

Postsecondary Enrollment During the COVID-19 Pandemic: Evidence from Rhode Island

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Introduction

The COVID-19 pandemic disrupted nearly every aspect of the social and economic lives of individuals, families, and communities. It also highlighted and deepened existing racial/ethnic and socioeconomic disparities. Beyond higher infection and death rates from the virus (Choi et al. 2020; Denice et al. 2020; Wrigley-Field et al. 2020), racialized minorities and those from lower socioeconomic statuses were more likely to experience job losses and layoffs during the pandemic (Cortes and Forsythe 2023; Montenovio et al. 2022). These same groups who were employed during the pandemic worked in occupations with significantly higher risks of exposure to COVID-19 (St-Denis 2020). Black, Latinx, and Asian households were also more likely to fall behind on their housing payments than White households, due in part to lost income during the pandemic (Cornelissen and Hermann 2023).

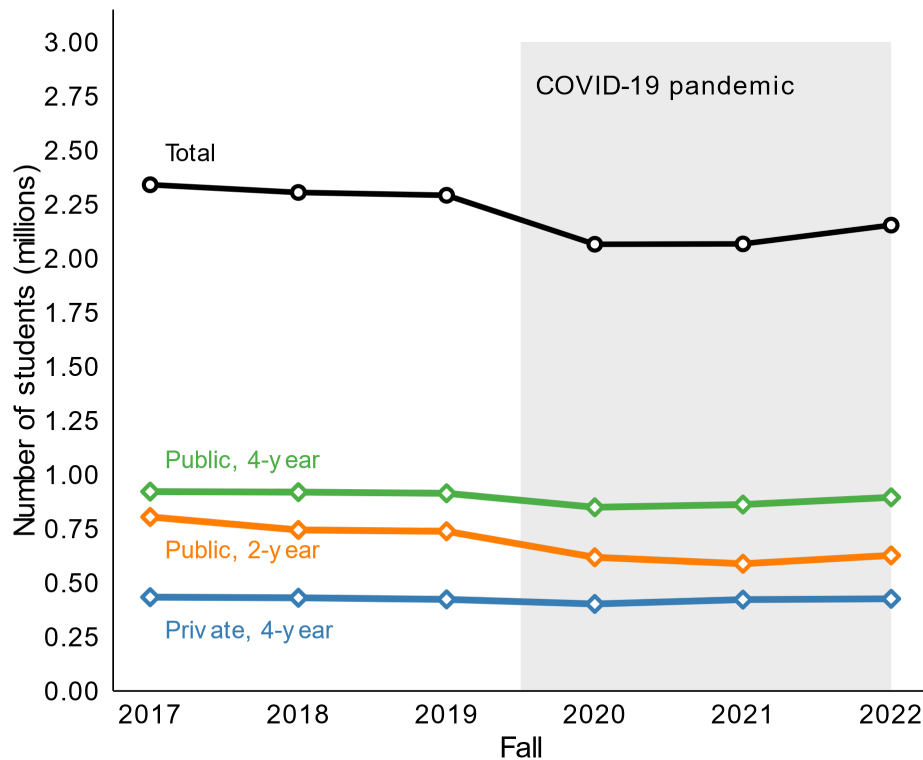
Education, too, was negatively impacted by the pandemic. Research has provided ample evidence about the challenges related to learning loss, access, and mental health among students in elementary and secondary schools (i.e., those in kindergarten through grade 12). Students' achievement, attendance, and grade-level progression declined substantially more than expected during the pandemic (Fuller et al. 2023; Strunk et al. 2023). And students of color, low-income students, and those who attended high-poverty schools experienced substantially slower growth in their test scores during the pandemic as compared to their pre-COVID growth (Peters et al. 2023).

Similar research is urgently needed to understand the effects of the COVID-19 pandemic on postsecondary education. Indeed, COVID-19 has undoubtedly affected most aspects of attending, learning, and teaching at higher education institutions (Harper 2020) in addition to students' preparation for meeting the demands of college and university (Lake 2023). This working paper examines whether and how the pandemic affected students' transitions from secondary to postsecondary education and their experiences in college and university.

The emerging research on postsecondary education during the pandemic suggests that postsecondary enrollment declined during the first couple years of the pandemic. Figure 1 uses data from the National Student Clearinghouse to show the number of freshmen aged 24 and younger enrolled in postsecondary schooling from 2017 to 2022 (National Student Clearinghouse Research Center 2022). After holding relatively steady at around 2.3 million students in 2017, 2018, and 2019, total freshman enrollment plummeted by 10% in fall 2020—the first fall of the pandemic. The decline was especially large in the public two-year sector, which saw its enrollment drop by over

16% (from nearly 740,000 to just under 620,000 students between fall 2019 and fall 2020), compared to declines in the public four-year (7%) and private four-year (5%) sectors. There was no meaningful rebound in the second year of the pandemic (fall 2021). By fall 2022, the number of freshmen across all sectors had ticked upwards (by about 4% overall), but this has still not been enough to make up for the pandemic losses.

Figure 1. Fall freshman enrollment, 2017-2022



Note: Figure shows the total number of first-year (freshman) students aged 24 and younger enrolled in fall across all postsecondary sectors, from 2017 to 2022.

Source: Figure 7, Current Term Enrollment Estimates, Fall 2022, NSC. Available here: <https://nscresearchcenter.org/current-term-enrollment-estimates/>

Other research confirms these broad trends. One study, for instance, found that postsecondary enrollments rates fell in fall 2020 (the first fall of the pandemic), particularly among higher-income young adults (Klugman, Arteta, and Lee 2022). Another study focused on the community college (two-year) sector in California, finding that enrollment dropped by 11 percent from fall 2019 to fall 2020 and by another 7 percent from fall 2020 to fall 2021 (Bulman and Fairlie 2022).

Beyond enrollment, nearly three in four U.S. households with plans to attend postsecondary education experienced pandemic-related disruptions (Liu 2021). Such disruptions widened existing socioeconomic and demographic disparities in

educational aspirations and attainment. While White students were more likely to report taking classes in different formats, Black and Hispanic students were more likely to switch into different degree programs or cancel their postsecondary plans altogether (Liu 2021). Liu also found that nonwhite students were also more likely to change or cancel their plans due to health or financial concerns, whereas White students were more likely to do so over concerns about changes to campus life.

This report builds on this emerging evidence, focusing on trends in one state in New England (Rhode Island) and bringing granular, longitudinal, student-level administrative data to bear on the following questions:

1. How has postsecondary enrollment and persistence changed during the COVID-19 pandemic?
2. Did students change the kinds of institutions in which they enrolled?
3. How do trends in enrollment and persistence compare across student subgroups (for instance, by race and socioeconomic status) and by institution type?
4. How do students' high school experiences shape their postsecondary pathways?

Data

We draw on several sources of data. First, this report uses student-level administrative data from the Rhode Island Department of Education (RIDE). Our sample includes the population of 33,735 Rhode Island public school students who graduated high school between the 2017-2018 and 2020-2021 school years.¹

These data are well-suited to the aims of this descriptive analysis. Because they cover the population of graduating public high school students in a state, the sample size allows precise estimates of postsecondary enrollment rates as well as the ability to disaggregate the analyses by student subgroups (e.g., race/ethnicity). Further, the data are longitudinal. The data follow individual students from kindergarten (or from their earliest enrollment in a Rhode Island public school) through their high school enrollment. RIDE merged information from the National Student Clearinghouse to incorporate students' attendance at postsecondary institutions across the country. For each school year, these data provide information on students' demographic characteristics, current grade level, and school. The data also include students' high school graduation date, the date they initially enrolled in a postsecondary institution, a

¹ The raw data include 34,079 unique students who graduated high school between January 1, 2018 (the earliest graduation year in our data) and June 30, 2021 (the latest graduation date for which we can observe postsecondary enrollment), and who have valid, non-missing information about whether or not they enrolled in college or university. We further exclude 344 students who were not in grade 12 at their last observation in the data, for a total sample size of 33,735.

code identifying the college or university in which they enrolled, and information on whether they were still enrolled in their second year following high school graduation.

Table 1 provides an overview of key characteristics (free and reduced-price lunch eligibility, race/ethnicity, and gender) of the students in the Rhode Island administrative data, both overall and by students' year of high school graduation. Students are divided into three categories based on their free and reduced-price lunch eligibility:² (i) *No FRL* refers to students who were never FRL-eligible across all years they were enrolled in Rhode Island public schools; (ii) *Low FRL* refers to students who were FRL-eligible for at least one year and at most half of their school years; (iii) *High FRL* refers to students who were FRL-eligible for more than half of their school years.

Table 1. Summary statistics of public high school students in Rhode Island, overall and by year of high school graduation

	Overall	High school graduation year			
		2018	2019	2020	2021
<i>Socioeconomic status</i>					
No FRL	45.3	45.7	45.8	45.7	44.0
Low FRL	11.2	9.2	11.8	10.8	12.8
High FRL	43.5	45.1	42.4	43.6	43.2
<i>Race/ethnicity</i>					
White	59.6	61.1	59.6	59.6	58.2
Black	8.8	8.6	9.0	8.8	9.0
Hispanic	24.6	23.9	24.6	24.0	26.0
Asian	3.3	3.0	3.3	3.6	3.2
American Indian	0.6	0.6	0.5	0.6	0.5
Other (two or more groups)	3.1	2.7	3.0	3.5	3.1
<i>Gender</i>					
Women	49.7	49.3	50.2	49.0	50.4
Men	50.3	50.7	49.8	51.0	49.6
<i>N</i>	33,735	8,111	8,455	8,544	8,625

Note: Data comes from Rhode Island student-level administrative data. Table displays the percentages of students belonging to each demographic group.

