Nonacademic Barriers Facing Kentucky Community And Technical College Students

Program Review And Investigations Committee

Sen. Danny Carroll, Co-chair
Rep. Rob Rothenburger, Co-chair

Sen. Tom Buford	Rep. Lynn Bechler
Sen. Perry B. Clark	Rep. Chris Fugate
Sen. Dan "Malano" Seum	Rep. Al Gentry
Sen. Reginald Thomas	Rep. Adam Koenig
Sen. Stephen West	Rep. Ruth Ann Palumbo
Sen. Whitney Westerfield	Rep. Steve Riley
Sen. Phillip Wheeler	Rep. Walker Thomas

Project Staff

Christopher T. Hall
Jean Ann Myatt
William Spears
Shane Stevens
Susannah Stitzer

Greg Hager, PhD
Committee Staff Administrator

Research Report No. 462_U

Legislative Research Commission
Frankfort, Kentucky
legislature.ky.gov

October 4, 2019

Paid for with state funds. Available in alternative format by request.

Abstract

The report identifies five nonacademic barriers that Kentucky Community and Technical College System (KCTCS) students face: inability to navigate college, financial instability, competing time constraints, personal health issues, and disengagement. Compared to students in Kentucky public universities, KCTCS students are more likely to be the first in their family to attend college, be academically unprepared, have dependents, come from a low-income household, and be older. Reliable data were not available regarding the prevalence of nonacademic barriers at KCTCS colleges. Information was available to estimate the likely prevalence of related issues in the regions served by KCTCS colleges. KCTCS colleges reported having more than 140 programs addressing nonacademic barriers. Each school had at least three such programs; 11 schools had at least eight. Retention rates were commonly used to measure effectiveness of nonacademic programs, but this does not establish whether a program has decreased the effects of a barrier. Better understanding the relationship between a program, its effectiveness, and changes in retention would allow KCTCS to better manage its programs and resources. The report has three recommendations related to determining the prevalence of nonacademic barriers and evaluating programs designed to address them.

Foreword

Program Review and Investigations Committee staff appreciate all those who provided assistance with this report. Most notably, President Box and Kentucky Community and Technical College System Office staff provided continuous support through their rapid responses to data requests and willingness to share their knowledge. The presidents and executive staff of all 16 community and technical colleges took time to discuss nonacademic barriers on their campuses. Council on Postsecondary Education staff were helpful in providing data on Kentucky's postsecondary institutions.

Jay D. Hartz
Director

Legislative Research Commission
Frankfort, Kentucky
October 4, 2019

Contents

Tables

Figures

Summary

This report investigates how well the Kentucky Community and Technical College System (KCTCS) helps students overcome barriers that prevent them from achieving their educational goals. College students face many challenges to their academic success. Many students are not academically prepared for postsecondary education. This report focuses on nonacademic barriers to student success, including inability to navigate college, financial instability, balancing competing time constraints, personal health issues, and feeling disengaged or disconnected from the college experience. National studies have found these barriers to be widespread and their impact to be significant.

KCTCS consists of 16 individually accredited colleges and a System Office in Versailles. With more than 70 campuses, it is the largest provider of higher education in the state and serves all 120 counties. Nearly 64,000 students were enrolled at KCTCS during the fall of 2017, representing 41 percent of the state's undergraduate students.

KCTCS recognizes that nonacademic barriers pose significant challenges for their students and reported more than 140 programs designed to address them. KCTCS does not have, however, reliable information regarding how prevalent nonacademic barriers are at its colleges.

Recommendation 1
The KCTCS System Office and colleges should develop methods to determine the prevalence of specific nonacademic barriers at each college and track the prevalence of such barriers over time.

Given the lack of reliable data on the prevalence of nonacademic barriers, this report analyzed socioeconomic data for students and for each region that KCTCS colleges serve as proxy measures. The analysis finds that a significant percentage of KCTCS students are likely to come from low-income households, experience housing or food insecurity, be first-generation students, or have limited options for addressing personal health issues. For example, nearly 50 percent of KCTCS students received Pell Grants in the 2016-2017 academic year and had an annual household income less than $40,000.

Program Review staff also asked KCTCS college presidents to report on how they addressed nonacademic barriers on their campuses and to provide information on the programs they offered. Programs were placed into six categories based on the nonacademic barrier targeted. These categories were comprised of the five identified barriers and an additional category for programs targeting multiple barriers. Programs targeting multiple barriers were the most common at 24.6 percent. Navigational and financial instability barriers were the next most common at 20.4 and 23.2 percent, respectively.

Programs were also categorized into eight groups based on the following categories: advising, financial aid, service, tutoring, inclusivity, engagement, streamlining, and orientation. Advising programs were the most common and accounted for 50 percent or more of programs at eight

colleges. Programs commonly offered multiple types of functions, with 44.4 percent of programs assigned to multiple categories.

Program funding sources were also compared, showing that colleges provided their own funding for 62 percent of programs. The costs ranged from $775 to $379,000 with a median of $42,490. Grants funded 36.6 percent of programs and ranged from $1,200 to $6.3 million with a median of $254,354. Donation and foundation funding were rare, each funding less than 10 percent of programs. Some programs were provided at no reported cost, usually in partnership with other entities.

Colleges were also asked how they measured the success of programs. Fifty percent of the program simply recorded the number of students who used them. Retention estimates were calculated by 41.5 percent. Attainment was tracked by 30 percent. Almost 10 percent of programs provided no response or did not clearly indicate a measure. Some of these responses included programs where tracking students could be difficult, like estimating the number of students who used a food pantry.

Given the significance of nonacademic barriers and the amount of resources devoted to developing programs to address them, it is important that KCTCS knows whether the programs are helping students overcome these barriers.

Recommendation 2
The KCTCS System Office and colleges should work to develop more accurate measures of nonacademic program success that focus on determining whether a program decreases the prevalence of the problem it was designed to address.

Beyond addressing the specific barrier they are designed to improve, the ultimate goal of nonacademic barrier programs is to increase the likelihood that students will return the next semester and eventually attain a credential or transfer to a four-year university. KCTCS currently has no way of determining the impact that their nonacademic barrier programs have on retention.

Recommendation 3
The KCTCS System Office should study the relationship between programs that decrease nonacademic barriers, student success, and retention. Results should be shared with the colleges so that they can improve existing programs and more effectively implement future programs.

Nonacademic Barriers Facing Kentucky Community And Technical College Students

In June 2018, the Program Review and Investigations Committee initiated a study of how well the Kentucky Community and Technical College System (KCTCS) helps students overcome barriers that prevent them from achieving their educational goals. This report focuses on nonacademic barriers.

At its June 2018 meeting, the Program Review and Investigations Committee voted to initiate a study of how well the Kentucky Community and Technical College System (KCTCS) helps students overcome barriers that prevent them from achieving their educational goals. College students face a wide range of academic and nonacademic barriers. Many students are not academically prepared for postsecondary education. More than half of KCTCS students who took an entrance exam at the college in which they were enrolled during the fall of 2017 did not meet the minimum testing standards.[1]

This report focuses on nonacademic barriers, which can be thought of as "life circumstance" issues. For example, a low-income student may have to decide between paying tuition and buying food, paying rent, or repairing their vehicle. A barrier may be as simple as a student being unable to take a required class because it is only offered when they are scheduled to work. Nonacademic barriers can also be issues such as students not having well-defined academic or career goals.

Kentucky Community And Technical College System

KCTCS consists of 16 individually accredited colleges and a System Office in Versailles. Each college serves regions of multiple counties. KCTCS educates 41 percent of the state's undergraduate students and trains nearly 80 percent of the state's skilled-trade workers.

KCTCS consists of 16 individually accredited colleges and a System Office in Versailles. With more than 70 campuses, it is the largest provider of higher education in the state and serves all 120 counties. Figure A shows each college's primary service region and student enrollment.

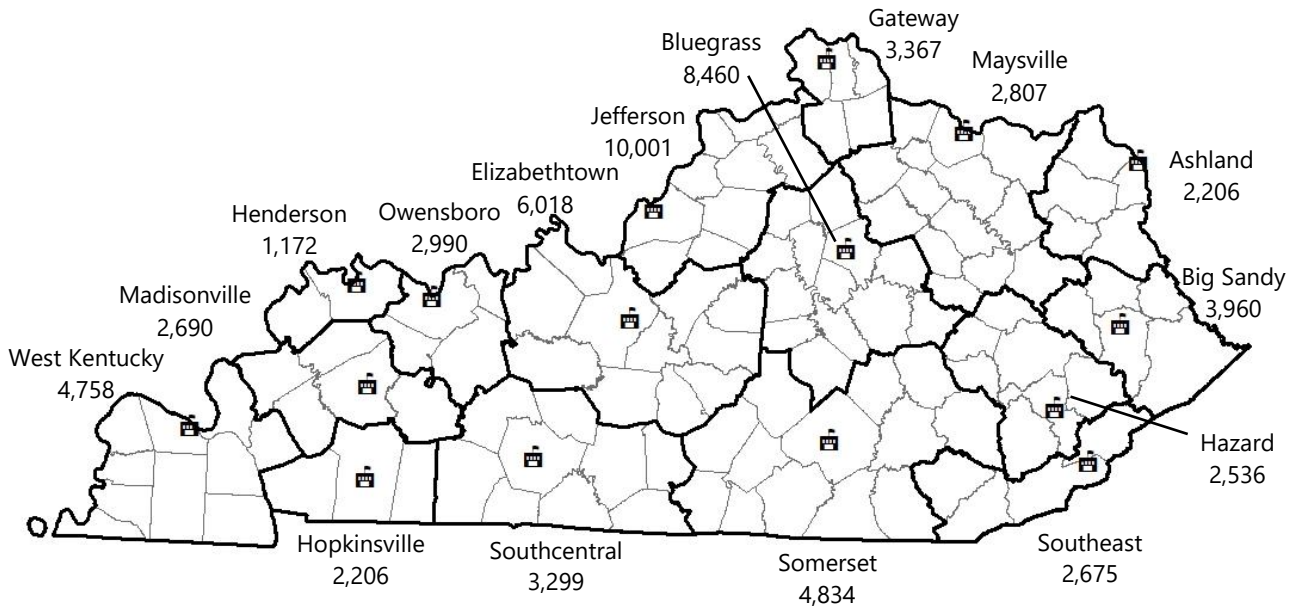
Nearly 64,000 students were enrolled at KCTCS in fall 2017, representing 41 percent of the state's undergraduate students.[a] [2] In the 2017-2018 academic year, KCTCS awarded more than 35,000 diplomas, certificates, and associate degrees.[3] Offering more than 100 technical programs, KCTCS is the state's primary provider of workforce training and educates nearly 80 percent of the state's skilled-trade workers. [4]

KCTCS has the same challenge most community colleges do of retaining students from one semester to the next. The national average retention rate at 2-year institutions is 62 percent and

[a] The number of KCTCS students does not include high school students taking advanced placement classes.

