



Texas Success Center



# **Enrollment and Success at Texas Community Colleges During the COVID-19 Pandemic**

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## **Summary**

The coronavirus pandemic caused massive disruption in higher education, with documented decreases in enrollment and a shift towards online and hybrid modes of Instruction. To understand the extent to which the pandemic affected students at Texas community colleges, we used administrative data from the Texas Higher Education Coordinating Board to conduct a descriptive analysis of enrollment, completion, and course and program delivery for entering student cohorts from Fall 2015 through Fall 2020, following them for five semesters after matriculation. Not surprisingly, we found that the size of entering fall cohorts in Texas community colleges decreased significantly after the onset of the pandemic; however, there were few differences in the demographic composition of these cohorts before and during the pandemic. Enrollment decreases occurred in both metro and non-metro areas but were greater in the former. With regard to instruction mode, the percentage of credit hours taken in person decreased significantly during the pandemic and most credit hours were taken online instead. Finally, our data show that a general trend of grade inflation continued over the course of the pandemic, with a noticeable rise in A grades in Fall 2020.

## Introduction

Various national studies, including prominent research from the National Student Clearinghouse<sup>1</sup>, demonstrate that the coronavirus pandemic caused massive disruption in the higher education sector. The documented consequences of this disruption include an unprecedented decrease in enrollment (particularly for freshmen students, first-generation students, and students of color), a hurried shift toward online and hybrid modes of instruction, and increased stress as students, faculty, and staff dealt with a myriad of life challenges posed by the pandemic. These consequences have threatened recent progress toward increasing higher education enrollment and success, particularly among historically underrepresented as well as academically and economically disadvantaged students.

Community colleges are an important point of access to higher education for many students. Therefore, it is important to understand the extent to which the COVID-19 pandemic impacted community college enrollment, completion, and course and program delivery. In this report, we document changes in community college enrollment, persistence, and completion at Texas community colleges over the course of the COVID-19 pandemic. In addition, we explore changes in the modality of course delivery, and course performance during this time.

## Research Questions

1. Did rates of enrollment, persistence, and completion at Texas community colleges change after the onset of the COVID-19 pandemic in spring 2020?
2. Did the characteristics (i.e., percent of low-income students or students of color) of student cohorts at Texas community colleges change after the onset of the pandemic?
3. Did some geographic areas (i.e., region of Texas, metro vs. non-metro areas) experience greater changes in enrollment?
4. How did the percentage of credit hours taken in each modality (in-person, hybrid, online) at Texas community colleges change during the pandemic?
5. Did final course grades received by students at Texas community colleges change during the pandemic versus pre-pandemic?

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<sup>1</sup> National Student Clearinghouse (2022). "COVID-19: Transfer, Mobility and Progress, First Two Years of the Pandemic Report." Available online at <https://nscresearchcenter.org/transfer-mobility-and-progress/>.

## Data

We used administrative data collected by the Texas Higher Education Coordinating Board (THECB), made available through the Education Research Center at the University of Texas at Dallas, to conduct this descriptive analysis. These data include detailed information on all students attending public community colleges in the state, including information on their demographic backgrounds, their college readiness status and scores on the state's college placement exam, the Texas Success Initiative Assessment (TSIA), all of the colleges they attend, all of the courses they take (including information on course modality), the grades they receive in all courses, and all degrees and credentials they earn.

## Methods

We used descriptive quantitative methods to examine trends in community college enrollment, success, and modality of instruction during the COVID-19 pandemic. As a purely descriptive study, it is important to acknowledge that our findings are not causal. As such, the observed patterns cannot be interpreted as directly attributable to the COVID-19 pandemic or to actions taken by Texas community colleges to respond to the pandemic. Nevertheless, the findings are useful for tracking changes in the community college sector over the course of the pandemic.

***Approach to Research Questions 1 and 2:*** We focused the analysis on the Fall 2015-2020 cohorts of Texas community college students and followed them longitudinally for five semesters after their matriculation. Students were eligible for inclusion in a cohort if they took most of their first-term courses at community colleges, were enrolled at least in one fall semester from 2015 to 2020, and were not enrolled for at least two semesters (excluding summer) before matriculation. Given these criteria, students could appear in more than one cohort if they had a period of at least a year in which they were not enrolled. In total, these cohorts included 1,309,286 students.