Importantly, the FRL, racial/ethnic, and gender composition of high school graduating cohorts did not change meaningfully between 2018 and 2021. A little less than half of

² Rather than rely on a single-point-in-time measure of students' FRL status (e.g., in students' final year of high school), we draw upon the longitudinal nature of our data to characterize a students' history of FRL eligibility. We calculate the percentage of years a student is eligible for FRL from kindergarten (or the earliest grade in which they are present in the Rhode Island public school system) through grade 12.

students are classified in either the most advantaged (*No FRL*) or least advantaged (*High FRL*) socioeconomic groups. Roughly 60% of the students are White, 9% are Black, and about a quarter are Hispanic. There are even shares of women and men.

Table 2 shows students' racial/ethnic and gender composition by their FRL eligibility. While women and men are evenly distributed across the three FRL categories, racial/ethnic groups are not. Nearly 90% of the *No FRL* group is White, compared to under one-third of the *High FRL* group. By contrast, just 2% and 5% of the *No FRL* is Black and Hispanic, respectively, and much higher shares (16% and 46%) of the *High FRL* group are Black and Hispanic. To the extent that we expect postsecondary enrollment among less economically advantaged students to be most negatively impacted by the pandemic, such impacts would be most heavily experienced by Black and Hispanic students.

To the student-level file, we merge our second data source: institution-level information about the sector (public vs. private, two-year vs. four-year) in which students enroll from the Integrated Postsecondary Education Data System (IPEDS), downloaded from the Urban Institute's Education Data Portal. College codes available in the student-level file were matched to institutions' Office of Postsecondary Education (OPE) identification numbers in the IPEDS data.

Table 2. Summary statistics of public high school students in Rhode Island, by socioeconomic status

	No FRL	Low FRL	High FRL
<i>Race/ethnicity</i>			
White	88.0	59.3	30.2
Black	2.1	9.8	15.6
Hispanic	4.7	22.5	45.9
Asian	2.8	4.1	3.6
American Indian	0.2	0.7	0.9
Other (two or more groups)	2.3	3.6	3.8
<i>Gender</i>			
Women	49.2	49.0	50.5
Men	50.8	51.0	49.5
<i>N</i>	15,275	3,773	14,687

Note: Data comes from Rhode Island student-level administrative data. Table displays the percentages of students belonging to each racial/ethnic and gender group, by their socioeconomic status (FRL eligibility).

Third, we complement our focus on Rhode Island in this report with publicly available information from state education agency websites for other states in the New England region.

Findings

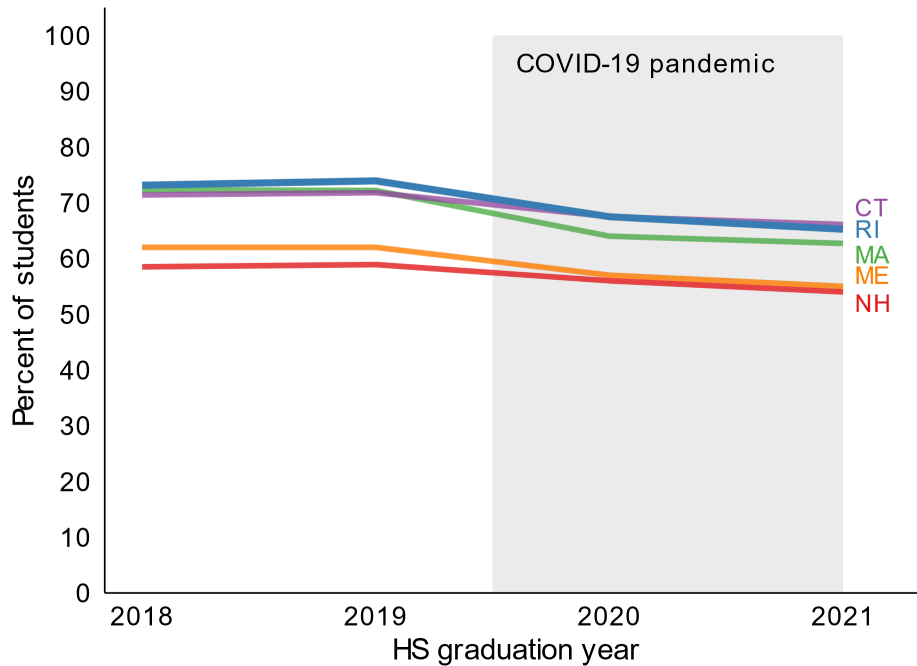
Finding 1: *Students across New England were less likely to enroll in postsecondary education in the first two years of the pandemic compared to pre-COVID levels.*

As seen in Figure 2, across all five of the New England states for which we have data, rates of immediate postsecondary enrollment declined during the first year of the pandemic.³ In Rhode Island, for example, the postsecondary enrollment rate dropped from 73.9% among those who graduated high school in 2019 to 67.5% among those who graduated in 2020—a decline of 6.4 percentage points.⁴ Similar declines in postsecondary enrollment occurred in other New England states between students who graduated high school in 2019 and those who graduated in 2020: 8.2 percentage points in Massachusetts, 5.0 in Maine, 4.3 in Connecticut, and 2.9 in New Hampshire. These initial drops were followed by another—albeit smaller—round of declines of roughly 2 percentage points in each state in the second year of the pandemic.

³ We focus on immediate enrollment—that is, postsecondary matriculation within one year of graduating high school—given research showing that students who enroll in college or university soon after completing high school experience better educational attainment and employment outcomes compared to those who delay their enrollment in a postsecondary institution (Bozick and DeLuca 2005; Denice 2019).

⁴ Students are categorized into classes based on their dates of high school graduation. The students in the administrative data graduated from high school between January 1, 2018, and June 30, 2021; most students graduate in June of any given year, and only a handful of students graduate in off-months (late August through May). We categorize students by their date of graduation into four groups: 2018 (those who graduated between January 1, 2018, and June 30, 2018), 2019 (July 1, 2018, to June 30, 2019), 2020 (July 1, 2019, to June 30, 2020), and 2021 (July 1, 2020, to June 30, 2021). Students who repeated a grade in high school (around 5% of the total sample) are assigned to the year in which they graduate high school.

Figure 2. Postsecondary enrollment rates across New England states



Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school, separately for five New England states.

Source: Rhode Island: student-level administrative data; Connecticut, Massachusetts, Maine, and New Hampshire: state-level data publicly available on state education agency websites.

At the same time, high school graduation rates have held steady. In Rhode Island, around 84% of high school students graduated in each year between 2018 and 2021. High school graduation rates among student subgroups were similarly consistent across these cohorts of students (e.g., 80-83% of Black students, 76-77% of Hispanic students, and 87-88% of White students graduated high school in each year between 2018 and 2021). Furthermore, as Table 1 indicates, neither the size nor composition of Rhode Island’s high school population changed substantially over this time period. This suggests that the inflection point was in the transition from secondary to postsecondary schooling. In other words, this is not a story about changing selection among high school graduates. Some students who would have likely gone on to enroll in college or university—and who in prior years did so—opted not to or were unable to do so during the pandemic.

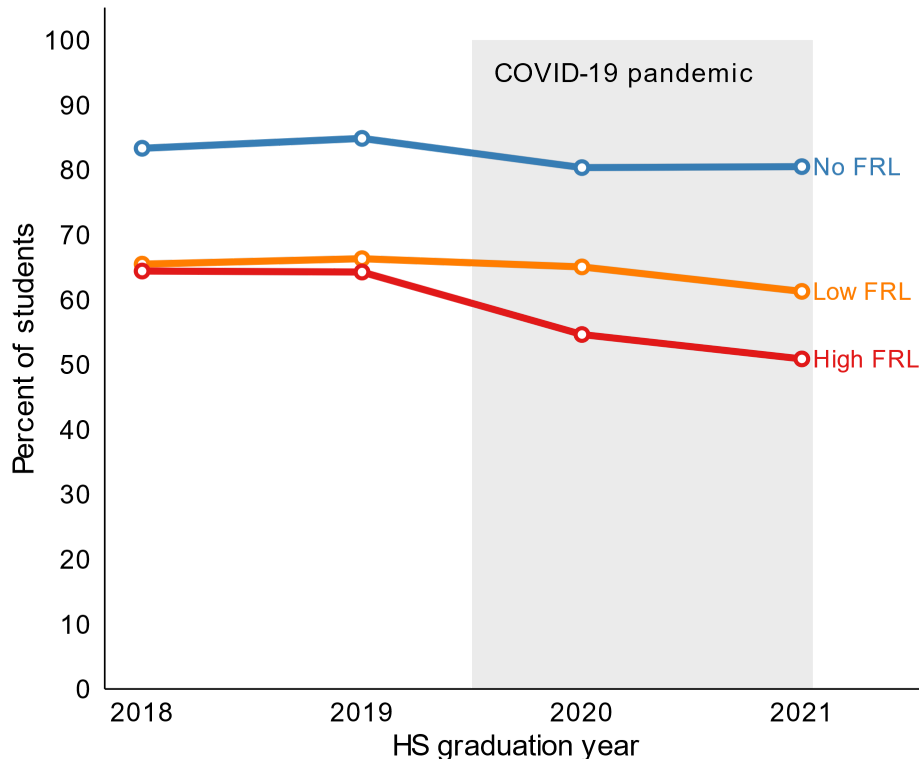
Additionally, we do not see evidence that students were more likely to delay their initial enrollment in postsecondary education during the pandemic, or to delay their enrollment by a longer amount of time. In Rhode Island, just 4.4 to 6.7% of graduating high school students who enrolled in a postsecondary institution did so more than a year after completing high school prior to the pandemic (in 2017-18 or 2018-19). For

those graduating high school in the first year of the pandemic (in 2019-20), a similar share (a little over 5%) delayed their postsecondary enrollment. Among those who delayed, students graduating high school before or during the pandemic waited a similar amount of time to matriculate (between 1.5 and 2 years). In short, there was a substantial decrease in college-going during the pandemic, which was not made up by students postponing their enrollment.