KCTCS's is 53.3 percent. KCTCS's rate has improved 2.4 percentage points since 2012.[5]

Figure A
KCTCS Colleges, Service Regions, And Student Enrollment
Fall 2017



Note: Service areas are determined by the predominant KCTCS college of attendance for each county.
Sources: Hannah Hodges, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. Oct. 5, 2018; Travis Muncie, director of data and advanced analytics. Council on Postsecondary Education. Email to Chris Hall. July 12, 2019.

Major Conclusions

This report has four major conclusions

- Nonacademic barriers can significantly affect student success and are more common at community colleges than at universities. Those identified at KCTCS are a student's inability to navigate college, financial instability, competing time constraints, personal health issues, and student disengagement.
- KCTCS serves a different population than do Kentucky's state universities. KCTCS students are more likely to be the first person in their family to attend college, be academically unprepared, have dependents, come from a low-income household, and be older.
- KCTCS is aware that nonacademic barriers can affect a student's ability to reach their academic or career goals. KCTCS colleges reported having more than 140 programs addressing nonacademic barriers. Each college had at least three such programs; 11 schools had at least eight.

- KCTCS does not know how prevalent nonacademic barriers are at each college and does not collect sufficient information on existing programs to determine whether they are effective.

Nonacademic Barriers

Program Review staff identified five prominent nonacademic barriers that KCTCS students face: inability to navigate college, financial instability, competing time constraints, personal health issues, and disengagement.

Based on interviews with all college presidents and System Office officials, Program Review staff identified five prominent nonacademic barriers that KCTCS students face:

- Inability to navigate college
- Financial instability
- Competing time constraints
- Personal health issues
- Disengagement.

These barriers are common nationwide. Nonacademic and academic barriers are not mutually exclusive.

Inability To Navigate College

A student's inability to navigate college procedures, such as registering for classes or applying for financial aid, can be a barrier to their success. Students who are the first in their family to attend college may be particularly affected.

Students must be able to navigate certain procedures to succeed at college. For example, registering for classes on time, completing the paperwork for financial aid, meeting with advisors, and creating an academic or career plan. Some students have difficulty with such tasks or do not understand how to enact the habits and behaviors necessary for sustained academic achievement. The inability or lack of guidance in navigating these procedures can create barriers to student success. These problems are often enhanced for community college students who tend to be first-generation students, older students with work and family responsibilities, or students who are less academically prepared.

For example, first-generation students are those whose parents do not have a postsecondary education. College-educated parents are often able to help their children understand college culture and college's effect on their future.[6] A 2018 study showed 33 percent of first-generation students who enrolled at a postsecondary institution during the 2003-2004 academic year left without earning a credential, compared to 26 percent of students whose parents attended some college.[7]

Financial Instability

Balancing the cost of paying tuition with other financial responsibilities can negatively affect students. Such financial constraints can lead to housing and food insecurity, lack of reliable transportation, and difficulties affording child care.

Although tuition at KCTCS is less expensive than Kentucky's 4-year state universities, the nearly $4,400 annual tuition for an in-state full-time student taking 12 credit hours can be a significant financial burden, particularly for low-income students. Program Review staff identified four ways that financial instability can negatively affect KCTCS students.

Housing Insecurity. Housing insecurity occurs when a student has difficulty both paying tuition and affording or maintaining stable housing.[8] A 2018 national survey of 90 community colleges, including Jefferson Community and Technical College, reported that 60 percent of students experienced housing insecurity the previous year.[9] Students experiencing such difficulties are more likely to miss classes, not purchase required textbooks, drop a class, and perform poorly academically.[10]

Food Insecurity. Food insecurity is defined as households that do not have access to enough food to meet their nutritional needs due to financial instability.[11] According to the US Department of Agriculture, 11.1 percent of national households were food insecure in 2018; 14.7 percent of Kentucky households were food insecure.[b] [12] While research on the effect food insecurity has on community college students is limited, a 2017 national study found that 56 percent of community college students had experienced food insecurity within the past month.[13]

Students with food insecurity tend to perform poorly academically and experience other problems that can affect their success. A 2018 national study found that 55 percent of students with food insecurity also reported symptoms of clinical depression, with 52 percent reporting severe anxiety and 20 percent reporting suicidal thoughts.[14]

Lack Of Transportation. For most college students, the lack of reliable transportation can be a significant barrier to their success. No KCTCS college has on-campus housing, so nearly all students must commute to attend classes (excluding on-line courses). This can be burdensome for students with long commutes or in communities with no public transportation. Low-income students might not be able to afford a reliable vehicle or its upkeep.

[b] The Kentucky percentage is the average for the 2016 to 2018 period with a margin of error of plus or minus 1.82 percentage points.

Child Care. Child care can affect student success in two main ways. The cost of child care can be a financial burden. For students who have no relatives or friends to watch their children, some localities may have no licensed child care available. In such cases, child care can become a "competing time constraint" barrier since the student may have to choose between personally caring for their child or attending class.

A recent national study found that for the 2011-12 academic year 15 percent of university and 30 percent of community college students had children. The same study found that for student-parents who enrolled in college during the 2003-2004 academic year, only 33 percent had graduated by 2009.[15]

Competing Time Constraints

Because community colleges tend to serve a larger proportion of adult students who have children, jobs, and aging parents or relatives, balancing schoolwork and other responsibilities can be a significant barrier.

Because community colleges tend to serve a larger proportion of adult students who have children, jobs, and aging parents or relatives, balancing schoolwork and other responsibilities can be a significant barrier. A 2016 study found that 69 percent of community college students work while attending school, with 33 percent working full time.[16] A 2009 survey found that 56 percent of students who had withdrawn from college listed "the need to work full time" and 53 percent listed "family commitments" as a reason.[17]

Personal Health Issues

Some KCTCS presidents listed mental health issues as a prominent barrier for many of their students.

Some KCTCS presidents listed mental health issues as a prominent barrier for their students. A 2018 national survey of college students found that 53 percent reported feeling hopeless, 63 percent reported overwhelming anxiety, and 12 percent reported seriously considering suicide. The study also found that more than 30 percent of these students had sought professional help for their mental health issues within the past year, of whom nearly half reported anxiety or depression.[18] Preexisting conditions or major medical events can also affect student success.

Student Disengagement

Students who are actively engaged with faculty, advisors, and campus activities are more likely to complete their postsecondary education.

Researchers have recognized for decades that students who are actively engaged with faculty, advisors, and campus activities are more likely to complete their postsecondary education.[19] Community colleges are increasingly dedicating resources to programs designed to keep students engaged.[20]

Comparing Community College And University Students

While there are some problems with how student data are reported, a comparison of KCTCS and Kentucky public university students shows KCTCS students are more likely to be first-generation students, be academically unprepared for college, have dependents, have a lower income, and be older.

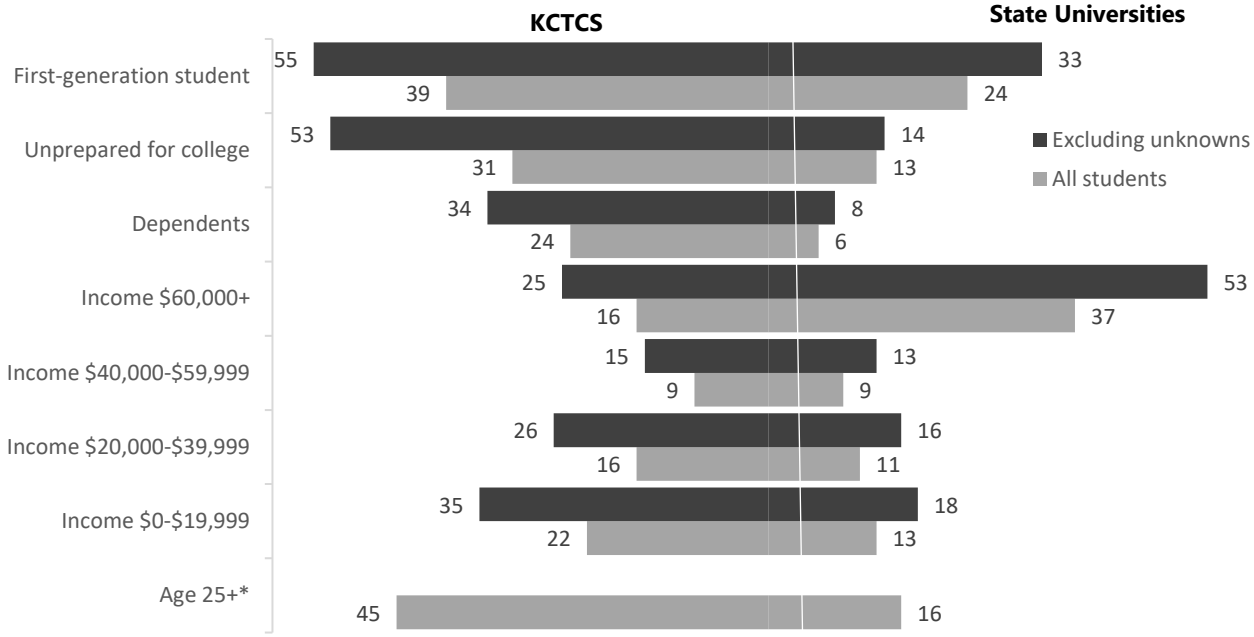
Figure B shows the differences between students who attend KCTCS and Kentucky's state universities. For many of the student characteristics described, information may only be known for a subset of the students. For example, whether a student is first generation is known only for students who provided their parents' education level on the Free Application For Federal Student Aid form (FAFSA). In fall 2017, 70 percent of KCTCS students provided their parents' education level. Of those, 55 percent reported being first-generation students. However, for the 30 percent of students who did not complete the form, or did not indicate their parents' education level, their first-generation status is unknown.

When CPE reports postsecondary education data to the federal government, it excludes those "unknown" students from its calculations. This is an accurate figure for students who provided their parents' education on the FAFSA form, but not for students as a whole because some "unknown" students will not be first generation. Another approach for indicating the number of first-generation students is as a percentage of all students. Using this method, 39 percent of all KCTCS students would be classified as first generation. This approach underrepresents, possibly significantly, the percentage of first-generation students because some of the "unknown" students will be first generation.