For question one, we calculated term-to-term rates of persistence, completion, upward transfer, and dropout for each cohort for five semesters since their initial enrollment. That is, for each term, we calculated the share of students who persisted (enrolled at any public two-year college in the state in the following term), transferred upward (enrolled at any four-year college in the state in the following term) or completed a credential at the end of the term, or dropped out (did not enroll in the following term). Once a student completed a credential, transferred upward, or dropped out, they were not counted in subsequent semesters for the cohort even if they re-enrolled at a later date.

To answer question two, we compared the demographic and academic characteristics of student cohorts enrolling in a community college before and after the start of the pandemic. We considered the following characteristics:

- Race/ethnicity
- Sex
- First-Time-In-College status
- Designation as economically or academically disadvantaged
- Intent (seeking degree, seeking credits for transfer, etc.)

**Approach to Research Questions 3, 4, and 5:** We compared the enrollment rates for students entering a Texas community college in Fall 2019 to Fall 2021 by urbanicity and region of the state. We sorted community colleges into administrative regions based on their assignment to a Higher Education Regional Council by the THECB. We determined metro and non-metro designation based on the Rural-Urban Continuum Code for the county in which the community college is located.

To assess changes in course modality, we calculated the percentage of credit hours taken in one of three modalities in the fall semester of each year from 2015 to 2020: face-to-face, online and hybrid. Similarly, to assess changes in course grades, we calculated the percentage of completed credit hours for which a student received a final grade of A; B or C; D, F, No-Pass, or Withdrawal; or Credit / Pass from 2015 to 2020.

## Results

*The size of entering fall cohorts in Texas community colleges decreased significantly after the onset of the pandemic.*

Figure 1 shows patterns of enrollment, persistence, completion, and upward transfer over five semesters for a combined pre-COVID cohort (2015, 2016, and 2017) and then three cohorts that experienced the pandemic (2018, 2019, and 2020). Both spring and fall semesters are included (i.e. for the Fall 2018 cohort, semester 1 is Fall 2018, semester 2 is Spring 2019, semester 3 is Fall 2019, semester 4 is Spring 2020, and semester 5 is Fall 2020). The transition from green to orange (and the addition of asterisks after the semester number) in the later cohorts marks the onset of the COVID-19 pandemic in Spring 2020.

There are not many significant changes in the rates of completion and upward transfer or persistence after the onset of the COVID-19 pandemic. The Fall 2018 and Fall 2019 cohorts show a slight decrease in persistence into the 5th semester (65% persistence as opposed to 68% in prior cohorts), which could be related to the pandemic. The Fall 2020 cohort also shows a slight drop in persistence into the second semester (64% persistence compared with 67% in previous semesters). However, these are small differences and are inconsistent between the post-COVID cohorts.

The most meaningful change shown in Figure 1 is the significant drop in newly enrolled students at the height of the pandemic in Fall 2020. All the cohorts that matriculate before the onset of the pandemic (e.g. those that are green for the initial fall term) are of similar size, around 224,000 students. The Fall 2020 cohort is much smaller with only around 192,000 students, representing a decrease of more than 14 percent in initial fall enrollment. Although we did not include it in the graphic because we were unable to follow it for more than one semester, the Fall 2021 cohort is similarly small with around 197,000 students.

While we expected to see a greater impact of the COVID-19 pandemic on rates of persistence, completion, and upward transfer, the observed changes in the cohort size do indicate that some students delayed or canceled enrollment plans during this time. In the next section, we explore the characteristics of each cohort to identify if some student groups were more vulnerable to this disruption.

**Figure 1:** Patterns in enrollment, persistence, drop/stop out, and completion/upward transfer



*The demographic composition and academic background of fall cohorts did not change after the pandemic.*

Table 1 shows the proportion of students in each cohort by characteristics of interest, including race and ethnicity, sex, economic disadvantage, academic disadvantage, first-time-in-college status, and intent. The purpose of this investigation was to determine if students with certain characteristics (i.e., low-income students or students of color) were more likely to be missing from the post-pandemic cohorts; however, there were not many significant changes in the composition of these cohorts. The primary exceptions were a marked increase in the share of Hispanic students over time and across cohorts, and an increase in the share of students who received a Pell grant among the Fall 2021 cohort. The former pattern is consistent with overall trends in the demographics of the college-age population in Texas, and the latter pattern may be attributable in part to disruptions in economic circumstances of students and their parents brought on by the pandemic. Overall, however, the general patterns suggest that the enrollment plans of more vulnerable student groups in Texas community colleges may not have been differentially affected by the COVID-19 pandemic.