Finding 2: Traditionally underrepresented groups in Rhode Island saw their postsecondary enrollment decline especially starkly.

Figure 3 disaggregates postsecondary enrollment rates by Rhode Island students’ socioeconomic status, as proxied by their free or reduced-price lunch eligibility. Among those who graduated high school prior to the pandemic (in 2018 and 2019), roughly 84% of students in the highest SES group (*No FRL*) and about two-thirds of those in the other two SES groups (*Low FRL* and *High FRL*) enrolled immediately in postsecondary education.

Figure 3. Postsecondary enrollment rates in Rhode Island, by socioeconomic status



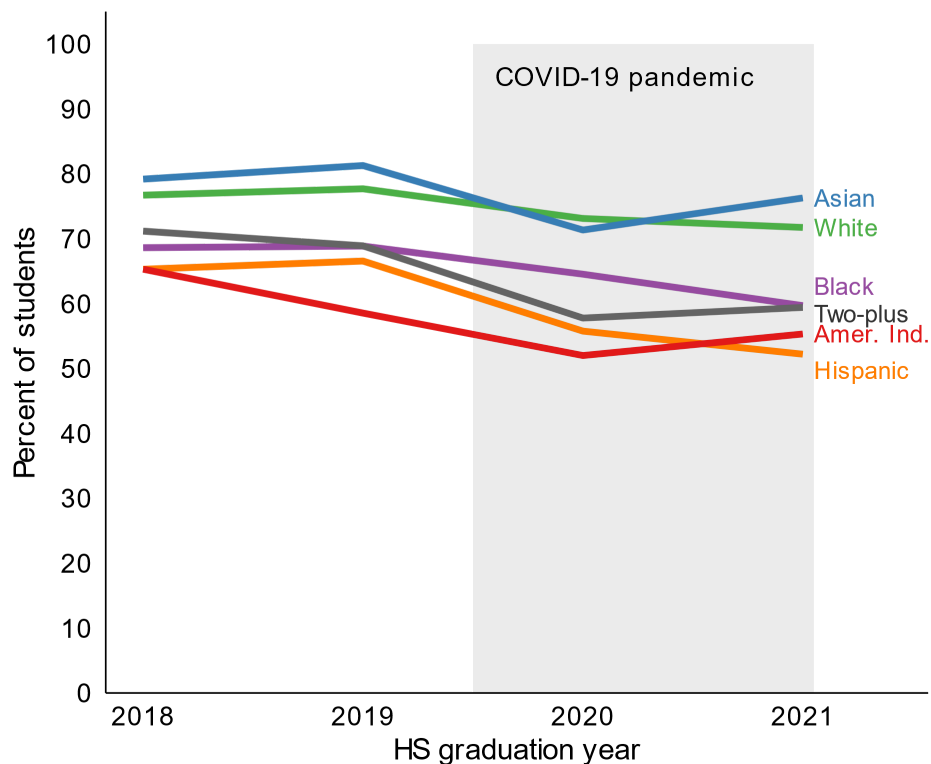
Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within 1 year, by the year in which they graduate from high school and their free and reduced-price lunch eligibility.

Source: Rhode Island student-level administrative data.

The most economically advantaged students saw their enrollment decline by about 4.5 percentage points during the first year of the pandemic, before holding steady into the second year of the pandemic. But enrollment among the least advantaged students fell by nearly 10 percentage points—from 64.2% in 2019 to 54.6% in 2020—and by another 3.7 percentage points (to 50.9%) in 2021. This means that the enrollment gap between the most and least economically advantaged students widened during the pandemic.

Figure 4 paints a similar picture by focusing on enrollment gaps among racial/ethnic groups. While all racial/ethnic groups experienced declines in postsecondary enrollment, especially during the first year of the pandemic, Black and Hispanic students were the most impacted. Indeed, the gap between Black and White students increased from roughly 8-9 percentage points among those who graduated high school in 2018 through 2020 to 12 percentage points among those who graduated in 2021. The gap between Hispanic and White students increased from about 11 percentage points in 2018 and 2019, to more than 17 percentage points in 2020, and to over 19 percentage points in 2021.

Figure 4. Postsecondary enrollment rates in Rhode Island, by race/ethnicity



Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and their race/ethnicity.
Source: Rhode Island student-level administrative data.

In addition to socioeconomic status and race/ethnicity, Table 3 shows how postsecondary enrollment rates changed during the pandemic by other student characteristics: sex, eligibility for an Individualized Education Plan (IEP), and English language learner status (ELL).

Postsecondary enrollment among boys declined slightly more than among girls in the first year of the pandemic. Boys saw their enrollment decline by more than 7 percentage points, from a little over 67% in 2019 to 60% in 2020 and 2021. Girls' enrollment declined by 5 percentage points from 2019 to 2020 (80.4% to 75.5%), though they experienced an additional decline of 4.5 percentage points into the second year of the pandemic (to 71.0% in 2021). Those with an IEP and English language learners also saw larger declines than their non-IEP and non-ELL counterparts.

Table 3. Postsecondary enrollment rates in Rhode Island, by other student characteristics

		High school graduation year			
		2018	2019	2020	2021
Sex	Girls	78.8	80.4	75.5	71.0
	Boys	67.7	67.3	59.8	59.4
	Gap	11.1	13.1	15.7	11.6
IEP	No	76.4	77.4	70.9	69.1
	Yes	46.9	46.8	37.2	35.7
	Gap	29.5	30.6	33.1	33.4
ELL	No	74.8	75.5	69.8	67.7
	Yes	51.1	55.1	43.3	39.8
	Gap	23.7	20.4	26.5	27.9

Notes: Table shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and other student characteristics.

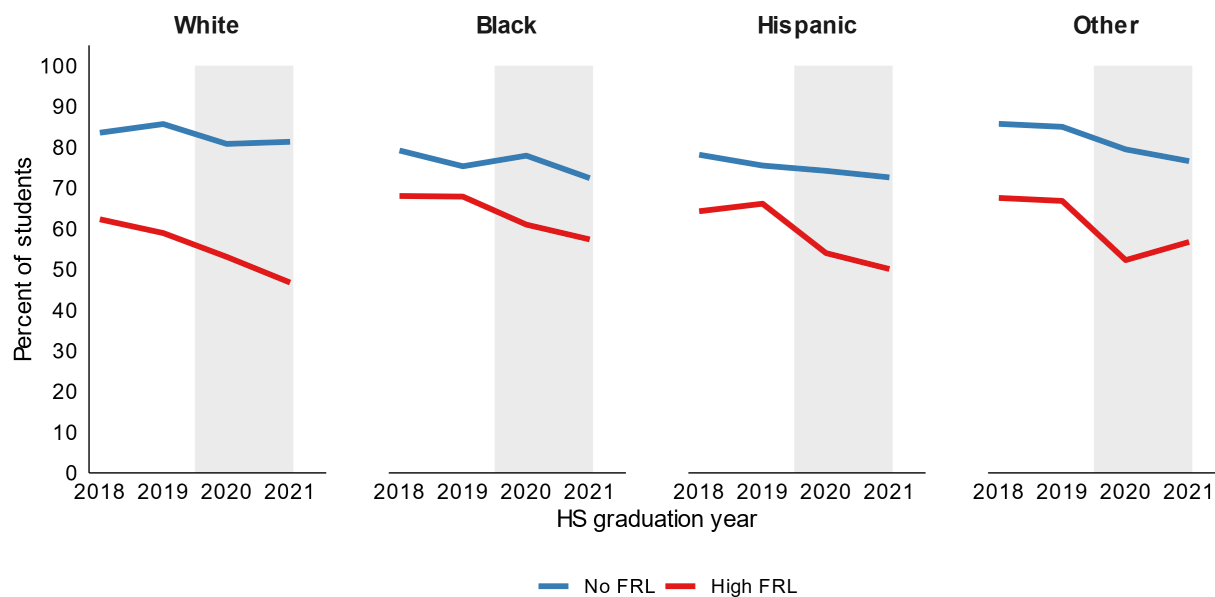
Source: Rhode Island student-level administrative data.

Figures 5, 6, and 7 illustrate trends in postsecondary enrollment among intersectional groups—by socioeconomic status and race/ethnicity, by socioeconomic status and gender, and by socioeconomic status, race/ethnicity, and gender, respectively. To ensure we retain large enough subsample sizes, we combine Asian students, American Indian students, and students reporting more than one group into a single “Other” category. Additionally, to improve the readability of these figures and to focus on the most interesting trends, we focus on the disparities between the *No FRL* and *High FRL*

groups (consistent with Figure 3, the *Low FRL* group generally falls somewhere in between these two).

