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Research Brief Series:

Higher Education and  
COVID-19 Recovery in  
Kentucky



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## College Financial Aid Applications in Kentucky Emerging from the Pandemic

### Executive Summary

This research brief focuses on the completion of the Free Application for Federal Student Aid (FAFSA) by July 2020 compared to July 2021—during the midst of and emerging from the pandemic. For students, completing the FAFSA is often a necessary step toward attending higher education as it helps determine eligibility for different forms of financial aid, such as federal or state grants. Completion rates for the FAFSA are important indicators of college access more broadly. We believe it is one of many indicators to which educators and policymakers should be paying close attention to mitigate the impacts of the pandemic, which may exacerbate existing inequalities in opportunities for youth to attend and complete higher education.

Therefore, we address two questions related to FAFSA completion we believe are essential to assessing the impacts of the pandemic and moving forward. First, what factors are associated with FAFSA completion rates among seniors in public high schools? Second, what factors are associated with changes in FAFSA completion rates among seniors in public high schools between July 2020 and July 2021?

We answer these questions using the most recently available public data at the high school and county level. Highlights of our findings include:

- Among the 212 public high schools included in our dataset, the year-over-year percentage change in FAFSA completions between July 2020 and 2021 was -9.7.
- Being a Title 1 eligible high school was negatively related to July 2021 FAFSA completion rates among seniors, but only modestly.
- Being a high school in a suburban locale was positively related to a decrease in the FAFSA completion gap between July 2020 and July 2021. The average year-over-year percentage change for suburban high schools was -4.5, compared to -10.2 for rural high schools.
- A one-point increase in the percent students of color at a high school was associated with a 13.7 year-over-year percentage change in FAFSA completions for July 2021. However, the percent students of color were not significantly related to the FAFSA completion gap between 2020 and 2021.
- Being a Title 1 eligible high school was associated with an 8.4% decrease in FAFSA completions for July 2021, but similarly to our findings for the percent students of color, Title 1 eligibility was not significantly related to the FAFSA completion gap.



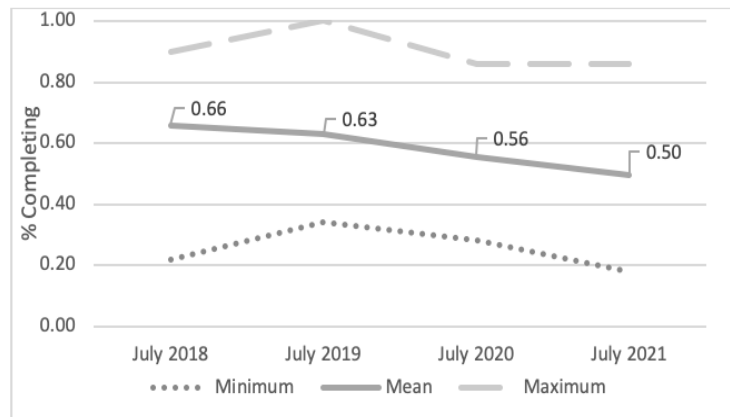
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This research brief is the first in the series, Higher Education and COVID-19 Recovery in Kentucky, which looks at indicators of post-secondary access and success in Kentucky as we emerge from the pandemic. The series is an initiative of the Center for Economic Education (CEE) and Fostering Attainment Through Educational Support (FATES) at the University of Louisville. The goal is to foster dialogue and action among citizens, educators, and policymakers to ensure higher education thrives following the pandemic.

## College Financial Aid Applications in Kentucky Emerging from the Pandemic

The drop in financial aid applications (i.e., the Free Application for Federal Student Aid or FAFSA) received much attention in summer and fall 2020, as the nation and the world grappled with the COVID-19 pandemic (e.g., Fein, 2020). Completion of the Free Application for Federal Student Aid (FAFSA) fell for all students between March 1 and April 30, 2020, but more so for low-income (i.e., less than \$25,000) students than high-income (i.e., more than \$50,000) students, at 14.5% and 3.9% respectively (DeBaun, 2020). One analysis showed that declines in FAFSA completions were greater for graduating high school seniors compared to students who had already enrolled in college (Gurantz & Wielga, 2021). Kentucky was no exception. By July 2020, the average percent of Kentucky in public high school seniors completing the FAFSA dropped to 56% compared to 63% in July 2019, before the pandemic (see Figure 1).

Figure 1. Average Percent of Kentucky Public High School Seniors Completing the FAFSA, 2018-2021



Given the importance of the FAFSA as a gateway for receiving financial aid along with research (National College Attainment Network, n.d.) that found high schools seniors who complete the FAFSA are 84% more likely to attend college, FAFSA completion is a key indicator of college access. Moreover, disaggregating completion rates by key groups—such as low-income students or students of color—enables us to describe and then address the stratification of educational opportunity. In this research brief, we focus on FAFSA completion rates in Kentucky among seniors at public high schools. Specifically, we utilize the most recent FAFSA completion data from July 2, 2021, along with data on high school characteristics to address two questions.

