Source: Kentucky Department of Education Uniform Chart of Accounts.

Although districts are required to code all CTE expenses to the 300 program code, they are not required to code expenses down to the lower-level program code of a specific program. For this reason, it is difficult to determine how much each district spends on agriculture programs or on health science programs; however, using the program codes, one should be able to determine how much is spent on CTE as a whole in the state or at each district.

OEA staff reviewed the state and federal grants to ensure that districts were coding expenditures correctly on the AFRs. According to the KDE funding matrix for the locally operated CTE grant, funds are supposed to be spent for those programs included in the funding formula.[40] These funds are generated based on the number of FTE students taking CTE classes; however, local area vocational education center funds were spent on regular instruction and grant programs. Table D.2 shows that, in the LAVEC state grant, there was a total of $5,380,045 incorrectly coded to three program codes in FY 2018. Also, KDE has the ROTC program code set up as 430, which is not in the 300 Career and Technical education program range. The table includes other grants that were reviewed; in total, $7,991,686 was incorrectly coded.

Table D.2
Incorrect Coding Of Specific Career And Technical Education State And Federal Grants FY 2018

Grant	Number Of Districts	Program Code And Description	Total Expenditures Coded Incorrectly
LAVEC	19	100-Regular Instruction	$3,178,397
LAVEC	2	295-Grant Programs	65,898
LAVEC	16	470-Support Services	2,135,750
Energy Technology Career Track	4	100-Regular Instruction	90,881
Vocational Education 20%	6	100-Regular Instruction	181,827
Perkins Grant	27	100-Regular Instruction	298,977
Perkins Grant	5	295-Grant Programs	41,370
ROTC Grant	16	100-Regular Instruction	1,730,691
ROTC Grant	5	430-Regular Programs Board Paid	267,895
Career and technical education total	59		$7,991,686

Note: LAVEC = local area vocational education center.
Source: OEA analysis of data from the Kentucky Department of Education.
Another program coding issue was that three districts are coding their KETS on-behalf network payments to program code 370 instead of program code 470.

SBDM Program Code

Kentucky has a school-based decision making (SBDM) model, which requires districts to allocate funds to A1 schools, after which the school councils decide how to spend these funds. SBDMs have existed since the Kentucky Education Reform Act was enacted in 1990. 702 KAR 3:246 discusses SBDM funding allocations to A1 schools. When Kentucky established its chart of accounts, it set up program code 140 to track SBDM allocated cost. The 140 program code is under the regular program code for programs such as Math, Reading, Writing, Band, etc. Teachers' salaries at A1 high schools are coded to the 140 program code if the funds are SBDM funds out of the general fund. This code causes CTE teachers at A1 high schools to not be coded to a 300 program code, and thus those teachers would not be included as a CTE expense on the AFR. In addition, KDE has set up board-paid program codes to track expenses out of the general fund that are spent at schools that may be part of Section 7 SBDM allocations or positions that are a priority to the board and not part of the SBDM allocation. SBDM and board-paid expenses are not a specific program at a school, and coding them as their own program code makes it difficult to track expenses for particular programs.

Location/School Codes

Another way that expenditures are coded on the annual financial report is by school location code. Each school has a location code assigned by KDE. Some LAVEC schools are in an A1 high school. Without the program codes being coded correctly, a true comparison of LAVECs to state-run career and technical schools should be possible using location codes; however, there were issues with location codes. Some stand-alone career and technical centers have regular teaching staff in those buildings to address the students' needs.[a] These expenses would overstate the true cost of career and technical education. Another issue uncovered with location code was that some of the career and technical schools have a KDE-assigned A2 location code but no expenditures coded to them. A2 expenditures were coded back to their A1 high schools. Districts also have coded CTE expenses to districtwide, central office, and transportation codes, resulting in understatement of total career and technical education expenses.

Professional Staffing Data

When districts set up employees in the MUNIS payroll system, each employee is assigned a summary class code that reflects the position that employee holds. An employee who is a school principal is assigned the summary class code of 1010; a high school teacher is assigned to code 2060; and a career and technical teacher is assigned to code 2080. Districts are required to report all certified staff on the professional staff data report (PSD) file to KDE by October 1 each year. This data is submitted to the National Center for Education Statistics each year so that national comparisons can be made on the number of staff in each state and to generate a pupil-teacher ratio.