Therefore, figure B shows two percentages for each characteristic. The larger values are numbers of students with a particular characteristic based on the percentage of students for which information is known. The smaller values are the number of students with a particular characteristic as a percentage of all students. The true percentage lies somewhere between these two numbers.

Compared to university students, KCTCS students are more likely to be first-generation students, be academically unprepared for college, have dependents, have a household income less than $20,000, and be older than 25.[21] Given these differences, many of the nonacademic barriers discussed above are likely to be more prevalent at community colleges.

Figure B
Percentage Of KCTCS And Kentucky University Students With Selected Characteristics 2016-2017



*Age is known for all students.
Sources: Staff analysis of data from US. Dept. of Education. Distribution of Federal Pell Grant Program Funds by Institution 2016-17; Travis Muncie, director of data and advanced analytics. Council on Postsecondary Education. Emails to Chris Hall. July 12, 2019 and Aug. 22, 2019.

Prevalence Of Nonacademic Barriers

KCTCS does not have data on the prevalence of nonacademic barriers on its campuses.

Reliable data were not available regarding the prevalence of nonacademic barriers at KCTCS colleges. The System Office reported that other than anecdotal information that students share with their advisors, colleges have no way of collecting additional information on the prevalence of most nonacademic barriers.[22] Some data are gathered when students submit a request to drop a class or withdraw from college. Students can select a reason from a list provided by KCTCS, but this is optional and it is not known how many students did not complete this section of the form. Therefore, these data are unreliable for making inferences about the student body.[23]

Recommendation 1

Recommendation 1

The KCTCS System Office and colleges should develop methods to determine the prevalence of specific nonacademic barriers at each college and track the prevalence of such barriers over time.

Various regional and KCTCS student data were used as proxy measures for the prevalence of certain nonacademic barriers on KCTCS campuses.

Given the lack of reliable data, this section attempts to provide a sense of how likely nonacademic barriers are at KCTCS colleges. Each college's student body is supposed to mirror the socioeconomic and demographic makeup of the communities it serves.[24] In practice, KCTCS is an open-access system with minimal entry requirements and lower tuition than state universities, and thus its student bodies more closely reflect the conditions of its communities.

Tables 1 and 2 present socioeconomic characteristics for both KCTCS service regions and students that are known to contribute to certain nonacademic barriers. No proxy measures were available for the inability of students to navigate college, those who lack transportation, or student disengagement.

Financial Instability

Table 1 shows the average annual household income of residents living in each service region, the average annual household income for the 70 percent of KCTCS students who completed the FAFSA form, and the percentage of students who received Pell Grants. Data indicate that a significant portion of KCTCS students are financially insecure.

The average annual household income in Kentucky varies considerably across KCTCS's service regions, ranging from less than $38,000 in the Southeast region to nearly $80,000 in the Gateway region. CPE reports that 60 percent of KCTCS student who completed the FAFSA form had household income below $40,000 and nearly 35 percent reported an income below $20,000

Statewide, the average annual household income is more than $64,000. This figure varies considerably across KCTCS's service regions, ranging from less than $38,000 in the Southeast region to nearly $80,000 in the Gateway region. Only the Gateway, Bluegrass, and Jefferson regions have average annual income of more than $70,000. CPE reported that in 2017, 60 percent of KCTCS students who completed the FAFSA form had a household income below $40,000 and nearly 35 percent reported an income below $20,000. Average household income was less than $30,000 for students at Big Sandy, Hazard, and Southeast.[25]

Nearly 50 percent of KCTCS students received Pell Grants in the 2016-2017 academic year. Most recipients have an annual household income of less than $40,000.

Table 1 also shows that, on average, nearly 50 percent of KCTCS students receive Pell Grants, federal financial aid that is awarded based on a student's household income.[26] Nationally, more than 70 percent of Pell Grant recipients have an annual household income of less than $40,000.[27] KCTCS's analysis of its 2015-16 student body found that 27 percent of Pell Grant recipients were below the federal poverty level and that 54 percent were independent students with an average household income of just over $16,000. [28]

Table 1
Indicators Of Financial Instability By KCTCS Service Region
2016-2017

College	Average Household Income (Region)	Average Household Income* (Student)	% With Household Income <$20,000* (Student)	% With Household Income <$40,000* (Student)	% Receiving Pell Grants (Student)	% Cost-Burdened Households** (Region)	% Food Insecure (Region)
Ashland	$57,715	$37,920	37.2%	59.4%	66.1%	42.9%	16%
Big Sandy	46,507	28,403	43.6	66.7	49.0	42.7	18.4
Bluegrass	70,461	42,676	31.8	57.5	45.5	54.8	14.4
Elizabethtown	60,834	41,668	30.5	53.7	40.4	45.5	13.9
Gateway	79,199	42,648	32.4	56.8	43.7	56.0	11.8
Hazard	42,572	25,728	42.0	68.9	46.3	37.1	19.4
Henderson	57,030	40,708	34.8	60.1	56.8	46.0	15.9
Hopkinsville	55,330	34,419	31.2	64.4	61.2	52.1	17.9
Jefferson	76,246	41,722	33.5	60.9	46.6	55.2	14.0
Madisonville	55,281	44,648	30.8	55.4	40.6	37.3	14.5
Maysville	54,224	32,386	39.3	64.5	63.6	43.4	16.0
Owensboro	62,821	45,355	29.1	52.7	42.9	44.0	13.7
Somerset	46,762	32,107	38.2	66.2	61.2	42.2	16.8
Southcentral	59,270	43,836	29.8	54.0	48.9	47.3	14.8
Southeast	37,954	25,437	45.5	70.4	62.7	40.1	20.8
West Kentucky	60,367	43,338	34.4	58.6	42.4	41.6	14.7
State/KCTCS	$64,436	$38,698	34.5%	60.1%	49.2%	48.6%	14.7%

Note: Averages for regional income and food insecurity are weighted averages by county population.
* For students who completed the Free Application For Federal Student Aid form. Overall, 70 percent of KCTCS students completed the form, but the percentage varies by school.
** Percentage who earn less than $50,000 per year and spend more than 30 percent of pretax income on housing.
Sources: Staff analysis of data from US. Census Bureau. 2013-2017 American Community Survey 5-Year Estimates, Income In The Past 12 Months In 2017 Inflation-Adjusted Dollars. Web. Accessed Sept. 24, 2019; Brian Perry, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. Sept. 4, 2019; Travis Muncie, director of data and advanced analytics. Council on Postsecondary Educ. Email to Chris Hall. July 12, 2019; US. Dept. of Educ. Financial Aid. Distribution Of Federal Pell Grant Program Funds By Institution 2016-17. Web. Accessed July 23, 2019; US. Census Bureau. American Fact Finder. Tenure By Housing Costs As A Percentage Of Household Income In The Past 12 Months. n.d. Web. Accessed July 25, 2019; Feeding America Research. Map the Meal Gap-County Level Food Insecurity. Web. Accessed July 19, 2019.

Cost-burdened households are those that spend more than 30 percent of their pretax income on housing. Statewide, nearly 50 percent of households with income of less than $50,000 are cost-burdened.

Housing Insecurity. Table 1 shows the percentage of cost-burdened homeowners and renters for households earning less than $50,000. Cost-burdened households can be defined as people who spend more than 30 percent of their pretax income on housing costs.[c] [29] Since a significant percentage of KCTCS students earn

[c] The 30-percent threshold has been challenged because the financial impact of housing costs will vary according to income and household arrangement. However, it is considered more applicable to lower-income households.

less than $50,000 annually, these data are used as a proxy measure for the potential prevalence of housing insecurity. Statewide, 48.6 percent of households earning less than $50,000 are considered cost burdened (62.1 percent of renters and 38.5 percent of homeowners).[30] Housing insecurity tends to be slightly more prevalent in urban areas.

In 2017, nearly 15 percent of Kentuckians experienced food insecurity, with higher percentages in rural regions.

Food Insecurity. Table 1 shows that food insecurity varies by KCTCS service region, ranging from nearly 12 percent in the Gateway region to 20 percent in the Southeast region. Food insecurity tends to be more prevalent in more rural regions.

The average parent in Kentucky who pays for full-time child care spent more than $7,000 annually per child. The average price for part time child care in Kentucky is approximately $28 per day. Statewide, licensed child care slots are available for only 60 percent of children aged 5 and younger.

Child Care. The percentage of KCTCS students who have difficulty finding child care is not known. However, the cost of child care can be a significant financial barrier. A 2017 study found that the median weekly cost of full-time child care in Kentucky ranged from $140 to $150 per child per week, depending on whether the child was an infant, toddler, or preschool-aged, which is more than $7,000 annually.[31] The average price for part-time child care in Kentucky is approximately $28 per day.[32]

The inability to find reliable child care can be a significant competing time constraint barrier for students who are parents. Table 2 shows the percentage of children aged 5 and younger and the number of available slots at licensed child care facilities. For example, in the Ashland service region, there were no slots at licensed child care facilities for nearly 64 percent of children aged 5 and younger. Statewide, there are licensed child care slots available for only 60 percent of children aged 5 and younger.[d] [33] Colleges serving larger urban communities tend to have more licensed child care facilities than do more rural regions.

[d] Licensed child care includes Type I and Type II child care facilities and certified family child care homes. Licensing is controlled by the Department for Community Based Services, Division of Child Care. In the source data, the reported number of licensed child care slots at a facility is rounded to the nearest ten. For example, a facility with 23 slots would be reported as 20.

Table 2
Indicators Of Child Care Needs And
Access To Health Care By KCTCS Service Region
2017

KCTCS College Service Region	% Of Children Aged 5 And Younger Without Access To Licensed Child Care	Residents Per Mental Health Provider	Residents Per Primary Care Physician
Ashland	63.9%	315	1,611
Big Sandy	74.5	257	1,376
Bluegrass	18.3	491	1,223
Elizabethtown	46.9	509	2,225
Gateway	30.1	788	1,476
Hazard	69.5	313	1,546
Henderson	49.1	1,083	2,246
Hopkinsville	61.1	384	2,039
Jefferson	22.6	427	1,231
Madisonville	64.8	1,709	1,406
Maysville	52.5	458	2,065
Owensboro	42.6	511	2,092
Somerset	69.7	372	2,045
Southcentral	51.4	644	1,848
Southeast	69.6	2,442	2,558
West Kentucky	47.9	1,172	1,789
State	48.2%	492	1,515

Note: Averages for mental health providers and primary care physicians are weighted averages by county population.
Sources: Annie E. Casey Foundation. KIDS Count Data Center. Licensed Child Care Capacity. 2017. Web. July 19, 2019; US. Census Bureau. American Fact Finder. Annual Estimates Of The Resident Population For Selected Age Groups By Sex For The United States, States, Counties, And Puerto Rico Commonwealth And Municipios: April 1, 2010 to July 1, 2017. June 2018. Web. Accessed July 25, 2019; Robert Wood Johnson Foundation. County Health Ranking & Roadmaps, 2019 County Health Rankings Kentucky Data. n.d. Web. Accessed July 19, 2019.