- First, what factors are associated with FAFSA completion rates through July 2021 among seniors in public high schools?
- Second, what factors are associated with changes in year-over-year FAFSA completion rates among seniors in public high schools between July 2020 and July 2021?



This is the first in a series of reports focused on indicators of college access and success in Kentucky as the Bluegrass State emerges from the pandemic. We believe it is vital to anticipate and watch for how the pandemic may worsen educational opportunities for our most marginalized (e.g., low-income students) students. The series is intended to promote discussion about changes in practice and policy that may be necessary across the state to ensure that higher education does not become further out of reach for many students. We begin with an overview of our methods, then focus on our findings.

## Methods

### Data

We use data from three sources to conduct our analysis. First, we use FAFSA completion data at the high school level for Kentucky released by the U.S. Department of Education on July 2, 2021. This dataset provides the number of applications completed by students at the high school at specific points in time. Our focus is on the latest time point (July 2021) compared to the same time last year, although we provide comparison points in 2018, 2019, and 2020. The second dataset we use comes from U.S. Census Bureau, specifically the Small Area Income and Poverty Estimates (SAIPE) for 2019. SAIPE comes from the American Community Survey, which is administered annually and provides estimates of poverty at the district level. Finally, high school-level characteristics, such as the proportion of students of color, come from the National Center for Education Statistics (NCES) Common Core of Data (CCD) for 2018 and 2019.

### Sample

We limit our sample to regular public high schools in Kentucky to reduce variation in high school types and mission. In total, there were 212 public high schools in our sample. High schools with missing data for a given variable were dropped from the analysis. For example, if a high school had no reported data on the percent of students of color that school was dropped from analyses focused on diversity. Very few data were missing overall.

Regarding characteristics of the high schools, 45% are in rural locations with about 26% located in towns (see Table 1). This is not surprising given the rural nature of Kentucky. The average portion of youth in poverty at the district level was 23%, although the range was almost 40 points, indicating considerable variation across the state. We describe our analysis and limitations next.

Table 1  
High School Characteristics

	Number	Column N %
Top Quartile, % Students of Color in High School	53	24.2
Title 1 Eligible	193	91
Locale		
Rural	95	44.8
Town	55	25.9
Suburb	35	16.5
City	27	12.7
	<b>Mean</b>	
Teacher Pupil Ratio	18.88	
Poverty Percent, Age 0-17	23	
Change in FAFSA Completions %, July 2020 to 2021	-9.7	

Source: Authors' Analysis

#### Analysis & Limitations

To study FAFSA completion rates we use descriptive statistics, bivariate correlations, and linear regression. Regression is used to help us explore the relationships among FAFSA completion and high school characteristics, such as being Title 1 eligible, while holding constant other characteristics, such as locale.

This is an exploratory analysis, meaning care should be taken in the conclusions that are drawn. There are several limitations to keep in mind before reviewing the findings. First, many factors impact FAFSA completion rates for a high school and for individual students that we cannot account for in our analysis. For example, one study (De La Rosa, 2006) found that school culture, family background, and student perceptions of costs can all impact whether a low-income student applies for financial aid. Second, ours is a correlational study, meaning we cannot conclude that one characteristic—such as the percent of youth in poverty in the district—causes FAFSA completion (or not completing it). Third, we include district-level data for poverty and income in our analysis, but in districts with many high schools this approach masks variation within the district. For example, Jefferson County Public Schools is a district in Louisville with 20 public high schools. Variation in youth poverty at these individual high schools is not captured in our dataset. Finally, completion rates calculated here differ from those produced by the National College Attainment Network (NCAN), the leading national advocacy and analysis organization on FAFSA completion. The difference in our analysis is that we do not include private high schools, as mentioned above. Additional details about the data, variables, and our method are provided in the methodological appendix at the end of this report.