In Figure 5, White students in the *No FRL* group experienced a decline in their postsecondary enrollment in the first fall of the pandemic, followed by a bit of a rebound in COVID’s second fall (2021). Black students in this socioeconomic group experienced a sizable decline in their enrollment—but in the second year of the pandemic. Hispanic students and those of other racial/ethnic groups in the *No FRL* group saw their enrollment decline steadily. Among all racial/ethnic groups, declines in postsecondary enrollment were especially pronounced among those in the *High FRL* category—with almost no rebound during the pandemic’s second year (with the exception of the “Other” racial/ethnic group). Recall, however, that White students are substantially less likely to fall in that *High FRL* category than are Black or Hispanic students (see Table 2 above). So, while White students in this socioeconomically disadvantaged group also experienced enrollment losses, this trend was much more pronounced among Black and Hispanic students.

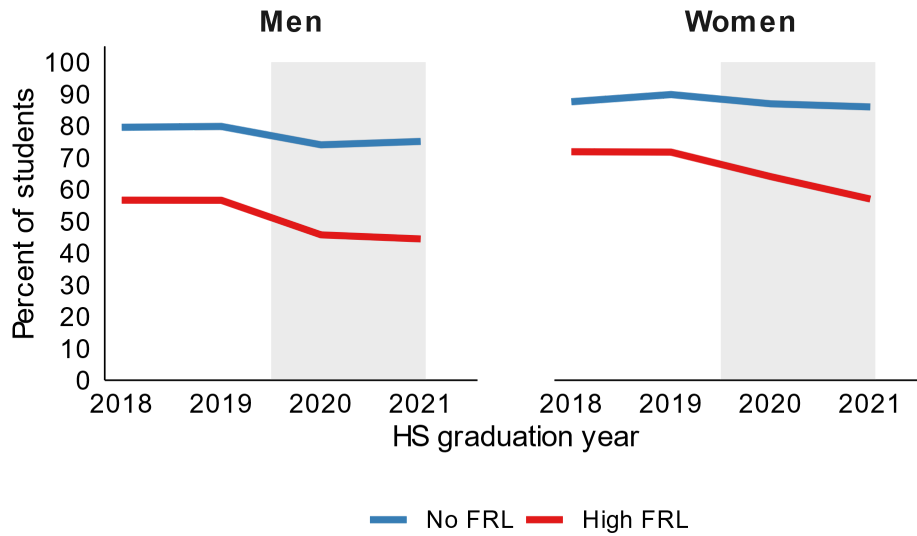
Figure 5. Postsecondary enrollment rates in Rhode Island, by socioeconomic status and race/ethnicity



Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and their socioeconomic status and race/ethnicity.

Source: Rhode Island student-level administrative data.

Figure 6. Postsecondary enrollment rates in Rhode Island, by socioeconomic status and gender

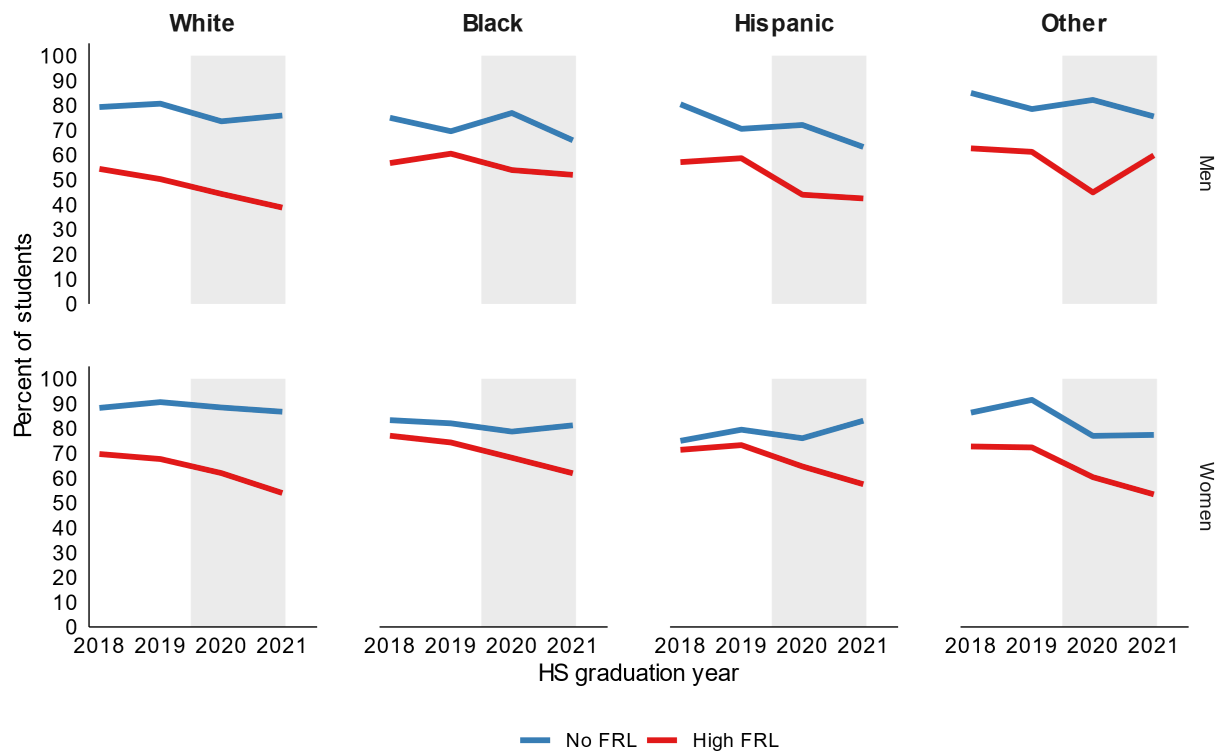


Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and their socioeconomic status and gender.

Source: Rhode Island student-level administrative data.

In a similar way, Figure 6 shows that men and women in the most advantaged group (*No FRL*) experienced relatively small declines in postsecondary enrollment compared to their counterparts in the *High FRL* group. At the same time, important gender differences are evident. Not only are men on average less likely than women to enroll in college or university, but the socioeconomic gap between lower- and higher-class men is larger than it is among women—at least prior to the pandemic. Among 2018 graduates, for instance, the gap between *No FRL* and *High FRL* men is nearly 23 percentage points, compared to 15.7 percentage points among women. However, by the 2021 cohort, the socioeconomic status gaps are the same for men and for women (about 30 percentage points). This is largely because women in the less advantaged group saw their postsecondary enrollment continue to decline into the second year of the pandemic, whereas enrollment among men in this group stabilized after a large drop in the pandemic’s initial year.

Figure 7. Postsecondary enrollment rates in Rhode Island, by socioeconomic status, race/ethnicity, and gender



Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and their socioeconomic status, race/ethnicity, and gender.

Source: Rhode Island student-level administrative data.

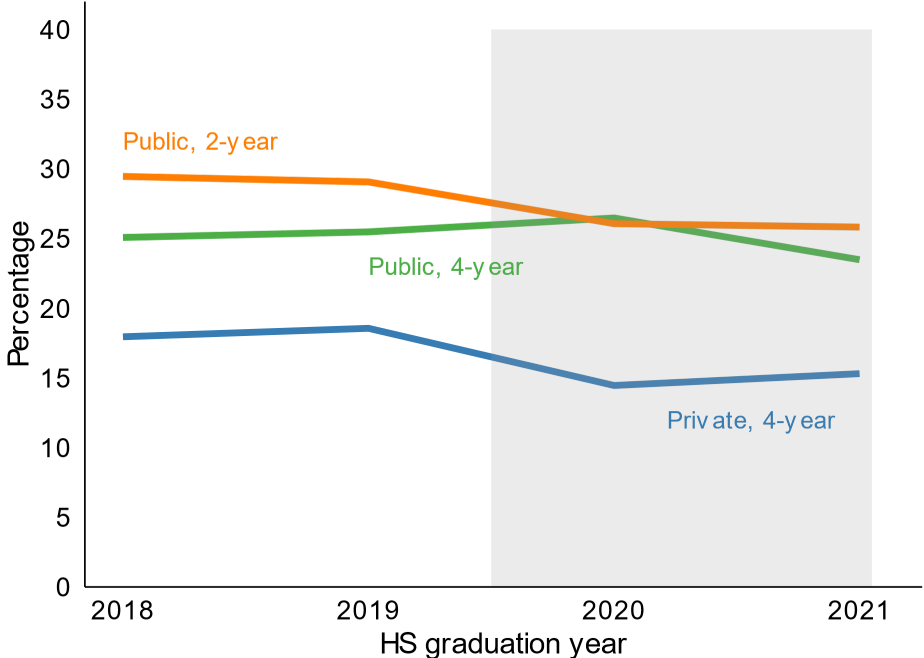
By looking at socioeconomic status, race/ethnicity, and gender all together in Figure 7, two patterns emerge. First, Hispanic men saw some of the largest declines in enrollment—among both those from higher and lower socioeconomic statuses. Indeed, more advantaged socioeconomic backgrounds appear “protective” against enrollment losses during the pandemic for most groups—especially Black and White women and men, for whom enrollment rates did not decline very much—but *not* for Hispanic men. Second, socioeconomic gaps widened among Black and Hispanic women, as well as (to a lesser extent) White men and women.

Finding 3: *Declines in enrollment were not experienced uniformly across postsecondary education sectors.*

As Figure 8 shows, declines in enrollment during the pandemic were especially pronounced at public, two-year colleges, consistent with national trends. Among Rhode Island students who graduated high school in 2018 or 2019, about 29%

Rhode Island students who graduated high school in 2018 or 2019, about 29% enrolled in a public two-year college. This fell to around 26% in the classes of 2020 and 2021. Enrollment in the private, four-year sector also fell substantially (from 19% of those graduating in the classes of 2018 and 2019 to 15% of those in the class of 2020), while a relatively steady share of graduating high schoolers enrolled in public, four-year institutions.