More than half of statewide licensed child care providers report having a waitlist, potentially leaving students with children to find child care via unlicensed facilities or family members and friends.[34]

Personal Health Issues

Although mental health issues were cited by KCTCS colleges as a prevalent problem, there is no reliable measure of such problems at each college. However, the high ratio of residents to mental health providers and primary care physicians shows that students in some regions may have difficulty accessing health care.

Mental health issues were cited by KCTCS college presidents as a prevalent problem, but there is no reliable measure of such problems at each KCTCS college. However, access to mental health providers and primary care physicians is often the starting point for addressing mental health issues and other medical concerns. Table 2 shows the ratios of residents to mental health providers and primary care physicians. Limited access to health care may affect the student directly but also indirectly when students are responsible for a dependent's or family member's care. Rural areas have higher ratios of residents to mental health providers and primary care physicians, increasing the possibility that residents have to travel farther to receive medical care.

In Kentucky, there are 492 residents per mental health provider and 1,515 residents per primary care physician. In four KCTCS service regions, there are more than 1,000 residents per mental health provider. Seven regions have more than 2,000 residents per physician.

Kentucky has a ratio of 492 residents per mental health provider. The national ratio is 440:1. In four KCTCS service regions, there are more than 1,000 residents per provider. Statewide, 69 counties report ratios of 1,000 or more residents per provider, including seven exceeding 5,000 residents per provider.[35]

For primary care physicians, the state's ratio is 1,515 residents per physician. The national ratio is 1,330:1. In seven KCTCS service regions, there are more than 2,000 residents per physician. Statewide, 16 counties have more than 5,000 residents per primary care physician, including seven counties exceeding 10,000.[36]

Programs Designed To Address Nonacademic Barriers

The System Office provides leadership, support, and services to Kentucky's 16 community colleges. Staff provide guidance to colleges and assume some administrative duties on their behalf. They also facilitate networking among colleges, provide colleges with national research, and connect colleges to state or national advocacy groups.[37]

Regarding nonacademic barriers, one way that the System Office helps colleges is by bringing representatives from each college together to form work groups and peer teams. The groups and teams discuss the barriers students are facing, share best practices for addressing them, and review relevant national perspectives and research. The System Office organizes, staffs, and provides information for these meetings.

Annual work groups are held where college officials share ideas about existing problems and potential solutions. The System Office also hosts peer teams of specialists from each college who focus on specific challenges facing students.

Work groups meet annually where faculty and staff from each college discuss the successes and challenges they have experienced. The colleges then work together to develop solutions to the major challenges facing their students and plan the implementation of solutions. Work groups have been held in 2017 and 2018 with future groups planned.

Peer teams are specialists from each college who meet to focus on specific challenges facing students. Examples are the Student Affairs Council and the Academic Council, which have led to the development of new programs designed to improve student engagement and accommodate working students.[38]

In addition, college presidents often refer specific nonacademic barriers they see their students experiencing to the System Office via "action teams" comprised of four college presidents. These teams are mandated to identify and gather information on specific barriers and formulate policy. This research and the resulting policy recommendation is presented to the KCTCS president and cabinet and the 16 community college presidents.[39]

The System Office also makes available to the colleges tools that allow them to monitor and respond to students' needs. For example, Starfish is early-alert software that allows faculty to engage students who may be struggling. Civitas Illum is a software package that allows staff to predict which students might be at risk of not returning to school the next semester.

The System Office also provides colleges with tools to monitor and respond to nonacademic barriers. For example, Starfish is early-alert computer software that allows faculty and advisors to proactively engage students who may be struggling. It allows students who are having difficulties to alert a professor or advisor while also allowing faculty and advisors to identify and contact students who are having difficulties. Once problems are identified, Starfish facilitates resolutions such as tutoring, advising, or referral to other resources. Instructors can use Starfish to provide students with positive and negative feedback on their class performance.[40]

Civitas Illume, another software package that KCTCS provides to colleges, is a data analytics tool that uses KCTCS student data to perform predictive analyses regarding student retention and performance. The tool allows faculty and staff to better predict the success of individual students, allowing them to pinpoint areas of need and provide targeted intervention. At the systemic level, Civitas Illume helps colleges identify specific student populations, the challenges they are likely to face, and the potential impact of a program or intervention designed to address a specific challenge. Ideally, the tool will allow colleges to better identify nonacademic barriers, design better solutions to those barriers, and better monitor and assess the success of those solutions.

KCTCS Colleges' Programs

Community colleges were asked to provide a list of nonacademic programs. Excluding programs that provided only academic services, colleges provided information on 142 programs.

Each KCTCS college was asked to provide information on its programs addressing nonacademic barriers. Ashland's response noted the difficulty of separating nonacademic programs because all its programs are designed to improve student success.[41] Some responses included both academic and nonacademic services. An example was the federal TRIO student support services program for disadvantaged students, which provides academic tutoring but also provides financial aid and requires students to be disabled, low-income, or first-generation.[42]

Programs were retained for analysis if they provided both academic and nonacademic support, like TRIO. Programs were excluded if they did not target at least one nonacademic barrier. For example, math and English tutoring may assist students but the activities are not directed at a barrier like financial instability.

Excluding purely academic programs, colleges provided information on 142 programs. The number of nonacademic programs submitted varied. Big Sandy and Henderson submitted the fewest with three programs each, while Elizabethtown submitted the most with 18 programs. Eleven colleges had at least eight programs.

Barriers Targeted

Programs were placed into seven categories. Six are based on the barrier targeted: financial instability, navigation, disengagement, personal health, time constraints, and multiple (for programs dedicated to multiple conditions unique to community colleges). The general category is for programs focusing on nonacademic issues that do not target a specific barrier.

Programs were placed into seven categories. Six are based on the nonacademic barrier targeted. Barriers targeted are based on the academic literature and community college staff's description of programs. The category is based on the main purpose of the program, though it is possible for students to receive assistance with a different barrier while participating. For example, staff in a financial aid program may inform a student about a mental health program.

The multiple-barrier category includes programs targeting multiple barriers based on the unique needs of the community college population. These programs typically provide multiple, different types of services, such as TRIO student support services. Colleges with a student support services program must provide academic tutoring, source selection advice, services to improve financial literacy, assistance with financial aid, and assistance in applying to graduate, professional, or 4-year programs.[43]

Other programs were placed into two categories if their services assisted students with more than one barrier. By comparison, these programs offered a single service that helped students in multiple ways. A child care center or transportation program only provided one service but helped students with both financial instability and time constraints.

The "general" category is for programs focusing on nonacademic issues that do not target a specific barrier. These include programs such as career centers, counseling or success coaches, and professional development workshops.

Programs that target multiple barriers are the most commonly provided, 24.6 percent. Financial instability, 23.2 percent, and navigation, 20.4 percent, are the most commonly targeted individual barriers.

Table 3 provides the percentage of programs targeting each barrier. Programs that target multiple barriers are the most commonly provided services, at 24.6 percent. Navigation, 20.4 percent, and financial instability, 23.2 percent, are the most commonly targeted individual barriers by the colleges as a whole. Program targets vary by college. Half or more of the programs at Henderson, Southcentral, and Southeast target navigational issues. Half of Gateway's programs target financial instability, while half of Hazard's programs are multiple-barrier programs.

Other than the unique multiple-barrier programs, 10 programs target more than one barrier. Seven programs target financial instability and time balancing through child care, transportation, and flexible schedule programs. Two programs target navigation and disengagement: Bluegrass's college admissions and financial aid application event and Southcentral's student ambassador program.[44] Jefferson targets personal health issues and disengagement through its program to reduce barriers for disabled students.[45]

Table 3
Nonacademic Barriers Targeted By Programs At KCTCS Colleges
Academic Year 2017-2018

College (Programs)	Financial Instability	Navigation	Disengage-ment	Personal Health	Time Constraints	Multiple	General
Ashland (9)	22.2%	11.1%	22.2%	11.1%	11.1%	33.3%	0.0%
Big Sandy (3)	0.0	0.0	33.3	0.0	0.0	66.7	0.0
Bluegrass (17)	5.9	41.2	23.5	11.8	0.0	17.6	5.9
Elizabethtown (16)	37.5	6.3	12.5	12.5	6.3	12.5	18.8
Gateway (9)	55.6	0.0	0.0	11.1	11.1	22.2	11.1
Hazard (10)	10.0	20.0	10.0	10.0	0.0	50.0	0.0
Henderson (3)	0.0	66.7	0.0	0.0	33.3	0.0	0.0
Hopkinsville (8)	12.5	37.5	0.0	0.0	25.0	37.5	0.0
Jefferson (11)	36.4	9.1	27.3	18.2	9.1	18.2	0.0
Madisonville (8)	25.0	12.5	12.5	12.5	12.5	25.0	12.5
Maysville (6)	16.7	0.0	16.7	33.3	0.0	33.3	0.0
Owensboro (7)	14.3	14.3	14.3	14.3	14.3	14.3	28.6
Somerset (10)	10.0	30.0	20.0	10.0	0.0	20.0	10.0
Southcentral (8)	25.0	50.0	12.5	0.0	0.0	25.0	0.0
Southeast (4)	0.0	50.0	0.0	0.0	0.0	25.0	25.0
West Kentucky (13)	46.2	7.7	0.0	15.4	0.0	23.1	7.7
All colleges (142)	23.2%	20.4%	13.4%	11.3%	6.3%	24.6%	7.7%

Note: Numbers in parenthesis indicate number of nonacademic programs at the college. Percentages may sum to greater than 100 percent because a program may target multiple barriers.
Source: Staff analysis of data from the Kentucky Community and Technical College System.

Program Types

Programs were categorized into eight groups based on the type of program. Nearly half were advising programs.