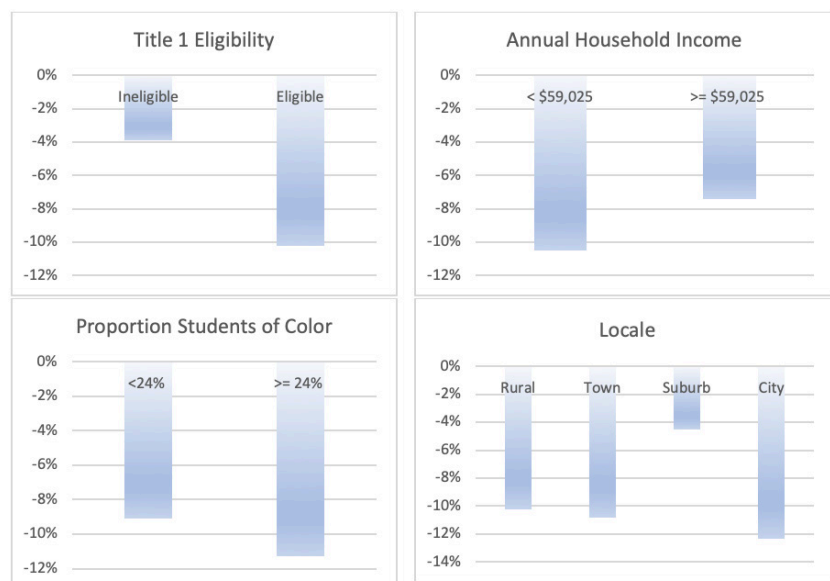
## Findings

Kentucky, like many states, has seen a decrease in FAFSA filing emerging from the pandemic. Among the 212 public high schools in our analysis, the year-over-year percent change (which we refer to here as the completion gap) in FAFSA completions between July 2020 and 2021 was -9.7 points. Recall from above, this is a larger gap than what has been estimated nationally, which is a -4.8 point year-over-year percent change. Perhaps not surprisingly, there is considerable variation in FAFSA filing between public high schools across the state.

Fifty-eight high schools had no gap in FAFSA completions between July 2020 and 2021. These schools saw increases in FAFSA completion ranging from a low of 0.5% to a high of 38.5%. Four high schools had the same completion rates. By comparison, 150 high schools did see a decrease in FAFSA completions, ranging from 0.5% to 57.8% between this year and last. We next explored whether FAFSA completion was related to selected high school characteristics—such as diversity—and whether changes in completions between July 2020 and July 2021 could be partially explained by these characteristics. Our findings were mixed.

When comparing variation in FAFSA completion by high school characteristics we see clear differences (See Figure 2). For example, we find a six-point difference in the completion gap between Title 1 eligible and non-eligible schools. We also note differences by locale, household income, and whether a school was classified as having a high proportion of students of color. However, we did not find that all high school characteristics were strongly and statistically associated with July 2021 FAFSA completions or the gap in FAFSA completions. We discuss this next.

Figure 2.  
Average Change in FAFSA Completions July 2020 to July 2021 by  
Selected High School Characteristics





We conducted bivariate correlational analysis and linear regression to better understand the extent—if any—to which high school characteristics were statistically related to July 2021 FAFSA completion rates as well as the FAFSA completion gap. Regression allows us to assess the relationship between FAFSA completions and high school diversity while controlling for Title 1 eligibility, as one example. Overall, the high school characteristics we include in our analysis were not statically significant concerning the FAFSA completion gap. In other words, the percent of youth 5-17 in poverty, percent students of color, the student to teacher ratio, Title 1 status, and locale did not directly explain the gap in FAFSA completion between July 2020 and July 2021.

However, we did find that some of these characteristics were significantly related to the July 2021 FAFSA completion rate. Being a Title 1 eligible high school was negatively related to FAFSA completion rates among seniors, but only modestly. Being a high school in a suburban locale was positively related to a decrease in the FAFSA completion gap between July 2020 and July 2021. The average completion gap for suburban high schools was 4.5%, compared to 10.2% for rural high schools. A one-point increase in the percent students of color at a high school was associated with a 13.7% decrease in FAFSA completions for July 2021. Finally, being a Title 1 eligible high school was associated with an 8.4% decrease in FAFSA completions for July 2021.

## Discussion

Our findings are similar to studies conducted by others (De-Baun, 2020; Gurantz & Wielga, 2021; L. Page et al., 2017), which show that low-income students, students of color, students in Title 1 eligible schools, and students in schools with relatively higher levels of youth poverty have lower rates of FAFSA completion. Indeed, prior research (de La Rosa, 2006; Heller, 2006) finds that applying for financial aid is stratified by socioeconomic status, which intersects with racial and ethnic identity. Notably, we find that racial and ethnic diversity in a high school and being a Title 1 eligible school were both associated with decreased FAFSA completions in July 2021 compared to other public high schools. Suburban high schools had higher FAFSA completion rates in July 2021 than districts in other locales and also had smaller gaps between 2020 and 2021. These differences were statistically significant.