**Table 1:** Demographic characteristics of student cohorts before and during the COVID-19 pandemic

Category	Characteristic	2015-2019 Cohorts Average	2020 Cohort	2021 Cohort
Race and Ethnicity	White	33.6%	32.7%	29.9%
	Black	14.9%	14.2%	13.8%
	Hispanic	41.6%	42.7%	46.3%
	Asian	4.0%	4.3%	4.2%
	Other	5.9%	6.1%	5.8%
Sex	Female	55.7%	59.9%	57.2%
	Male	44.3%	40.1%	42.8%
Disadvantage	Pell-Recipient	38.9%	37.6%	47.6%
	Academic <sup>2</sup>	33.4%	32.9%	36.4%
First-Time-in-College Status	FTIC	48.7%	47.4%	47.4%
	Non-FTIC	51.3%	52.6%	52.6%
Intent	Earn an associate degree	51.8%	54.3%	56.0%
	Earn a certificate	7.0%	6.5%	7.6%
	Earn credit for transfer	25.4%	27.7%	24.7%
	Courses for new/better job	3.3%	3.5%	3.6%
	Earn a BAT degree	0.1%	0.4%	0.5%
	Other	12.3%	7.6%	7.6%
Enrollment Status	Full-Time	40.8%	43.0%	41.9%
	Part-Time	59.2%	57.0%	58.1%

*Note:* Because of the large sample size, almost all differences are statistically significant.

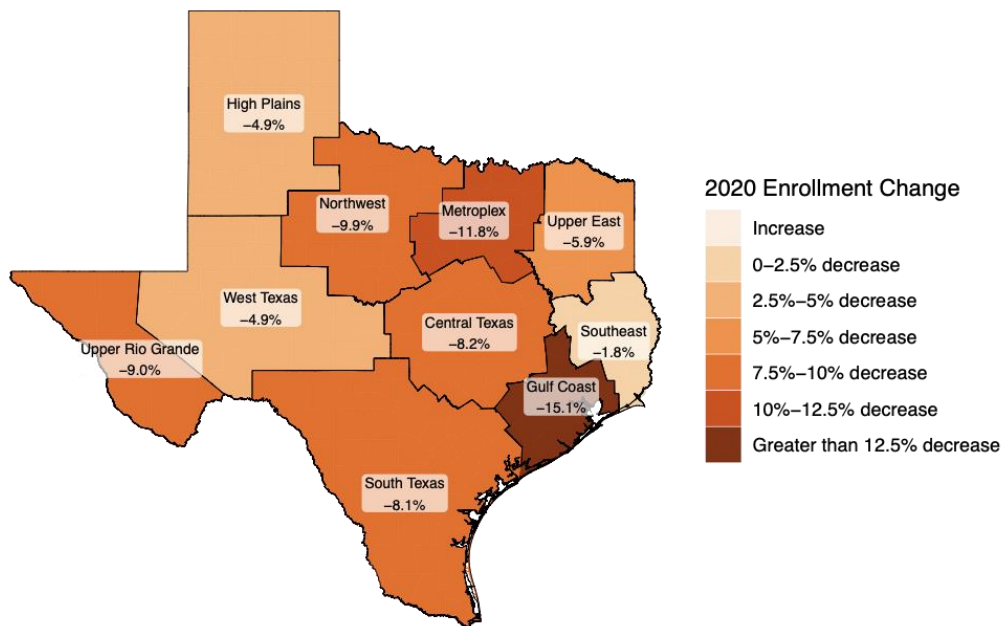
<sup>2</sup> THECB defines a student as “academically disadvantaged” if they are deemed not to have entry level college skills in reading, writing or mathematics. Typically, these are students who test below college-level on the state’s placement exam, the TSIA. Some colleges also report students who did not have a high school diploma or GED at the time of entry as academically disadvantaged. See: <https://reportcenter.highered.texas.gov/reports/data/glossary-of-data-terms/>

*Enrollment decreases occurred in 2020 and 2021 in most THECB regions but were greatest in the urban Gulf Coast and Metroplex regions.*

Figures 2 and 3 show the change in enrollment by THECB region for 2020 and 2021, relative to 2019. All regions had decreased enrollment in both years (except for the West Texas region in 2021) and many had a larger decrease in 2021. Thus, rather than enrollment recovering or staying constant after 2020, it continued a downward trend in many areas. This matched the overall trend in cohort enrollment that we observed in earlier sections of the report.