Programs were categorized into eight groups: advising, financial aid, targeted service, tutoring, inclusivity, engagement, streamlining, and orientation. Advising programs have an element of one-on-one interaction with students that provides career or academic support. The targeted service category collects functions that target students with issues outside of college, like child care, bus services, and food pantries. Engagement and inclusivity programs have a similar goal of increasing interest and participation of students. Inclusivity programs focus on specific subgroups such as minority students, disabled students, or veterans. Streamlining programs make progress easier for students. One streamlining program was Accelerating Opportunity (now GED-plus) at Somerset, which allows a student to earn a GED while taking college courses.[46]

Table 4 shows the percentage of programs at each college. Advising programs are the most common as a whole, and account for one-half or more of programs at eight colleges. Sixty-three programs, 44.4 percent, were assigned to multiple categories. The most common combination is the 14 programs, 9.9 percent, that provide advising and financial assistance. For example, Owensboro has workforce collaboration for flexible scheduling that allows students to attend classes 2 to 3 days per week and work in an industry the remaining days.[47] These students have a success coach who represents the advising component and the work days provide income for the student.

Orientation, streamlining, and engagement were uncommon, with less than 10 percent of programs providing the functions. Four of the six orientation events are events at the start of the school year to assist students, such as Southcentral's mandatory orientation that introduces new students to student ambassadors.[48] Two of the orientation programs are college success courses. Owensboro's course covers success strategy instruction, goal orientation, campus resources, and registering for the second semester.[49] Of the 12 streamlining programs, five programs were versions of Accelerating Opportunity at Ashland, Hazard, Jefferson, Somerset, and Southeast. West Kentucky also had an "Accelerate You!" program, which places students directly into college-level courses without slowing progress in noncredit courses as a result of low placement test scores.[50] The 13 engagement programs included six cultural diversity programs at Ashland, Hazard, Jefferson, Madisonville, Owensboro, and Somerset.

Table 4
Types Of Nonacademic Programs
Academic Year 2017-2018

College (Programs)	Advising	Financial Aid	Targeted Service	Tutoring	Inclusivity	Engage-ment	Stream-lining	Orientation
Ashland (9)	44.4%	33.3%	33.3%	22.2%	22.2%	22.2%	11.1%	0.0%
Big Sandy (3)	66.7	33.3	0.0	66.7	0.0	33.3	33.3	0.0
Bluegrass (17)	70.6	23.5	11.8	29.4	23.5	5.9	11.8	5.9
Elizabethtown (16)	37.5	18.8	43.8	0.0	18.8	12.5	0.0	0.0
Gateway (9)	33.3	55.6	33.3	11.1	11.1	0.0	0.0	0.0
Hazard (10)	50.0	40.0	20.0	30.0	10.0	10.0	20.0	0.0
Henderson (3)	33.3	0.0	0.0	0.0	33.3	0.0	33.3	33.3
Hopkinsville (8)	75.0	37.5	12.5	12.5	25.0	0.0	0.0	0.0
Jefferson (11)	27.3	36.4	36.4	9.1	18.2	18.2	9.1	0.0
Madisonville (8)	50.0	25.0	37.5	12.5	12.5	12.5	0.0	0.0
Maysville (6)	50.0	33.3	50.0	16.7	16.7	0.0	0.0	0.0
Owensboro (7)	42.9	42.9	28.6	14.3	14.3	14.3	0.0	14.3
Somerset (10)	40.0	20.0	30.0	10.0	20.0	20.0	10.0	10.0
Southcentral (8)	50.0	25.0	12.5	25.0	0.0	0.0	12.5	12.5
Southeast (4)	50.0	25.0	0.0	75.0	0.0	0.0	25.0	0.0
West Kentucky (13)	30.8	46.2	30.8	15.4	23.1	0.0	7.7	7.7
All colleges (142)	46.5% (66)	32.4% (46)	26.8% (38)	18.3% (26)	16.9% (24)	9.2% (13)	8.5% (12)	4.2% (6)

Note: Numbers in parenthesis indicate number of nonacademic programs at the college. Percentages may sum to more than 100 because programs may fit multiple categories.
Source: Staff analysis of data from the Kentucky Community and Technical College System.

Program Funding

Program costs could not be precisely determined. Funding sources were analyzed based on whether the program was funded by the college, grants, donations, or the college's foundation.

Program costs could not be precisely determined because of missing information and cost variations. Total costs were provided for 128 programs, 90.1 percent. For 17 programs, responses did not identify how funding was divided among multiple programs. For instance, West Kentucky's community scholarship program costs $95,000 and is funded by the college and its foundation, but a specific amount of funding was not assigned to either source.[51]

Reported costs varied among similar programs across colleges. This variation could be due to differences in costs or differences in how funds were recorded or estimated. Ready to Work was reported by 13 colleges. Big Sandy reported Ready to Work is funded with $9,500 in grants; Maysville reported $1.2 million in grants.[52] Eleven colleges reported TRIO student support services, including Bluegrass with $232,265 in grants and Ashland with $313,406 in grants.[53] Seven colleges reported veteran services, with Hazard spending $14,712 of its funds and Elizabethtown spending $68,163 of its funds.[54]

Most programs, 62 percent, were funded by the college. Fewer programs, 36.6 percent, were funded by grants but the median for grants, $254,354, was larger than the median for college funding, $42,490. Donation and foundation funding were rare.

Table 5 provides the funding sources for nonacademic programs at KCTCS's 16 colleges. Colleges provided the funding for 28 programs, 62 percent. Contributions ranged from $775 to $379,000 with a median of $42,490. Grant funding was less common but the amounts were typically higher on average, ranging from $1,200 to $6.3 million with a median of $254,356. The $6.3 million grant funding was provided by the Department of Community Based Services as part of a 3-year, $19 million grant for Southeast's Paths 2 Promise, which helps SNAP work recipients earn a GED or college degree.[55]

Less than 10 percent of programs reported donation and foundation funding. Donation funding ranged from $2,500 to $49,000 with a median of $25,750. Foundation funding ranged from $508 to $155,000, with a median of $12,800. Colleges used multiple sources of funding for 25 programs. The most common combination was use of college funding and grants for 13 programs.

Table 5
Funding Sources Of Nonacademic Programs At KCTCS Colleges
Academic Year 2017-2018

College (Programs)	College	Grants	Donations	Foundation	No Cost
Ashland (9)	55.6%	33.3%	0.0%	0.0%	11.1%
Big Sandy (3)	33.3	66.7	0.0	0.0	0.0
Bluegrass (17)	76.5	35.3	5.9	0.0	0.0
Elizabethtown (16)	43.8	37.5	18.8	0.0	18.8
Gateway (9)	55.6	44.4	0.0	22.2	0.0
Hazard (10)	60.0	40.0	0.0	0.0	0.0
Henderson (3)	100.0	0.0	0.0	33.3	0.0
Hopkinsville (8)	62.5	12.5	0.0	0.0	25.0
Jefferson (11)	81.8	27.3	9.1	9.1	0.0
Madisonville (8)	37.5	37.5	12.5	0.0	25.0
Maysville (6)	33.3	50.0	16.7	0.0	16.7
Owensboro (7)	85.7	42.9	0.0	14.3	0.0
Somerset (10)	80.0	30.0	0.0	0.0	0.0
Southcentral (8)	62.5	25.0	0.0	0.0	25.0
Southeast (4)	50.0	100.0	0.0	0.0	0.0
West Kentucky (13)	61.5	38.5	23.1	23.1	0.0
All Colleges (142)	62.0% (88)	36.6% (52)	7.0% (10)	5.6% (8)	7.7% (11)

Note: Numbers in parenthesis indicate number of nonacademic programs at the college. Percentages sum to more than 100 because programs can be funded by more than one source.
Source: Staff analysis of data from the Kentucky Community and Technical College System.

Eleven programs were reported as having no cost to the college. These were typically partnerships with other entities.

Programs With No Reported Costs. Responses were considered to have no reported costs when the college did not indicate a direct cost for the program. For example, a child care center at Ashland is staffed by Boyd County Public Schools, but Ashland provides housekeeping, maintenance, and facilities management.[56] Table 6 provides a list of all programs that had no reported costs. All programs except for class scheduling and the debt-free campaign are provided in partnership with other entities. For the debt-free campaign, which tries to reduce student debt through financial aid counseling, Southcentral spent $87,000 of personnel time in academic year 2014-2015 to establish it but did not incur costs in later years.[57]

Table 6
KCTCS Programs With No Reported Costs
Academic Year 2017-2018

College	Program
Ashland	Child care center
Elizabethtown	Mental health counseling
	Partnership with VA Vocational Rehabilitation
	Transportation and emergency assistance services
Hopkinsville	Hopkinsville Transit
	Strategic class scheduling
Madisonville	New student orientation
	Public transportation partnerships
Maysville	Mental health services
Southcentral	"Graduate Debt Free With SKYCTC" campaign
	Orientation

Source: Staff analysis of data from the Kentucky Community and Technical College System.

Measures Of Success

Colleges were asked to provide measures of success for their nonacademic programs. The most common measures were counts of service or students, 50.0 percent, and measures of retention, 41.5 percent.

Community college staff were asked how they measure the success of each program. Table 7 provides the percentage of programs using each success measure by the barrier targeted by the program. The blank measures were those that did not provide a response; the no measure category is for entries that provided a response but did not provide a measure. For example, Madisonville's food pantry does not track usage for privacy reasons.[58] For disability or accommodation programs at Bluegrass, Maysville, and Owensboro, respondents said they provided services to the disabled or complied with the Americans with Disabilities Act.[59]

Table 7
Measures Of Success By Nonacademic Program Barrier
Academic Year 2017-2018

Barrier (Programs)	Blank	No Measure	Usage	Retention	Attainment	Other
Financial (33)	12.1%	6.1%	51.5%	33.3%	9.1%	15.2%
Navigation (29)	3.4	0.0	44.8	41.4	31.0	10.3
Engagement (19)	0.0	0.0	63.2	42.1	21.1	5.3
Health (16)	0.0	18.8	50.0	37.5	12.5	6.3
Time (9)	0.0	11.1	77.8	22.2	11.1	0.0
Multiple (35)	5.7	0.0	48.6	51.4	62.9	0.0
General (11)	18.2	0.0	27.3	45.5	36.4	0.0
All Barriers (142)	6.3%	3.5%	50.0%	41.5%	30.3%	7.0%

Notes: Numbers in parenthesis indicate number of programs associated with each barrier. The sum of programs does not equal 142 because some programs targeted various barriers but were not part of the multiple-barrier group. The sum of measures does not equal 100.0 percent because some responses provided multiple measures of success.
Source: Staff analysis of data from the Kentucky Community and Technical College System.