However, we did not find a direct relationship among high school characteristics (such as the proportion of youth in poverty or racial and ethnic diversity) and the FAFSA completion gap between 2020 and 2021. We interpret this to mean that FAFSA completion in the current year has been directly impacted by socioeconomics and race and ethnicity and that those factors indirectly (not directly) impact the FAFSA completion gap. In other words, we hypothesize that other factors—such as families needing to address jobs, housing, and food insecurity—that are not accounted for in our analysis may explain the gap. As another example, consider variation in vaccination status based on household income and how this may affect the ability of families to recover from the pandemic. The percentage of lower-income households



(less than \$40,000 annually) that have been vaccinated is 19 percentage points lower than higher-income households (more than \$90,000 annually) (Hamel et al., 2021). Unvaccinated individuals are now bearing the brunt of surges in COVID-19 variants, which may impact their employment as well as their ability to help dependents apply for financial aid. We cannot account for these important factors in our analysis.

In summary, our findings—while important—are expected. However, given existing inequalities for students from low-income families and students of color, there is the real possibility that the pandemic will worsen these inequalities. Indeed, as Baker (Baker, 2020) argues, the pandemic has the potential to exacerbate several inequities in our financial aid system. It is possible that without attention paid to the gap in FAFSA completions emerging from the pandemic, Kentucky may lose ground in terms of equitable access to higher education. We recommend three actions moving forward.

## Recommendations

First, FAFSA completion should be closely, regularly, and transparently tracked with student-level data. Such tracking should better enable policy makers and educators to understand how individual characteristics rather than high school and county level characteristics impact FAFSA completion statewide. This analysis would ideally be provided back to high schools, such as the Kentucky Center for Statistics routinely does with its High School Feedback reports.

Second, statewide outreach efforts for FAFSA completion should be especially focused on high schools and counties where FAFSA completion has dropped during the course of the pandemic. This outreach should be clear and focused, prompting students to complete the FAFSA, to talk to high school counselors (if available), or reach out to the closest community college or university to speak with their financial aid office. The concept of nudging, popularized by behavioral economists Richard Thaler and Cass R. Sunstein in their book *Nudge: Improving Decisions About Health, Wealth, and Happiness* (Thaler & Sunstein, 2009) has been applied to FAFSA completion with mixed-results (Bird et al., 2019; L. C. Page et al., 2020) Nudge theory proposes that choices can be designed in a way to positively reinforce and indirectly suggest a particular choice. It is a form of intrusive counseling, in this case to help students from lower-income and underrepresented backgrounds take the steps necessary to attend college.

Finally, Kentucky should consider passing legislation that makes FAFSA completion mandatory, such as has been done in Illinois, Texas, and Louisiana. Although implementation must be done with careful attention to equity, some evidence (Granville, 2020) suggests these policies can have a positive effect on closing the FAFSA completion gap for underrepresented students. In 2020, House Bill 87 was introduced in the State Legislature. Had this bill passed out of the State Senate, it would have required seniors in public high schools to complete and



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August 2021

submit a FAFSA in order to graduate, with options to opt out. Although mandatory FAFSA completion policies are not a panacea, with sufficient supports in place these policies may help promote equal opportunity to attend postsecondary education for underrepresented groups (Granville, 2020). In passing such a policy, and ensuring careful study of its impact, Kentucky could put itself in the forefront of states seeking to promote access and success through careful policy design.



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## Methodological Appendix

Data for this report come from the three sources listed below. Our approach in relying on these three datasets is similar to that of prior work done by Page, Lowry, and Nurshatayeva (2017) in their report for the National College Access Network (NCAN) on the relationship between district poverty and FAFSA completion nationwide. However, our approach differs in that we focus on high schools, not districts.

U.S. Department of Education, Federal Student Aid (FSA), “FAFSA Completion by High School and Public School District.” Release date: July 2, 2021. <https://studentaid.gov/data-center/student/application-volume/fafsa-completion-high-school>

U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), “Public Elementary/Secondary School Universe Survey”, 2018-19, 2019-20, 2020-21, v.1a; “Public Elementary/Secondary School Universe Survey Geographic Data (EDGE)”,

U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program. “2019 Poverty and Median Household Income Estimates - Counties, States, and National”  
Release date: December 2020. <https://www.census.gov/programs-surveys/saipe.html>

Data were merged by public high school name to create a single dataset with high school level FAFSA completions from July 2018 to July 2021, high school level characteristics from 2018 to 2021, and county level youth poverty data from 2019. Because only public high schools were included in our analysis, our figures may differ from those reported for Kentucky by the National College Access Network.

The percent change year-over-year was calculated as a simple percentage change in completions between 2020 and 2021. The percentage of completions for each year was calculated as the number of completions per high school divided by the number of seniors in each year.

The 75th percentile was used as a cut point to divide high schools into low- or high-minority as well as annual household income at the county level. A school was considered high-minority if 24% or more of all enrolled were students of color. A county was coded as high-income if median household income from SAIPE was greater than or equal to \$59,025. All continuous variables in the dataset were treated as such in our regression modeling.