Figure 8. Postsecondary enrollment rate of high school students in Rhode Island, by sector

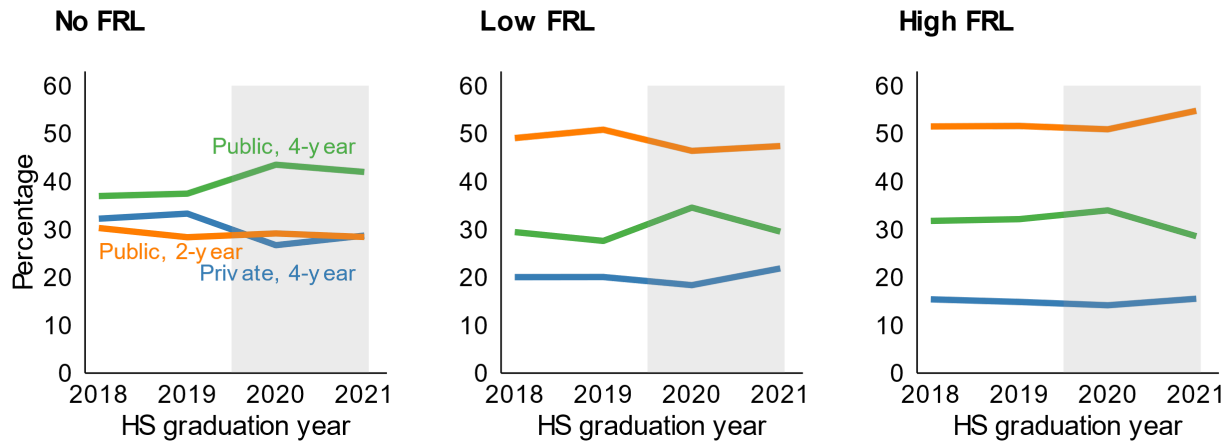


Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and the institutional sector in which they enroll.

Source: Rhode Island student-level administrative data.

Among Rhode Island’s college-goers, the shares of students enrolled shifted between sectors as well—patterns that were not consistent across student subgroups. For instance, the share of students from higher socioeconomic backgrounds (*No FRL*) enrolled in postsecondary education shifted their enrollment within the four-year sector (from private to public institutions), while the share of less economically advantaged college-goers shifted their enrollment within the public sector (from four-year to two-year public institutions). These patterns can be seen in Figure 9.

Figure 9. Postsecondary enrollment by institutional sector in Rhode Island, by socioeconomic status

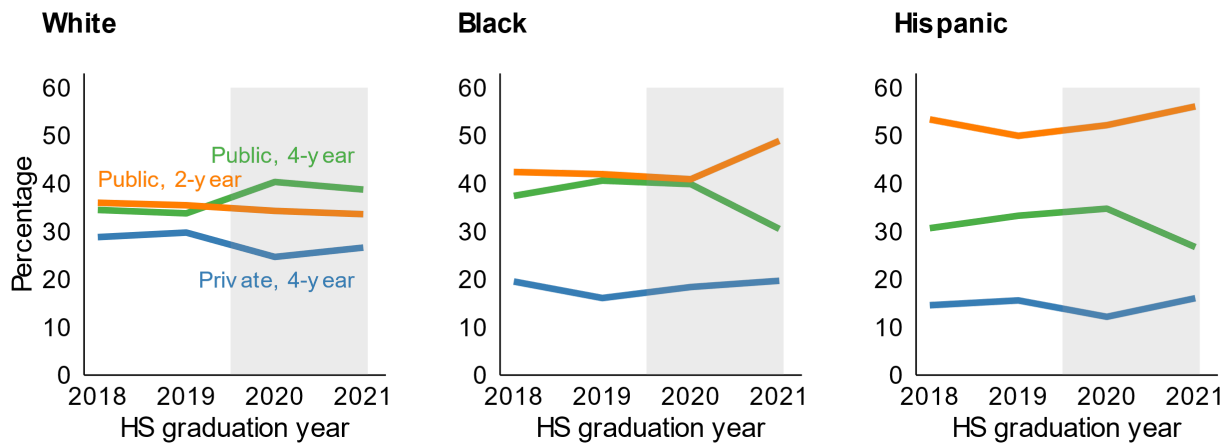


Notes: Figure shows the percentage of students who immediately enroll in a postsecondary institution within one year by the institutional sector in which they enroll, the year in which they graduate from high school, and their free and reduced-price lunch eligibility.
Source: Rhode Island student-level administrative data.

We see similar patterns by students’ race/ethnicity, illustrated in Figure 10.⁵ The share of White college-goers in public, four-year institutions increased, while their share in private, four-year schools decreased. Black and Hispanic students were generally less likely than White students to attend private, four-year schools, and their enrollment in that sector held relatively steady. But the share of Black and Hispanic college-goers in public, two-year colleges substantially increased, while their share in public, four-year institutions decreased during the pandemic.

⁵ We focus our subgroup analyses on the three largest racial/ethnic categories: White, Black, and Hispanic.

Figure 10. Postsecondary enrollment by institutional sector in Rhode Island, by race/ethnicity



Notes: Figure shows the percentage of students who immediately enroll in a postsecondary institution within one year by the institutional sector in which they enroll, the year in which they graduate from high school, and their race/ethnicity.

Source: Rhode Island student-level administrative data.

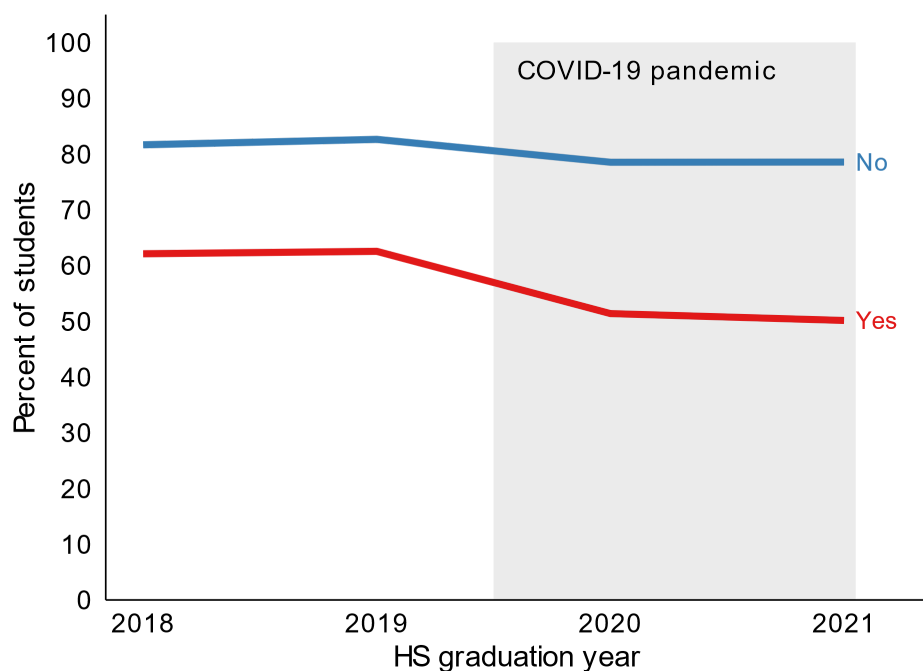
These trends suggest that the costs associated with attending college and university mattered to students and their families—particularly to those from less economically advantaged and underrepresented backgrounds (Liu 2021; Silver et al. 2022). The financial crunch associated with the pandemic seems to have pushed college-goers into less expensive kinds of institutions—from the private to public sector, and from four-year to two-year institutions.

Finding 4: *Students’ high school experiences matter for their postsecondary enrollment—but not necessarily equally across student subgroups.*

For instance, student absenteeism increased substantially during the pandemic (Dee 2023; Santibañez and Guarino 2021), and this appears to have had important implications for postsecondary enrollment rates. As seen in Figure 11, students who were chronically absent⁶ saw their postsecondary enrollment decline by roughly 12 percentage points from 2018 to 2021, compared to just 3 percentage points among non-chronically absent students.

⁶ Chronic absenteeism is defined here as being absent for at least 10% of school days in a given academic year.

Figure 11. Postsecondary enrollment rates in Rhode Island, by chronic absenteeism



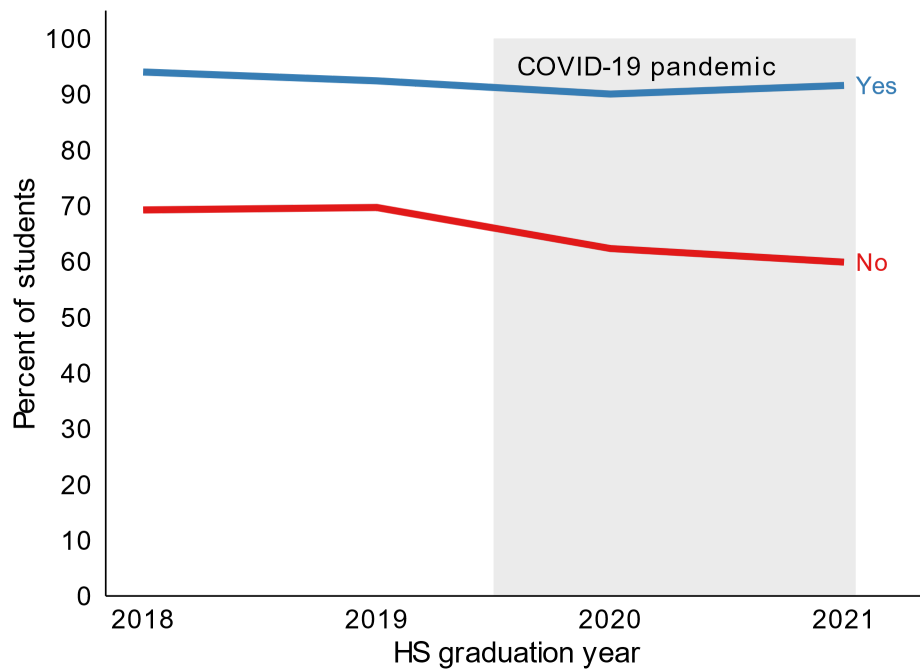
Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and whether or not they were chronically absent during high school.