Usage counts were used by half of programs and were the sole source of measurement for 28.2 percent of programs. This may not indicate whether a program has had an impact but they may be the only option for some programs.

Usage Of Programs. The usage category represents measures where program staff track the number of participants or number of uses. Usage counts are a basic level of analysis because the counts indicate the amount of service provided but not whether those services resulted in any changes for the student. Usage is tracked by half of the programs and is the sole source of measurement for 40 programs, 28.2 percent. For example, Elizabethtown's day care services counts the number of children enrolled and Hopkinsville's transit program records the number of students using the program.[60]

Usage can be the most appropriate measure of success when the college may have difficulty tracking students. If students do not want to be associated with need for a program, tracking the student could discourage students from participating. Jefferson's Hub measures use of a food pantry and connections to community resources and Maysville's mental health services tracks number of referrals.[61]

Retention rates were used for 41.5 percent of programs. More than half of multiple-barrier programs used retention. Retention can be a stronger measure of a student's progress but does not indicate whether a student achieved a goal.

Retention. Retention tracks whether a student returns to the college in a later semester and can serve as a stronger measure of success. Retention was used by 18 multiple-barrier programs, 51.4 percent, like Hazard's Ready to Work and TRIO programs.[62] Retention rates for subgroups instead of the population as a whole are examined by 10 programs, 7.0 percent. Somerset's disability and veteran services programs analyze retention for those groups of students.[63]

Attainment was used by 30.3 percent of programs as a whole, but was used by almost two-thirds of multiple-barrier programs. Attainment can show whether a student has made progress, does not indicate causality.

Attainment. Attainment measures considered whether students had obtained a certificate, diploma, degree, or a job. Attainment serves as a stronger measure of success than retention or usage because it shows whether a student has progressed to a point that can improve their future. However, it does not necessarily indicate the program caused the attainment. Individuals who seek out or voluntarily participate in a program may be more likely than their peers to succeed.

Attainment is used by less than a third of programs overall but is used by 22 multiple-barrier programs, 62.9 percent. The multiple-barrier group contains federal programs such as TRIO and state programs such as Ready to Work. Their reporting requirements may have contributed to the higher usage of attainment as a measure. Attainment of specific groups within the student population is used by seven programs. Owensboro's Office of Diversity and Inclusion reviews graduation rates of underrepresented minorities.[64] West Kentucky's TRIO program follows the graduation and transfer of participating students.[65]

Other. Ten programs used less traditional measures of success, including five programs focusing on financial management. Gateway's two scholarship programs and its work study program consider reduction in unmet financial need and decreased use of student loans.[66] Bluegrass's summer academic boot camp measures scores on placement tests after completion.[67]

Comparisons between the program's participants and other groups of students were used by five programs. Comparisons can help determine a program's effect by removing other factors.

Comparisons between the program's participants and other groups of students were used by five programs. Two were navigation programs. For example, Henderson's student onboarding event, which allows students to meet staff and locate services and classes, considers rates of enrollment in comparison to previous years' enrollment in the same week.[68] Two of the five comparisons targeted multiple barriers. For example, Jefferson's 15,000 Degrees program, which focuses on outcomes for African American students in five Louisville neighborhoods, compared participants' GPA and retention rates with those of the general student population. The final comparison is related to financial and time barriers. Jefferson's bus pass program compared retention of program participants with college wide retention.[69]

Comparisons can be a strong measure of effectiveness. Comparing participating students with nonparticipants may help determine whether a program changed outcomes for participants. However, all programs made comparisons with the population as a whole or with previous years. These comparisons do not consider that

participants may be different from nonparticipants or that student populations may vary across years. A stronger method would be to compare a group of participants with a group of nonparticipants who have similar characteristics or demographics, especially if attainment measures for each group were available.

Surveys were used by 10 programs to see how programs affected students.

The use of surveys was reported for 10 programs. For example, Elizabethtown uses survey results to evaluate its veteran student events.[70] Bluegrass uses a survey to see how its Latino/Latina leadership and college experience camp influence perceptions of college, retention, and graduation.[71] Multiple surveys are used for four West Kentucky programs: accessibility services, veteran services, diversity and inclusion programs, and a career center. These programs use student exit surveys, staff and faculty surveys, and the results of the national Community College Survey of Student Engagement.[72]

Students Served

Community colleges were asked to estimate the number of students served by their programs. Estimates were provided for 116 programs, 81.7 percent.

Community colleges were asked to estimate the number of students served by their programs in fall 2017 and spring 2018. The number of students served was divided by students enrolled at each campus to estimate the percentage of the student body served by each program. Percentage served does not indicate the quality of a program. A smaller percentage served may indicate that a program is focused on a subgroup of students or may be providing more services to students who need more assistance. Table 8 shows the median number and percentage of students served for each nonacademic barrier targeted and the programs serving more than half of their students. Estimates were provided for 116 programs, 81.7 percent. Other responses were blank or did not contain enough information to estimate students served. For example, Southcentral's food pantry and clothing closet was opened in September 2018 and did not have enough information to estimate service in a typical year.[73]

Table 8
Median Number And Percentage Of
KCTCS Students Served And Number Of Programs
Serving More Than Half Of Students
By Nonacademic Barrier Targeted By Program
Academic Year 2017-2018

Barrier (Programs)	Median Students Served	Median % Of Students Served	Programs Serving More Than Half Of Students
Financial (24)	82	1.7%	1
Navigation (21)	140	3.4	1
Engagement (18)	290	3.5	1
Health (14)	112	2.1	1
Time (8)	122	3.0	0
Multiple (32)	137	1.7	0
General (9)	420	5.4	1
All barriers (116)	139	2.4%	5

Note: Estimates of students served were not available for 26 programs. Programs do not sum to 116 because some programs were assigned to multiple barriers.
Sources: Staff analysis of data from the Kentucky Community and Technical College System; Brian Perry, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. July 30, 2019.

Nonacademic programs as a whole typically served less than 3 percent of students.

Programs were most likely to serve a small portion of the student body. Nonacademic programs as a whole served a median 2.4 percent of students. Some categories of programs served a higher median percentage of students, but all categories served a median below 6 percent of students. For example, the TRIO program at West Kentucky assisted 206 students from its class of 8,657.[74] Jefferson's Accelerating Opportunity allowed 43 students from its 16,509 student body to earn an industry credential along with a GED.[75]

Financial programs and the multiple barrier group, which included programs like Ready to Work and TRIO student support services, were the most likely to serve small groups of students. One financial program was Hopkinsville's program to ensure public transportation was provided to its campus, which aided five to ten students per semester.[76] General programs served a larger median group of students than the other categories. These were programs like Gateway's career center, which assists students in acquiring professional development skills, developing a career portfolio, and finding jobs.[77]

Programs serving more than half of the student body were uncommon but appeared in most categories. Western Kentucky's response said its diversity and inclusion program and career exploration services served the entire student body. [78] Big Sandy provided engagement activities for 4,542 students through its student activities events.[79] Bluegrass provided financial assistance through its financial aid office.[80] Southcentral implemented a campaign to reduce student debt through financial aid counseling.[81]

Program Staffing

Community colleges were asked to provide staff estimates for nonacademic programs. Most programs, 69 percent, had five or fewer full time equivalent employees, including 46 percent with one or fewer full-time-equivalent employees.

Community colleges were asked to provide staffing estimates for their nonacademic programs. Based on the responses, about half of programs had one or fewer full-time-equivalent (FTE) employees, while about a quarter had five or fewer but more than one FTE. Staffing could not be determined for 32 of the 142 programs.[e]

Table 9 shows one or less FTE was assigned to 65 programs, 45.8 percent, which includes 30 programs with 0.5 or less FTE assigned. Elizabethtown assigned 5 percent of one employee's time to its student engagement program.[82] Gateway's student bus service was operated by three staff, with two staff providing 1 percent of their time and a supervisor providing 10 percent.[83] Eight programs had no FTE assigned because they were partnerships with other entities, required little official time like Madisonville's food pantry, or had no staff assigned like Southcentral's orientation.[84]

Table 9
Full-Time-Equivalent Staff Of
KCTCS Nonacademic Programs
Academic Year 2017-2018

Full-Time-Equivalent Staff	Programs	% Of Programs
1.00 or fewer	65	45.8%
1.01 to 5.00	33	23.2
More than 5.00	12	8.5
Blank or unknown	32	22.5
Total	142	100.0%

Source: Staff analysis of data from the Kentucky Community and Technical College System.

[e] FTEs could not be determined for 32 programs, 22.5 percent. Blank responses were provided for 17 programs. Insufficient information was provided for 15 responses. These responses listed groups of individuals without providing specific numbers, indicated time was split with other programs without providing the split, or did not provide a response.

FTEs of greater than 1 but less than or equal to 5 were assigned to 33 programs, 23.2 percent. For example, Hazard's electrical lineman workforce program was assigned 30 percent of one coordinator's time, 100 percent of a faculty's time, and 20 percent of seven other faculty members' time for a total of 2.7 FTE.[85] Programs with more than 5 FTE were less common, accounting for 12 programs or 8.5 percent. The largest assignment was for Elizabethtown's day care services, which had 31 FTE across two locations.[86]

Review Of Nonacademic Programs In Other States

Community college nonacademic programs were reviewed in the seven surrounding states bordering Kentucky. Many programs were similar to those offered at KCTCS colleges. Some colleges offered programs that were different but focused on similar issues.

Community college nonacademic programs were reviewed in the seven surrounding states: Illinois, Indiana, Missouri, Ohio, Tennessee, Virginia, and West Virginia. Websites of individual colleges were searched for any nonacademic programs offered. If an entity oversaw the community colleges in a state, like the Tennessee Board of Regents, the entity's website was reviewed for nonacademic programs related to the community college.[87]

Many of the programs in other states were similar to those offered at KCTCS colleges. Programs to assist students in navigating college were common. Illinois's Triton College had an Undergraduate Men Pursuing Higher Education program that offered mentoring and tutoring to first-generation minority men.[88] Child care facilities were available at some schools, like the Ivy Tech Early Childhood Learning Center at Indiana's Fort Wayne Campus.[89] Food pantries were common, like the Tiger Cupboard at Tennessee's Chattanooga State Community College.[90]

Some community colleges offered programs that were different from KCTCS but focused on similar issues. St. Louis Community College in Missouri did not have child care facilities but offered grants to cover a portion of child care costs for students without a degree.[91] Ohio's Clark State Community College covered health issues by providing student health insurance.[92] Southern West Virginia Community and Technical College and West Virginia Northern Community College participated in a program to provide free two-way college counseling services through text messages. The messages assist students by providing reminders and advice, such as deadline notifications and check-ins.[93]

Improving Measures Of Program Success

The ultimate goal of program that address nonacademic barriers is to increase the likelihood that students will return the next semester. However, retention alone is not an accurate measure of a particular program's effectiveness. Program success should measure its ability to decrease the prevalence of the problem it was intended to address.