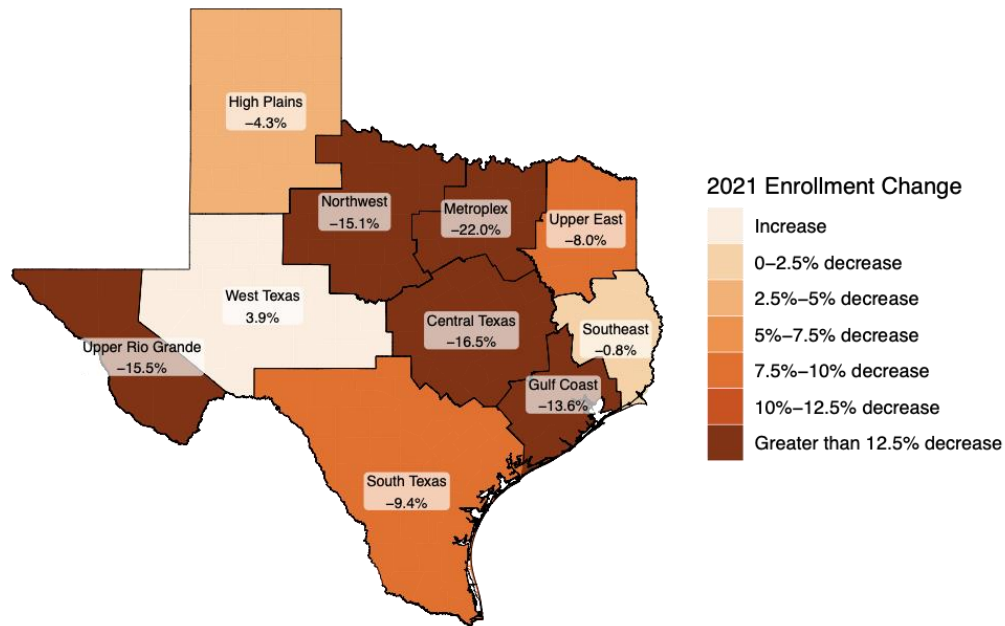
In 2020, the largest enrollment decreases occurred in the Metroplex and Gulf Coast regions (12% and 15%, respectively). These regions also experienced large declines in 2021 (22% and 14%), along with the Northwest, Central Texas, and Upper Rio Grande regions (15%, 17%, and 16%, respectively). In both years, the largely rural High Plains, West Texas, and Southeast regions had the smallest enrollment declines.

**Figure 2:** Percent change in enrollment in 2020 relative to 2019 by THECB region





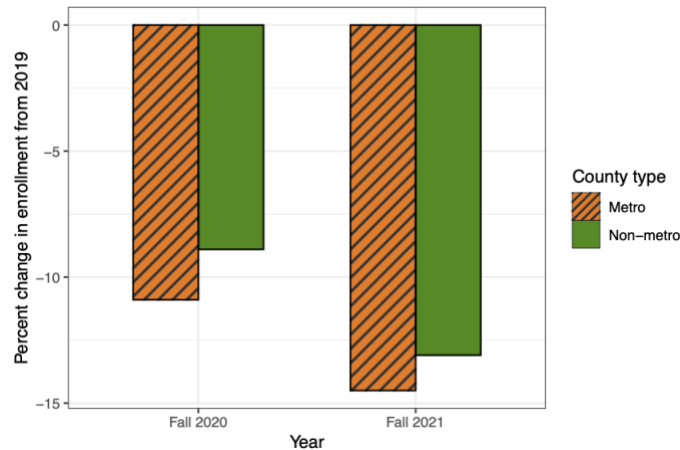
**Figure 3:** Percent change in enrollment in 2021 relative to 2019 by THECB region



*Enrollment decreased in both metro and non-metro areas, but the change was greater in metro areas.*

Figure 4 shows the change in enrollment in metro and non-metro areas in Fall 2020 and Fall 2021, relative to Fall 2019. Both metro and non-metro areas had decreases in enrollment after the pandemic and both showed a greater decrease in 2021. Metropolitan areas were the hardest hit, which aligns with the pattern we observed in Figures 2 through 3 above that the THECB regions containing large urban areas had the greatest enrollment decrease.