Source: Rhode Island student-level administrative data.

Certain high school courses have been linked to postsecondary preparation, attendance, and performance—including calculus (Long, Conger, and Iatarola 2012; Long, Iatarola, and Conger 2009; Ogut and Circi 2023). In the data, around 17% of students in Rhode Island had taken calculus (either at their school or through a dual-enrollment program) by the time they graduated high school. We might wonder whether taking calculus in high school continued to serve as a pathway into postsecondary education and *for whom*.

Figure 12 shows that students who took calculus in high school had generally high rates of postsecondary enrollment, which did not change much before or during the pandemic. Students who did not take calculus, by contrast, saw their enrollment fall 9 percentage points, from 69% among 2018 high school graduates to 60% among 2021 graduates.

Figure 12. Postsecondary enrollment rates in Rhode Island, by calculus course-taking



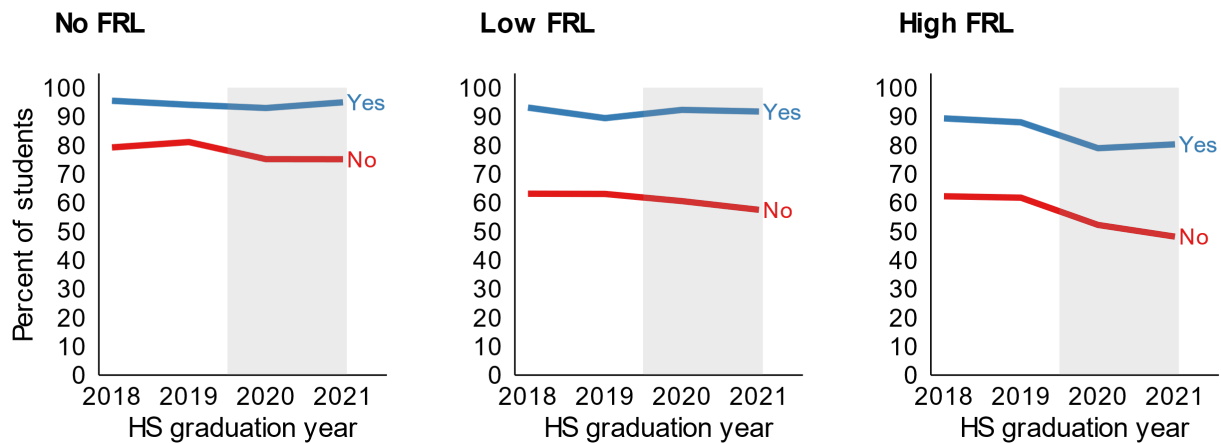
Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school and whether or not they took calculus in high school.

Source: Rhode Island student-level administrative data.

Furthermore, calculus course-taking was substantially less “protective” for students from lower socioeconomic backgrounds than for their more advantaged counterparts, as shown in Figure 13. *High FRL* students who took calculus in high school saw their postsecondary enrollment decline by 9 percentage points between 2019 and 2020 (from 88% to 79%), compared to a 1-percentage-point decline among *No FRL* students (from 94.1% to 93.0%).

We see a similar pattern by race/ethnicity: Black and Hispanic students who took calculus in high school saw their postsecondary enrollment rates decline by 8 and 9 percentage points, respectively, from 2018 to 2021, compared to no decline among White students.

Figure 13. Postsecondary enrollment rates in Rhode Island, by calculus course-taking and socioeconomic status

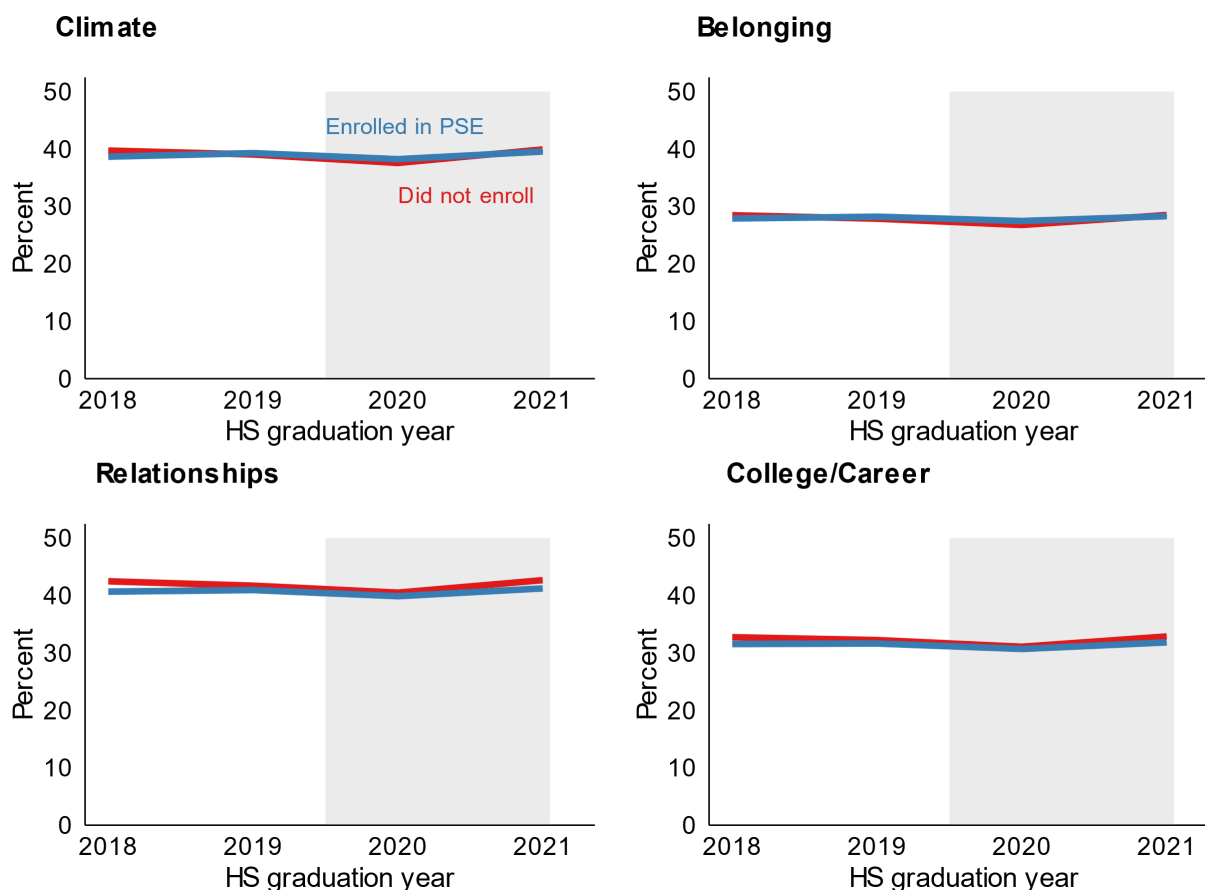


Notes: Figure shows the percentage of graduating high school students who enroll in a postsecondary institution within one year, by the year in which they graduate from high school, whether or not they took calculus in high school, and their FRL-eligibility.

Source: Rhode Island student-level administrative data.

In addition to students' own absenteeism and course-taking, we also consider whether students' perceptions of their schools' learning environments are related to rates of postsecondary enrollment during the pandemic. In Figure 14, we show the percentage of a school's students who rated their school favorably across four areas—school climate, sense of belonging, student-teacher relationships, and college, career, and life readiness—for students who did and did not enroll immediately in postsecondary education. (For more on the school climate surveys and the measures we use here, see Appendix A.) The general takeaway is this: students are no more or less likely to enroll in postsecondary education whether they attended a school with high or low learning environment scores. In results not shown, we disaggregate these trends by socioeconomic status and race/ethnicity, and we similarly find no large differences between those who do and do not enroll immediately in college or university either before or during the pandemic. We encourage some caution when interpreting these results, however, since we do not have access to student-level survey data.

Figure 14. School-level assessments of climate, by year of high school graduation and whether students enroll immediately in postsecondary education



Notes: Figure shows the school-level average climate scores, by the year in which students graduate from high school and whether or not they enroll immediately in postsecondary education.

Source: Rhode Island student-level administrative data.

Finding 5: While overall rates of persistence into a second year of postsecondary education did not decline during the pandemic as drastically as initial enrollment, there is a lot of variation across student subgroups.