OEA reviewed the 2018 PSD files to determine how many career and technical teachers were employed at each district in Kentucky. There were only 168 career and technical teachers

[a] For example, a LAVEC may have a math or English teacher coded to that location.

reported in 31 districts; however, there are 42 districts that receive LAVEC funding and another 6 that have CTE-approved programs not receiving state funding. Further review showed that some career and technical teachers are coded as regular high school teachers.

Districts are also required to submit the local educator assignment data (LEAD) report to KDE each year. This report lists each classroom teacher, the teaching certificates they hold, and the population of students taking each class. A review of the 2018 LEAD report showed that there were 3,157 teachers teaching career and technical education classes in Kentucky. This is significantly more than the 180 who were reported on the PSD file, which KDE uses to submit the career and technical data to the National Center for Education Statistics.

The US Department of Labor reports the employment of career and technical education teachers in secondary schools by each state. The latest report was as of May 2018. Table D.3 shows the number that KDE is reporting compared to neighboring states' numbers of career and technical education teachers.

Table D.3
Number Of Career And Technical Education Teachers
In Kentucky And Neighboring States
FY 2018

State	Number Of Career And Technical Education Teachers
Illinois	1,970
Indiana	1,050
Kentucky	180
Missouri	530
Ohio	5,350
Tennessee	2,540
Virginia	2,690
West Virginia	570

Source: United States. Bureau of Labor Statistics. *Occupational Outlook Handbook*, Career and Technical Education Teachers, n.d. Web. Accessed July 29, 2019.

Based on the number of career and technical teachers reported, it would also appear that KDE is not including the career and technical teachers who are teaching at the state-run area vocational centers, in its reports to the US Department of Labor. According to KDE, 385 career and technical teachers were employed in ATCs last year. By not including the state-employed career and technical teachers, KDE causes the student-teacher ratio at high schools to be miscalculated.

KDE is also required to report the number of other school staff to NCES. In addition to state CTE teachers, each ATC also employees a principal, a maintenance worker, and an administrative assistant in each building who should be reported as staff as well. These employees were not reported to NCES.

Appendix E

ATC Satellite Campuses And Enrollment

ATC	Satellite Program	Fall 2018 Enrollment	FTE
Barren County	Industrial Maintenance Technology – Caverna HS	19	6.85
Belfry	Construction Carpentry Technology – Phelps HS	72	15.38
Belfry	Health Sciences – Belfry HS	73	16.30
Belfry	Health Sciences – Phelps HS	56	11.50
Belfry	Health Sciences – Pike Central HS	68	14.38
Bell County	Health Sciences – Harlan SECTC	34	14.17
Breckinridge County	Information Technology – Hancock HS	86	18.39
Carroll County	Health Sciences – Owen HS	77	14.75
Carroll County	Information Technology – Henry HS	40	8.06
Floyd County	Information Technology – Prestonsburg HS	73	18.67
Green County	Allied Health – Taylor Regional Hospital	102	20.82
Green County*	Allied Health – Taylor Regional Hospital	combined	combined
Harrison County	Health Sciences – Bourbon HS	73	16.37
Knox County	Health Sciences – Knox Central HS	96	20.36
Lake Cumberland	Health Sciences – Adair HS	125	25.92
Lake Cumberland	Welding – Adair HS	75	20.29
Lake Cumberland*	Welding – Adair HS	combined	combined
Madison County	Allied Health – Madison Southern HS	88	15.64
Madison County	Health Sciences – Estill HS	105	20.04
Millard	Health Sciences – Shelby Valley HS	40	20.00
Monroe County	Health Sciences – Metcalfe HS	60	11.65
Morgan County	Health Sciences – Rowan County HS	109	19.44
Paducah	Health Science – Baptist Health Paducah	108	24.57
Paducah	Information Technology	114	25.26
Paducah	Media Arts – McCracken HS	87	16.18
Shelby	Business – Collins HS	91	16.68

*KDE combined enrollment and FTE together for these satellite programs.
Source: Data provided by Kentucky Department of Education.