**Figure 4:** Percent change in enrollment in 2020 and 2021 relative to 2019 by metro/non-metro designation

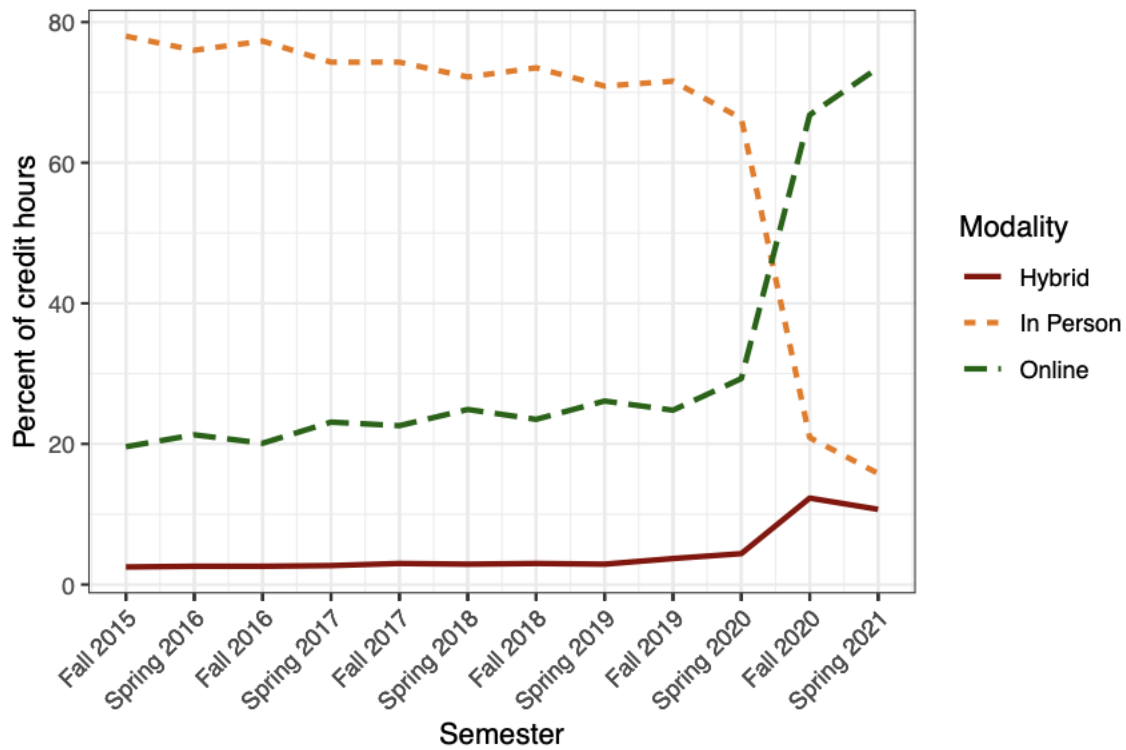


*The percentage of credit hours taken in person decreased significantly during the pandemic; the majority of credit hours were taken online instead.*

Figure 5 shows the change over time in the proportion of credit hours taken in in-person, online, and hybrid modalities. Even before the onset of the pandemic, there was a clear downward trend in the proportion of in-person credit hours, equal to a drop of approximately ten percentage points between Fall 2015 and Spring 2020. For the most part, these credit hours that are no longer in person are taken online instead. There is very little change in the percentage of courses taken in hybrid modality before the onset of the pandemic, and hybrid courses make up a very small percent of the total.

As expected, there is a significant drop in the proportion of credit hours taken in-person after the Spring 2020 semester from 68% to around 20% in Fall 2020. The percentage of credit hours taken in online and hybrid modalities significantly increased during this period to 68% and 11%, respectively. After the Fall 2020 semester, the proportion of credit hours taken in-person and hybrid modality both dropped, while the proportion of credit hours taken online continued to rise. These results align with the existing anecdotal evidence of a dramatic switch in the dominant course modality at many institutions during and after the COVID-19 pandemic.