The ultimate goal of programs that address nonacademic barriers is to increase the likelihood that students will return the next semester and eventually attain a credential or transfer to a 4-year university. KCTCS, and most other postsecondary institutions, often use "retention rates" to measure the effectiveness of their nonacademic programs. However, retention alone is not an accurate measure of a particular program's effectiveness.

All nonacademic programs are designed to address a particular problem, or set of problems, facing community college students. As such, measuring a program's success should be geared toward determining whether it decreased the prevalence of that problem. For example, measuring the success of a campus food pantry should be tied to a decrease in the number of students reporting food insecurity, not simply that retention rates increased since the pantry was opened.

Recommendation 2

Recommendation 2

The KCTCS System Office and colleges should develop more accurate measures of nonacademic program success that focus on determining whether a program decreases the prevalence of the problem it was designed to address.

It is understood that there are programs for which analysis will be problematic because of students' hesitancy to report sensitive or private matters, like mental health issues.

Better understanding the relationship between a program's effectiveness and retention would demonstrate the utility of individual programs and allow KCTCS to better manage its programs and resources.

Many factors contribute to a student's willingness or ability to return the next semester. Rarely can a student's retention be tied directly to their participation in a particular program. A successful program may decrease the burden of a particular nonacademic problem but have no effect on retention. Better understanding the relationship between a program's effectiveness and retention would demonstrate the utility of individual programs and allow KCTCS to better manage their programs and resources.

Recommendation 3

Recommendation 3

The KCTCS System Office should study the relationship between programs that decrease nonacademic barriers, student success, and retention. Results should be shared with the colleges so that they can improve existing programs and more effectively implement future programs.

[1] Travis Muncie, director of data and advance analytics. Council on Postsecondary Educ. Email to Chris Hall. Aug. 22, 2019.
[2] Travis Muncie, director of data and advanced analytics. Council on Postsecondary Educ. Email to Chris Hall. July 12, 2019.
[3] Kentucky. Council on Postsecondary Educ. "Total Degrees And Other Credentials Awarded By Level." n.d. Web. Accessed Sept. 20, 2019.
[4] Jay Box, president. Kentucky Community and Technical College System. Testimony. Interim Joint Committee on Educ. Frankfort. Aug. 2018. Web. Accessed Sept. 12, 2019; Kentucky. Community and Technical College System. "Fact Sheet." Web. Accessed Sept. 18, 2019.
[5] Kentucky. Council on Postsecondary Educ. *Progress Report*. Frankfort: CPE, 2019.
[6] Roxanne Moschetti and Cynthia Hudley. "Measuring Social Capital Among First-Generation And Non-First-Generation, Working-Class, White Males." *Journal Of College Admission*. 198.1 (2008): 25-30. P. 26.
[7] Emily Cataldi et al. Dept. of Educ. Natl. Center for Educ. Statistics. "First-Generation Students: College Access, Persistence, And Postbachelor's Outcomes." 2018. Web. Accessed Aug. 31, 2018. P. 4.
[8] Sara Goldrick-Rab et al. *Hungry And Homeless In College*. Wisconsin Hope Lab. 2017. Web. Accessed. July 26, 2019. P. 3.
[9] Sara Goldrick-Rab et al. *College And Univ. Basic Needs Insecurity: A National #RealCollege Survey Report.* The Hope Center. 2019. Web. Accessed Aug. 26, 2019. P. 8.
[10] James Dubick, Brandon Matthews, and Clare Cady. *Hunger On Campus The Challenge Of Food Insecurity For College Students.* College and University Food Bank Alliance. 2016. Web. Accessed Sept. 21, 2018. P. 22.
[11] Sara Goldrick-Rab et al. *College And Univ. Basic Needs Insecurity: A National #RealCollege Survey Report.* The Hope Center. 2019. Web. Accessed Aug. 26, 2019. P. 5.
[12] United States. Dept. of Agriculture. Economic Research Service. *Food Security In The U.S. Key Statistics & Graphics*. Web. Accessed July 25, 2019.
[13] Sara Goldrick-Rab et al. *Still Hungry And Homeless In College.* Wisconsin Hope Lab. 2018. Web. Accessed July 26, 2019. P. 3; Sara Goldrick-Rab et al. *Hungry And Homeless In College*. Wisconsin Hope Lab. 2017. Web. Accessed July 26, 2019. P. 12.
[14] Sara Goldrick-Rab et al. *Hungry To Learn: Addressing Food & Housing Insecurity Among Undergraduates.* Wisconsin Hope Lab. 2015. Web. Accessed July 26, 2019. P. 14.
[15] Elizabeth Noll, Lindsay Reichlin, and Barbara Gault. *College Students With Children: National And Regional Profiles.* Institute for Women's Policy Research. 2017. Web. Accessed June 26, 2019. Pp. 7, 17.
[16] Jennifer Ma and Sandy Baum. *Trends In Community Colleges: Enrollment, Prices, Student Debt, And Completion*. College Research Board. 2016. Web. Accessed May 1, 2019. P. 10.
[17] Jean Johnson and John Rochkind. *With Their Whole Lives Ahead Of Them: Myths And Realities About Why So Many Students Fail To Finish College.* The Bill and Melinda Gates Foundation. 2016. Web. Accessed May 1, 2019. P. 6.
[18] American College Health Association. *Amer. College Health Assn.-Natl. College Health Assessment II: Reference Group Executive Summary Spring 2018*. Silver Spring, MD: American College Health Assn., 2018. Web. Accessed April 12, 2019. Pp. 14, 15.

[19] Vincent Tinto. "Classrooms As Communities: Exploring The Character Of Student Persistence." *Journal Of Higher Educ.* 68.6 (1997): 599-623. Web. Accessed Feb. 10, 2019; Kuh, George et al. "Unmasking The Effects Of Student Engagement On First-Year College Grades And Persistence." *Journal Of Higher Educ.* 79.5 (2008): 540-563. Web. Accessed Sept. 16, 2019. P. 555.
[20] Center for Community College Student Engagement. *Engagement Rising: A Decade Of CCSSE Data Shows Improvements Across The Board*. Austin, TX. 2015. P. 2
[21] Travis Muncie, director of data and advanced analytics. Council on Postsecondary Educ. Emails to Chris Hall. July 12, 2019 and Aug. 22, 2019; US. Dept. of Educ. Financial Aid. Distribution Of Federal Pell Grant Program Funds By Institution 2016-17. Web. Accessed July 23, 2019.
[22] Brian Perry, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. July 30, 2019.
[23] Ibid.
[24] Kentucky. Council on Postsecondary Educ. "Kentucky Public Postsecondary Educ. Policy For Diversity, Equity And Inclusion." Sept. 2016. P.2.
[25] Travis Muncie, director of data and advanced analytics. Council on Postsecondary Educ. Email to Chris Hall. July 12, 2019.
[26] United States. Dept. of Educ. Federal Student Aid. Federal Pell Grants. n.d. Web. Accessed July 31, 2019.
[27] College Board. *Trends In Student Aid 2017*. Oct. 2017. Web. Accessed Sept. 4, 2019. P.4.
[28] Kentucky. Community and Technical College System. *Project Go: How The KY System Proposes To Educate And Lift Students*. Sept. 2017. Web. Accessed July 30, 2019. Pp. 8, 13; Kentucky. Council on Postsecondary Educ. *Total Headcount Enrollment By Level Fall 2007-Fall 2017*. Web. Accessed Sept. 4, 2019.
[29] United States. Dept. of Housing and Urban Development. *Defining Housing Affordability*. Web. Accessed July 26, 2019. P.1.
[30] United States. Census Bureau. *American Fact Finder*. "Tenure By Housing Costs As A percentage Of Household Income In The Past 12 Months." Web. Accessed July 25, 2019.
[31] Partnership for Early Childhood Services. *Market Rate Study*. Web. Accessed July 29, 2019; Child Care Aware of Kentucky, Human Development Institute. *2017 Child Care Market Rate Study*. 2018. Web. Accessed July 26, 2019.
[32] Ibid.
[33] Annie E. Casey Foundation. KIDS Count Data Center. *Regulated Child Care Capacity*. 2017. Web. July 19, 2019; US Census Bureau. American Fact Finder. "Annual Estimates Of The Resident Population For Selected Age Groups By Sex For The United States, States, Counties, And Puerto Rico Commonwealth And Municipios: April 1, 2010 to July 1, 2017". June 2018. Web. Accessed July 25, 2019.
[34] Child Care Aware of Kentucky, Human Development Institute. *2017 Child Care Market Rate Study*. 2018. Web. Accessed July 26, 2019. P. 33.
[35] Robert Wood Johnson Foundation. County Health Ranking & Roadmaps, 2019 County Health Rankings Kentucky Data. n.d. Web. Accessed July 19, 2019.
[36] Ibid.
[37] Brian Perry, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. July 30, 2019.
[38] Ibid.
[39] Ibid.
[40] Ibid.
[41] Steve Woodburn, dean of student success and enrollment services. Ashland Community and Technical College. Email to Chris Hall. Jan. 17, 2019.