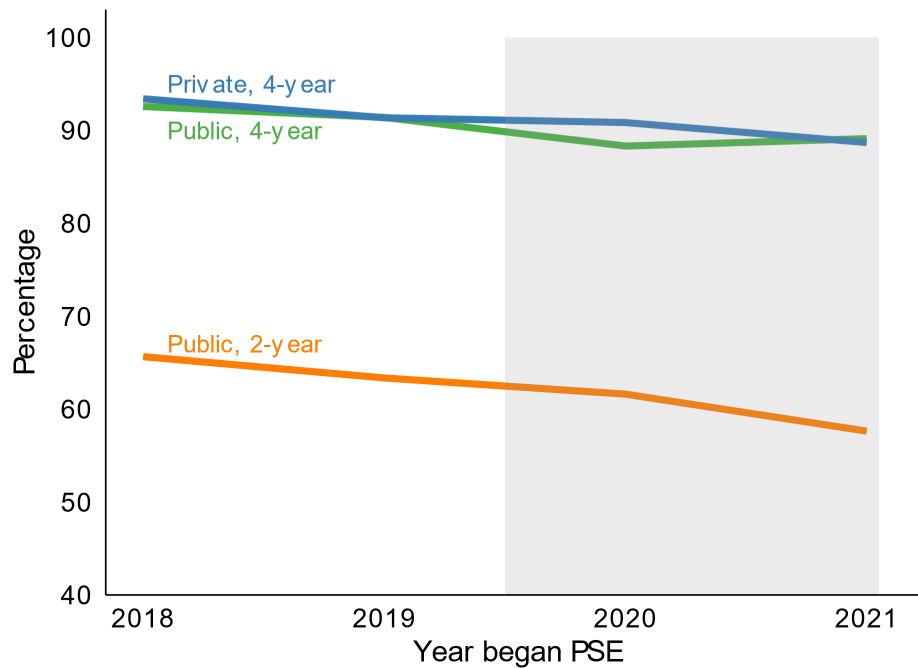
Overall, in Rhode Island, rates of persistence into a second year of postsecondary education declined by only a small amount during the pandemic as compared to pre-COVID levels. About 79-82% of students who began college or university in 2018 or 2019 persisted to a second year, compared to 77-78% of students who began in 2020 or 2021.

However, this overall picture masks substantial variation by institutional sector and student subgroup. As Figure 15 shows, declines in persistence were evident in the

public sector, and especially among two-year colleges. Rates of persistence among two-year college-goers were about 2 percentage points lower for those who began in 2020 (61.6%) as compared to those who began in 2019 (65.6%), and were lower still for those who began college in 2021 (57.6%).

Figures 16 and 17 disaggregate persistence rates by institutional sector as well as by students' socioeconomic status and racial/ethnic background, respectively.

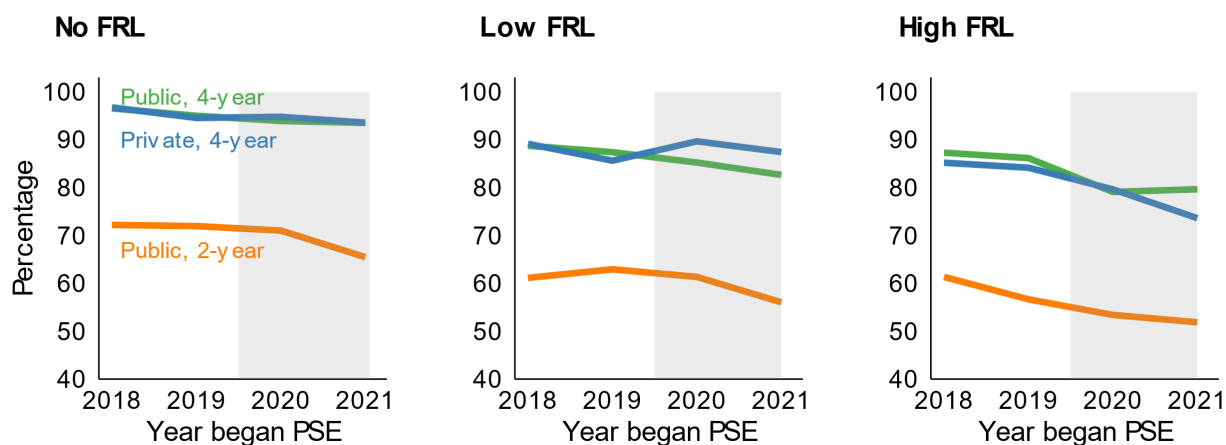
Figure 15. Postsecondary persistence by institutional sector in Rhode Island



Notes: Figure shows the percentage of students who persist to a second year of postsecondary education, among those who immediately enrolled within one year of completing high school, by institutional sector and the year in which they began college or university.

Source: Rhode Island student-level administrative data.

Figure 16. Postsecondary persistence by institutional sector in Rhode Island, by socioeconomic status



Notes: Figure shows the percentage of students who persist to a second year of postsecondary education, among those who immediately enrolled within one year of completing high school, by institutional sector, the year in which they began college or university, and their free and reduced-price lunch eligibility.

Source: Rhode Island student-level administrative data.

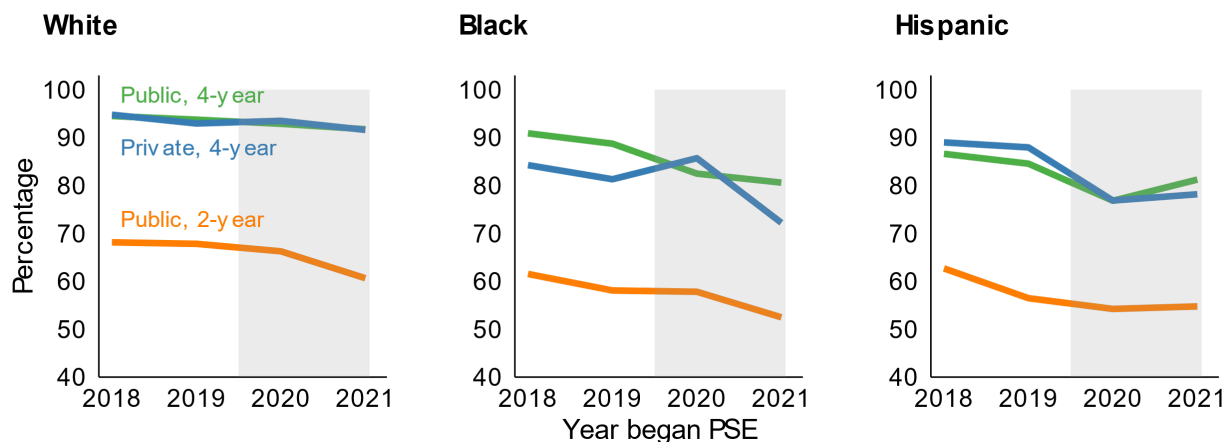
Among the most advantaged students (*No FRL*) enrolled in public or private four-year institutions, persistence remains high (over 90%) both before and during the pandemic. These advantaged students enrolled in public two-year institutions do experience a drop in the likelihood of persisting, particularly among those who began in 2021—from about 72% among those who began college or university in 2018 through 2020 to about 66% among those who began in 2021.

For students in the middle socioeconomic group (*Low FRL*), their patterns of postsecondary persistence are broadly similar to those in the most advantaged group—even though their rates are on the whole lower. We see only a small and gradual decline in persistence among those who attend public, four-year institutions; no overall change among those enrolled in private, four-year institutions; and a somewhat larger and sharper drop among those in public, two-year institutions. Their persistence in public, two-year colleges fell from 63% in 2019 to 61% in 2020 and 56% in 2021.

By contrast, among the least advantaged group (*High FRL*), students experienced large declines—of nearly 10 percentage points—in second-year persistence across all three postsecondary sectors. Their persistence in public, four-year institutions fell from 87% in 2018 to 80% in 2021; from 85% to 74% in private, four-year institutions; and from 61% to 52% in public, two-year schools.

Turning to differences by racial/ethnic background in Figure 17, we see similar patterns. The largest declines in persistence among White students were evident in the public, two-year sector. Compared to students who began college or university in 2018, White students who first enrolled in public, two-year schools in 2021 were nearly 8 percentage points less likely to persist to a second year.

Figure 17. Postsecondary persistence by institutional sector in Rhode Island, by race/ethnicity



Notes: Figure shows the percentage of students who persist to a second year of postsecondary education, among those who immediately enrolled within one year of completing high school, by institutional sector, the year in which they began college or university, and their race/ethnicity.
Source: Rhode Island student-level administrative data.

Black and Hispanic students, however, experienced substantial declines in postsecondary persistence during the pandemic across sectors. Black students' persistence rates dropped by roughly 10 percentage points in each sector between 2018 and 2021: from 91% to 81% in public, four-year institutions; from 84% to 72% in private, four-year schools; and from 62% to 53% in public, two-year colleges.⁷ Similarly, Hispanic students experienced declines in persistence between 2018 and 2021 of about 6 percentage points in public four-year institutions (87% to 81%), around 11 percentage points in the private four-year sector (89% to 78%), and roughly 8 percentage points in public, two-year schools (from 63% to 55%).

⁷ There are some additional interesting patterns among student subgroups: namely, short-term increases in persistence among *Low FRL* and Black students who began at a private four-year school in 2020. Some of this may be partially explained by the changing composition of the high school graduates who enrolled in postsecondary institutions during the pandemic. Given the overall decline in enrollment, and the relatively lower levels of enrollment in private, four-year colleges among less economically advantaged and Black students (see Figures 8-10), there may be some selection on characteristics that would make students particularly resilient in the face of the challenges associated with attending college during a pandemic. These patterns may also reflect statistical noise, given the relatively small sizes of these particular subgroups.

Conclusions

Drawing on student-level administrative data from Rhode Island, we contribute to the growing evidence about how rates of postsecondary enrollment and persistence changed during the COVID-19 pandemic. Our results highlight substantial declines in enrollment generally, as well as growing socioeconomic, racial/ethnic, and gender gaps.