Appendix F

ATC Facilities, Year Built, And Date Of Last Remodel

ATC	School District That Owns Facility	Year Built	Year Of Last Major Renovation, Remodel, Or New Building
Barren County ATC	Barren County	1974	2018
Belfry ATC	Pike County	1962	N/A
Bell County ATC	Bell County	2010	N/A
Boone County ATC	Boone County	1974	N/A
Breathitt County ATC	Breathitt County	1962	1968
Breckinridge County ATC	Breckinridge County	1969	2012
Bullitt County ATC	Bullitt County	1974	N/A
Butler County ATC	Butler County	2006	N/A
Caldwell County ATC	Caldwell County	1975	2018
Campbell County ATC*	Campbell County	1974	2013
Carroll County ATC	Carroll County	1969	2002
Casey County ATC	Casey County	1970	1994
Clark County ATC	Clark County	1969	2015
Clay County ATC	Clay County	1966	N/A
Clinton County ATC	Clinton County	1968	2017
Corbin County ATC	Corbin Independent	1967	N/A
Estill County ATC	Estill County	In progress	
Floyd County ATC	Floyd County	1962	1975
Fulton County ATC	Fulton County	1973	N/A
Garrard County ATC	Garrard County	1967	N/A
Green County ATC	Green County	1968	2018
Greenup County ATC	Greenup County	1968	1991
Harrison County ATC	Harrison County	1968	N/A
Harrodsburg ATC	Mercer County	1969	2008
Jackson County ATC	Jackson County	2001	N/A
Knott County ATC	Knott County	1968	N/A
Knox County ATC	Knox County	1961	1966
Lake Cumberland ATC	Russell County	1967	In progress
Lee County ATC	Lee County	1967	2009
Leslie County ATC	Leslie County	1970	2011
Letcher County ATC	Letcher County	1968	1973
Lincoln County ATC	Lincoln County	2002	N/A
Logan ATC**	Russellville Independent	1967	2017
Madison County ATC	Madison County	1970	1995
Marion County ATC	Marion County	1966	In progress
Martin County ATC	Martin County	1967	N/A
Mason County ATC	Mason County	1967	2019***
Mayfield/Graves ATC	Mayfield Independent	1973	N/A
Meade County ATC	Meade County	1975	2005
Millard ATC	Pike County	1960	1978-1979
Monroe County ATC	Monroe County	2002	N/A
Montgomery County ATC	Montgomery County	1967	N/A
Morgan County ATC	Morgan County	1972	N/A
Murray/Calloway County ATC	Murray Independent	1972	2016
Nelson County ATC	Nelson County	1966	2008-2009
Ohio County ATC	Ohio County	1975	N/A

ATC	School District That Owns Facility	Year Built	Year Of Last Major Renovation, Remodel, Or New Building
Paducah ATC	Paducah Independent	1965	N/A
Pulaski County ATC	Pulaski County	2006	2018
Rockcastle County ATC	Rockcastle County	2007	N/A
Russell ATC	Russell Independent	1975	2016
Shelby County ATC	Shelby County	1968	2016
Warren County ATC	Warren County	2006	N/A
Wayne County ATC	Wayne County	1971	In progress
Webster County ATC	Webster County	1975	N/A

* Campbell County ATC was previously McCormick ATC.
** Logan ATC was previously Russellville ATC.
*** Mason County ATC purchased a new building.
Source: Data from the Kentucky Department of Education.

Endnotes

[1] Kentucky. Legislative Research Commission. *A Study Of Secondary Career And Technical Education.* Research Report No. 315. Frankfort: LRC, 2003;
Thomas P. Miller & Associates. *First Things First: A Funding Analysis Of Kentucky's Career And Technical Education System.* Presented to the Kentucky Department of Education, March 2015.
[2] Kentucky. Legislative Research Commission. *A Study Of Secondary Career And Technical Education.* Research Report No. 315. Frankfort: LRC, 2003.
[3] Association for Career and Technical Education. Perkins V FAQs. n.d. Web. Accessed Sept. 5, 2019.
[4] Perkins Collaborative Resource Network. State Allocations. n.d. Web. Accessed Sept. 5, 2019.
[5] Alisha Hyslop. Assn. for Career and Technical Educ. Perkins Funding Distribution, 2019. Web. Accessed Aug. 14, 2019.
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