[42] Cassandria Dortch. "The TRIO Programs: A Primer." US. Congressional Research Service. March 16, 2018. Web. Accessed Oct. 19, 2018. Pp. 8-9.
[43] Ibid.
[44] Greg Feeney, vice president, academics and workforce development. Bluegrass Community and Technical College. Email to Chris Hall. Jan. 17, 2019; Millie Wells, assistant to the president. Southcentral Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[45] Laura Smith, vice president for student affairs and dean of students. Jefferson Community and Technical College. Email to Chris Hall. Jan. 15, 2019.
[46] Tracy Casada, vice president of student affairs. Somerset Community College. Email to Chris Hall. Jan. 18, 2019.
[47] Scott Williams, president. Owensboro Community and Technical College. Email to Chris Hall. Jan. 16, 2019.
[48] Millie Wells, assistant to the president. Southcentral Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[49] Scott Williams, president. Owensboro Community and Technical College. Email to Chris Hall. Jan. 16, 2019.
[50] Emily Peck, vice president of student services. West Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[51] Ibid.
[52] Jimmy Wright, dean of student services. Big Sandy Community and Technical College. Email to Chris Hall. Jan. 18, 2019; Stephen Vacik, president. Maysville Community and Technical College. Email to Chris Hall. Jan. 17, 2019.
[53] Greg Feeney, vice president, academics and workforce development. Bluegrass Community and Technical College. Email to Chris Hall. Jan. 17, 2019; Brian Perry, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. Nov. 28, 2018.
[54] Jennifer Lindon, president. Hazard Community and Technical College. Email to Chris Hall. Jan. 18, 2019; Juston Pate, president. Elizabethtown Community and Technical College. Email to Brian Perry. Jan. 17, 2019 in email from Brian Perry to Chris Hall. Jan. 18, 2019.
[55] Vic Adams, president. Southeast Kentucky Community and Technical College. Email to Chris Hall. Jan. 17, 2019.
[56] Brian Perry, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. Nov. 28, 2018.
[57] Millie Wells, assistant to the president. Southcentral Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[58] Cynthia Kelley, president. Madisonville Community College. Email to Chris Hall. Jan. 17, 2019.
[59] Greg Feeney, vice president, academics and workforce development. Bluegrass Community and Technical College. Email to Chris Hall. Jan. 17, 2019; Stephen Vacik, president. Maysville Community and Technical College. Email to Chris Hall. Jan. 17, 2019; Scott Williams, president. Owensboro Community and Technical College. Email to Chris Hall. Jan. 16, 2019.
[60] Juston Pate, president. Elizabethtown Community and Technical College. Email to Brian Perry. Jan. 17, 2019 in email from Brian Perry to Chris Hall. Jan. 18, 2019; Alissa Young, president. Hopkinsville Community College. Email to Chris Hall. Jan. 15, 2019.
[61] Laura Smith, vice president for student affairs and dean of students. Jefferson Community and Technical College. Email to Chris Hall. Jan. 15, 2019; Stephen Vacik, president. Maysville Community and Technical College. Email to Chris Hall. Jan. 17, 2019.
[62] Jennifer Lindon, president. Hazard Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[63] Tracy Casada, vice president of student affairs. Somerset Community College. Email to Chris Hall. Jan. 18, 2019.

[64] Scott Williams, president. Owensboro Community and Technical College. Email to Chris Hall. Jan. 16, 2019.
[65] Emily Peck, vice president of student services. West Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[66] Ingrid Washington, vice president for student development. Gateway Community and Technical College. Email to Chris Hall. Jan. 8, 2019.
[67] Greg Feeney, vice president, academics and workforce development. Bluegrass Community and Technical College. Email to Chris Hall. Jan. 17, 2019.
[68] Brian Perry, governmental affairs specialist. Kentucky Community and Technical College System. Email to Chris Hall. Nov. 28, 2018.
[69] Laura Smith, vice president for student affairs and dean of students. Jefferson Community and Technical College. Email to Chris Hall. Jan. 15, 2019.
[70] Juston Pate, president. Elizabethtown Community and Technical College. Email to Brian Perry. Jan. 17, 2019 in email from Brian Perry to Chris Hall. Jan. 18, 2019.
[71] Greg Feeney, vice president, academics and workforce development. Bluegrass Community and Technical College. Email to Chris Hall. Jan. 17, 2019.
[72] Emily Peck, vice president of student services. West Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[73] Millie Wells, assistant to the president. Southcentral Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[74] Emily Peck, vice president of student services. West Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[75] Laura Smith, vice president for student affairs and dean of students. Jefferson Community and Technical College. Email to Chris Hall. Jan. 15, 2019.
[76] Alissa Young, president. Hopkinsville Community College. Email to Chris Hall. Jan. 15, 2019.
[77] Ingrid Washington, vice president for student development. Gateway Community and Technical College. Email to Chris Hall. Jan. 8, 2019.
[78] Emily Peck, vice president of student services. West Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[79] Jimmy Wright, dean of student services. Big Sandy Community and Technical College. Email to Chris Hall. Jan. 18, 2019
[80] Greg Feeney, vice president, academics and workforce development. Bluegrass Community and Technical College. Email to Chris Hall. Jan. 17, 2019.
[81] Millie Wells, assistant to the president. Southcentral Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[82] Juston Pate, president. Elizabethtown Community and Technical College. Email to Brian Perry. Jan. 17, 2019 in email from Brian Perry to Chris Hall. Jan. 18, 2019.
[83] Ingrid Washington, vice president for student development. Gateway Community and Technical College. Email to Chris Hall. Jan. 8, 2019.
[84] Cynthia Kelley, president. Madisonville Community College. Email to Chris Hall. Jan. 17, 2019; Millie Wells, assistant to the president. Southcentral Kentucky Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[85] Jennifer Lindon, president. Hazard Community and Technical College. Email to Chris Hall. Jan. 18, 2019.
[86] Juston Pate, president. Elizabethtown Community and Technical College. Email to Brian Perry. Jan. 17, 2019 in email from Brian Perry to Chris Hall. Jan. 18, 2019.
[87] Board of Regents. College System of Tennessee. “Purpose Of The Board.” n.d. Web. Accessed August 20, 2019.

[88] Illinois Community College Board. "Fiscal Year 2017 Illinois Community College System Selected Programs And Services For Underrepresented Groups." Dec. 2018. Web. Accessed August 20, 2019. P. 21.
[89] Ivy Tech Community College. "Fort Wayne Student Services & Resources." n.d. Web. Accessed August 20, 2019.
[90] Chattanooga State Community College. "Tiger Cupboard." n.d. Web. Accessed Aug. 20, 2019.
[91] St. Louis Community College. "Child Care Grants For Parents." n.d. Web. Accessed Aug. 20, 2019.
[92] Clark State Community College. "Student Health Insurance." n.d. Web. Accessed Aug. 20, 2019.
[93] West Virginia Higher Education Policy Commission and Community and Technical College System. "Updates For 2017-18." Jan. 2019. Web. Accessed Aug. 20, 2019.

Appendix
Response From KCTCS

October 1, 2019

Dear Chairs Carroll and Rothenburger,

On behalf of the Kentucky Community and Technical College System (KCTCS), thank you for the research request regarding "*Nonacademic Barriers Facing Kentucky Community and Technical Colleges Students.*" Our sincere kudos to the Legislative Research Commission team led by Chris Hall – their dedicated efforts and collaboration with KCTCS staff has led to the enclosed work, which is full of detailed and important information for your review. Their work is applaudable.

The research and recommendations of the identified barriers in this report are common to community colleges nationally and have been confirmed by nationally recognized research. I have said many times to state and national officials and policymakers that, unfortunately, life too often gets in the way of our students' educational success. A personal sense of defeat or actual unpreparedness, the need to work to support family, a lack of childcare, or even something as simple as a flat tire on the first day of class means that many of our students drop out before they earn a credential. They want an education because they know it leads to a better life, but their path is full of obstructions, missed on-ramps, and detours.

If there is one thing you take from this report, I urge you to remember that our students are not the same students that can be found across the Commonwealth's University campuses. Keep in mind that 45% of our students are 25 or older; 55% are first-generation; 53% come unprepared for college; 34% have dependents; and 35% have income less than $20,000 (2016-17 data, as included in the report). And, lastly, remember that over 40% of Kentucky's undergraduates are enrolled at a KCTCS College.

Despite these sobering statistics and the uphill battle of declining state appropriations, our Colleges have nonetheless placed significant emphasis on nonacademic programs and services to our students. As KCTCS President, I challenge our College Presidents to address barriers in an entrepreneurial and innovative way. In fall 2017, I created the "Entrepreneurial Innovation Grants" -- $750,000 of incentive grants awarded to Colleges that formed innovative ways to attract, educate, and support non-traditional age (25 and up) students. Colleges came up with brilliant ideas like, "Tuesday Night Live" wherein students were offered tutoring, childcare, and a meal on a weekly basis at

Dr. Jay K. Box
President
Kentucky Community and Technical College System
300 North Main Street • Versailles, KY 40383
P: 859-256-3132 • kctcs.edu

Hazard Community and Technical College; and, "Tech-X" at Owensboro Community and Technical College wherein students enroll in a multi-craft technologist program that offers training in a real-world industrial program that can be completed in 7-9 months, with class and work scheduling flexibility. The grants continued for 2018 and 2019.

In fall 2018, as a first step to help address the issue of housing and food insecurity within KCTCS, each College was given $2,000 as a challenge grant to either start a program or to bolster an existing program to serve this challenged population of students. After the first year, it has been reported that the Colleges assisted over 2,000 students through their food pantry initiatives and established 48 new partnerships within their respective communities. It is this kind of pioneering creativity, coupled with community partnerships, that we must employ as a higher education institution. No longer are we responsible for solely providing classroom instruction – we are being called upon to address students' basic needs and we are rising to that challenge.

Overall, our 16 Colleges offer more than 140 nonacademic related support services designed to address barriers that may impede student persistence and completion. These services are paying off. *In 2018-19, for every 10 KCTCS credentials awarded:*

- *Over 6 were awarded to low income students;*
- *Nearly 3 in 10 were awarded to students who entered college academically underprepared;*
- *And more than 1 in 10 were awarded to underrepresented minorities.*

Keep in mind that these kinds of triumphs are being achieved with less per student funding than KCTCS had in 2008, and less per student funding than our comprehensive university partners receive today.

But, there is still work to be done. KCTCS concurs with the five identified designations of nonacademic barriers and the three recommendations included herein. College presidents and their leadership teams have received a copy of this report which will be discussed in an upcoming executive briefing. They will consider ways to address and implement each recommendation. The President's Leadership Team (consisting of the 16 College Presidents and my Cabinet) will develop strategies and systemwide initiatives for the 2020-2022 KCTCS Action Plan that directly relate to the recommendations. The Action Plan informs College proposed actions to address mission-critical needs as well as strategic goals. So, in short, know that we will actively be looking at how to better determine barriers, track their prevalence, gauge the success of nonacademic services and understand the effects such services have on success and retention.

I would be remiss to not point out that there are limitations that hamper our ability to effectively address these issues, such as adequate financial and staffing resources, CPE data alignment, the ability to tie a single outreach effort to student success, and the multiplicity of student issues that impede success (students often face more than one barrier). While these are challenges, they will not hinder our resolve to improve students' success across the state. We believe in "Better Lives for a Better Kentucky" and we will persist in our efforts so that our students persist in their education.

Sincerely,

Jay K. Box, Ed.D.
KCTCS President