While college enrollment rates were generally lower among cohorts of students graduating high school during the pandemic compared to those who left high school prior to 2020, these declines were especially large among lower-income, Black, and Hispanic students. Additionally, students from less advantaged backgrounds were the only ones to experience meaningful declines in their postsecondary persistence rates. Among college-goers, students also appear to have made different decisions about where to enroll—changes that vary systematically by their socioeconomic and racial/ethnic backgrounds. Whereas the share of higher-income and White college-goers shifted within the four-year sector from public to private schools, the share of lower-income and Black or Hispanic students shifted within the public sector from four-year to two-year institutions.

These patterns are somewhat surprising given evidence during other periods of large-scale disruption—such as economic recessions—that postsecondary enrollment is counter-cyclical (Barr and Turner 2015; Dellas 2003; Long 2014). In other words, enrollment tends to increase as individuals look to ride out poor labor markets and when the perceived costs of forgone earnings to time spent in school rather than at work decrease (Barrow and Davis 2012; Borrescio Higa 2018). The descriptive findings of this report suggest some evidence that concerns about the costs of higher education may have had some effect on students' enrollment decisions during the pandemic: increased economic uncertainty may have pushed students into less expensive institutions within the four-year (from private to public) and public (from four-year to two-year) sectors among more and less advantaged students, respectively.

But the impacts of the pandemic were not solely or even primarily economic in nature. The pandemic's economic recession was relatively short-lived and, compared to prior recessions, it came with a more progressive policy response (Larrimore, Mortenson, and Splinter 2023). Due to stimulus payments and unemployment insurance, median earnings near the bottom of the income distribution *increased* and income inequality *fell* (Autor, Dube, and McGrew 2023; Larrimore et al. 2023). Additionally, rapid relative earnings growth among lower-income workers may have reduced the college wage premium and enabled young, non-college educated workers to move from lower- to higher-paying jobs (Autor et al. 2023).

In this way, the perceived value of a college degree and the cost/benefit analysis of attending and persisting in postsecondary education may have shifted during the pandemic. Economic uncertainty coupled with rising opportunities in the low-wage labor market may have incentivized lower-income students to re-evaluate the value of higher education (Silver et al. 2022) and thus decide against postsecondary enrollment or drop out of college during the pandemic. This is part and parcel of a broader trend challenging the perceived returns to a college degree (Heckman, Letkiewicz, and Kim 2023), especially given rising debt (Dwyer, McCloud, and Hodson 2012; Seamster and Charron-Chénier 2017). Indeed, some research suggests that lower-income students perceive the financial and non-pecuniary (e.g., job and life satisfaction) returns of college to be lower than their higher-income counterparts (Boneva and Rauh 2017).

Students from lower-income backgrounds or those experiencing financial uncertainty due to the pandemic may be more cost-conscious of high tuition fees and the possibility of student debt. This may have led some students and families to question the costs and necessity of a college degree and pushed them to reconsider postsecondary education altogether or enroll in shorter, more cost-effective programs (Philibert 2020; Silver et al., 2022). This may partly explain the substantial declines in enrollment and persistence in the public two-year sector during the pandemic: economically disadvantaged students may be taking advantage of immediate wage gains in unskilled occupations, while foregoing the long-term earnings potential of a college degree.

Students who may have considered community college enrolled for Fall 2020 may have also doubted the value of beginning a course of study remotely—especially those in hands-on fields with tight connections to the labor market like automotive, culinary arts, and allied health (Bulman and Fairlie 2022; Schanzenbach and Turner 2022). Indeed, there is some evidence that, among two-year college students, the largest enrollment declines occurred in fields in which virtual learning was either impossible or suboptimal. For example, Bulman and Fairlie (2022) find that enrollment in engineering and industrial technologies at California’s community colleges fell by 30% in fall 2020 compared to fall 2019, but then bounced back with an increase of 7% in fall 2021 as health and social distancing mandates were lifted. Nationally, we see a similar rebound in two-year college enrollments from fall 2020 to fall 2021 among hands-on fields with clear connections to in-demand job opportunities, including construction trades (15.5% year-over-year change), transportation and materials moving (11.5%), precision production (6.3%), and mechanic and repair technologies (4.0%).⁸ So, when they became more available again, shorter degree programs like these may provide some students with an opportunity to make an investment in future earnings potential, albeit

⁸ See the “Enrollment by Major Field” tab (two-year sector) in the Appendix of the National Student Clearinghouse Research Center’s *Current Term Enrollment Estimates, Fall 2022* (available here: https://nscresearchcenter.org/wp-content/uploads/CTEE_DataAppendixFall2022.xlsx).

through a lower-risk program with a shorter duration and in a field more closely connected to job opportunities in skilled trades.

Another factor driving decreased enrollment rates among students from lower-income backgrounds could be that they considered longer degree programs from more expensive institutions to be riskier, carrying a higher chance of downward social mobility if degrees go uncompleted. Higher-income families may be more willing—and financially able—than lower-income families to take on these risks (Breen and Goldthorpe 1997).

The widening socioeconomic, racial/ethnic, and gender gaps in whether and where students enroll are concerning. Some students who deferred or dropped out of college during the pandemic may return but others may cancel their educational plans altogether (Allen and Seaman 2020). And even if they do return, delaying their initial enrollment or interrupting their academic momentum can lead to suboptimal educational and economic outcomes. Delayers are less likely to attend four-year institutions or complete a bachelor's degree, and are more likely to transition to other roles such as parent or spouse (Bozick and DeLuca 2005; Denice 2019). Delayers also tend to earn less over the long-term (Lin and Ting 2019). Furthermore, students who begin their postsecondary education at two-year rather than four-year institutions are less likely to earn a bachelor's degree (Xu, Jaggars, and Fletcher 2016). And as this and other research finds, much of the decline in postsecondary persistence during the pandemic occurred in the public two-year sector. In these ways, the pandemic proved disruptive to students' educational trajectories by ushering in substantial losses in the rate at which students transitioned to college or university, leading students to enroll in different kinds of institutions, and widening college-going gaps by socioeconomic status, race/ethnicity, and gender.

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APPENDIX A: School Climate Survey Data

Part of this report draws on school climate survey data. Each year since 2016-2017, the Rhode Island Department of Education (RIDE) surveys students, parents, and educators about their assessments of their schools' learning environments, safety, and student engagement. We received summaries of students' survey data at the school level for each year between 2016-2017 and 2021-2022.

Our data include scores for questions from student surveys in the following four topic areas:

1. School Climate
 - a. How positive or negative is the energy of the school?
 - b. How pleasant or unpleasant is the physical space at your school?
 - c. How fair or unfair are the rules for students at this school?
 - d. At your school, how much does the behavior of other students hurt or help your learning?
 - e. How often do your teachers seem excited to be teaching your classes?
2. College, Career, Life Readiness
 - a. When there are major news events, how often do adults at your school talk about them with students?
 - b. To what degree do you see your family, culture, and personal identities reflected in the texts you read at school?
 - c. How much do you think missing at least two days of school a month impacts a student's chance of graduating high school?
 - d. How often do you talk about college in class?
 - e. How often do you talk about jobs and careers in class?
 - f. How happy are you with how much time you spend in specials or enrichment (art, music, PE, etc.)?
 - g. Does your school encourage you to take challenging courses?
 - h. Do you have an Individualized Learning Plan (ILP) (a plan that describes your academic, career, and personal goals and maps out a plan for achieving these goals)?
 - i. How useful is your ILP?
3. School Belonging
 - a. How well do people at your school understand you as a person?
 - b. How connected do you feel to the adults at your school?
 - c. How much respect do students at your school show you?
 - d. How much do you matter to others at this school?
 - e. Overall, how much do you feel like you belong at your school?
4. Student/Teacher Relationships
 - a. How respectful are your teachers towards you?

- b. If you walked into a class upset, how concerned would your teachers be?
- c. When your teachers ask, “How are you?”, how often do you feel that your teachers really want to know your answer?
- d. How excited would you be to have your teachers again?

The raw scores for each question capture the share of students responding favorably to the question. For example, one question under “school climate” asks students, “How positive or negative is the energy of the school?” Students could answer on the following 7-point Likert scale: very negative, somewhat negative, slightly negative, neither negative nor positive, slightly positive, somewhat positive, or very positive. Students are considered to have responded favorably to this question if they reply with any one of the following three options: slightly positive, somewhat positive, or very positive. This is the same logic used when RIDE reports the results of their climate surveys publicly (see, e.g., here: <https://ride.ri.gov/information-accountability/ri-education-data/surveyworks>).

While all questions under the school climate and student-teacher relationship topics are asked of students in every year of our observation period, the questions under the college, career, life readiness and school belonging areas are not asked consistently. To help address missingness and changes in which questions were included in the surveys over time, we calculate school-level averages over all years a question was asked between 2016-2017 and 2021-2022, weighted by the number of survey-takers in any given year. This approach allows us to maximize the questions we can include in our analyses, and it helps to characterize students’ learning environments more fully by smoothing out year-to-year noise.

We then summarized students’ responses by averaging the percentage of students responding favorably to the questions within each topic area. This is consistent with the way RIDE presents their data (see, e.g., https://secure.panoramaed.com/ride/understand/1314726/survey_results/1544558#/questions/topics/11955).

We also tried a different way of reducing the dimensionality of the school climate survey data with principal components analysis (PCA). Results are substantively similar to those presented here.

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