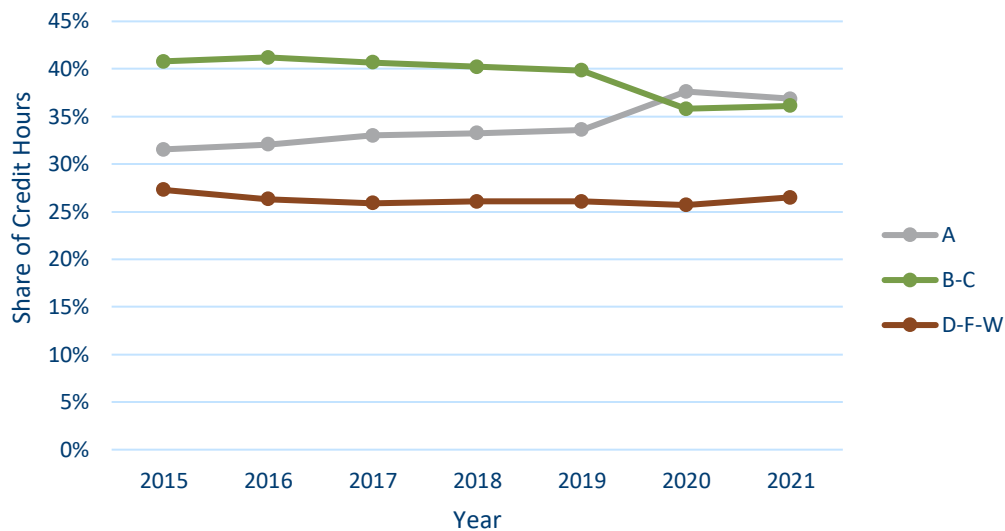
**Figure 5:** Percent of credit hours taken in person, online, and in hybrid modality at Texas community and technical colleges over time.



*A general pattern of grade inflation that began prior to the pandemic continued through Fall 2021.*

Figure 6 documents changes in final course grades students received in fall terms from 2015-2021. There is a clear trend of general grade inflation that started prior to the pandemic and has continued unabated. The share of completed credit hours for which students received a final course grade of A increased from 32% in 2015 to 37% in 2021. There was a noticeable uptick in As received during Fall 2020 (from 34% to 38%), but the share of As received in Fall 2021 (37%) was roughly in line with the pre-Pandemic trend. The increase in As over the study period was driven largely by decreases in Bs and Cs (decrease from 41% to 36%). The share of completed credits where students received a D, W or F held relatively steady at around 25% to 26% over the study period.

**Figure 6:** Share of completed credit hours by course grade



## Conclusion

The COVID-19 pandemic caused significant disruption among all higher education institutions. This report aimed to document any immediate shifts in enrollment and success at Texas community colleges at the onset of the pandemic and in the following year, and to see if any shifts differed by student groups.

As expected, we observed a marked decrease in the number of students enrolling in the Fall 2020 and Fall 2021 semesters. But, we found little evidence of changes in patterns of completion and persistence for cohorts enrolling during the COVID-19 pandemic. This indicates that students who had already started working towards a degree when the pandemic started did not change their persistence or

completion plan. However, many students who might have enrolled otherwise delayed or canceled these plans.

And, although it was expected that the pandemic would disproportionately affect certain groups, we found no evidence of changes in the composition of student cohorts entering in the fall of 2020 and 2021 with respect to race and ethnicity, sex, economic and academic disadvantage status, first-time-in-college status, and intent. Any fluctuations we observed in 2020 and 2021 with regard to these characteristics were indistinguishable from overall time trends.

At a larger scale, we observed differential declines in enrollment between THECB regions and metro and non-metro areas. The overall trend in 2020 and 2021 for all THECB regions but one and for both metro and non-metro areas was a decrease in enrollment relative to 2019. However, enrollment declines were greater in THECB regions with large urban areas and in metropolitan areas.

Our findings with respect to course modality closely follow existing anecdotal evidence that suggested large changes in the dominant instruction modality during the pandemic. Before Spring 2020, approximately two-thirds of courses were taken in person and a quarter were taken online. However, in Fall 2020 and Spring 2021, this trend reversed so that the majority of courses were taken online.

Finally, our findings with respect to course performance suggest that a general trend of grade inflation continued over the course of the pandemic. The rate at which students received As increased by nearly 17% from Fall 2016 to Fall 2021. There was a noticeable uptick in As in Fall 2020 that returned to the overall trend in Fall 2021.

## Next Steps

This is the first of two reports from a mixed methods study documenting enrollment and success patterns at Texas community colleges over the course of the pandemic. A second report, to be released by the end of 2024, will track enrollment and success patterns through Spring 2023, and report findings from a qualitative study that will document strategies that Texas community colleges are using to support students as we emerge from the pandemic.

## Acknowledgements

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The Texas Schools Project supports and conducts independent, high-quality research to inform policy and practice, improve academic achievement and teacher effectiveness, increase transitions to and success in postsecondary education, and improve labor market outcomes of students in Texas and the nation. Improving the quality of education provided to low-income and minority students continues to be a particular focus of the Texas Schools Project. For more information, visit [tsp.utdallas.edu](http://tsp.utdallas.edu)



## Texas Success Center

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