

THE GRAD **PARTNERSHIP**

Advancing Student Success Systems



Educating America

PROGRESS AND CHALLENGES IN PROVIDING ALL YOUTH WITH THE EDUCATION THEY NEED FOR ADULT SUCCESS

2024



The GRAD Partnership is a collaborative effort of nine national education organizations coming together to advance student success.



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We thank our Communicating Partners, who support our work by sharing the value of high-quality student success systems with their networks: AASA, the School Superintendents Association; Arizona Rural Schools Association; Attendance Works; Children Now; Civic; Coalition on Adult Basic Education; Colorado Youth for a Change; Data Quality Campaign; Education Resource Strategies; Education Strategy Group; Florida Association of School Administrators; National Association of State Boards of Education (NASBE); National Education Association (NEA); National Education Equity Lab; National Rural Education Association (NREA); and United Way of North Central New Mexico.

TABLE OF **CONTENTS**

- **01** Introduction
- **05** State of Educational Attainment and Engagement—2024
- **31** Featured In-Depth Analysis: The Immediate Impact of the Pandemic on High School Graduation Rates: 2020 to 2022
- **61** Plotting a Path Forward
- **68** References
- 71 Appendix A. Technical Notes
- **73** Appendix B. Additional Exhibits

LIST OF **EXHIBITS**

EXHIBIT 1.

Averaged Freshman Graduation Rate (AFGR) and Four-Year Adjusted Cohort Graduation Rate (ACGR), by State, 2002–2022	7
EXHIBIT 2. 2022 ACGR by Select Subgroup	8
EXHIBIT 3. Map of All States with 2022 ACGR, Color Coded	9
EXHIBIT 4 . State 2011 ACGR, by Range	10
EXHIBIT 5. State 2022 ACGR and Change Since 2011, by Range	11
EXHIBIT 6. 9th Grade On-track: All Students, by State	13
EXHIBIT 7. 9th Grade On-track: Students with Disabilities, by State	14
EXHIBIT 8. 9th Grade On-track: Low-income Students, by State	14
EXHIBIT 9A. Opportunities to Learn: High School Chronic Absence	16
EXHIBIT 9B. Opportunities to Learn: Advanced Placement and Dual Enrollment	19

EXHIBIT 10. Secondary School Improvement, 2011–2022	22
EXHIBIT 11. Postsecondary Enrollment by State	25
EXHIBIT 12. Six-Year Postsecondary Completion Rates by State	27
EXHIBIT 13. U.S. Adjusted Cohort Graduation Rate by Race and Ethnicity: 2017–2022	37
EXHIBIT 14. Average Annual Change in Adjusted Cohort Graduation Rate by State during the Pre-COVID-19 (2017–2019) and COVID-19 (2019–2022) Eras	39
EXHIBIT 15. Average Annual Change in Adjusted Cohort Graduation Rate by State During the COVID-19 Era: 2019–2022	40
EXHIBIT 16. State Contributions to the National Adjusted Cohort Graduation Rate Rebound: 2021 to 2022	42
EXHIBIT 17. Distribution of District Graduation Rate Changes (2019 vs. 2022)	46
EXHIBIT 18. Distribution of U.S. School District High School Graduation Rate Changes from 2019 to 2022 by State	48
EXHIBIT 19. Distribution of U.S. School District High School Graduation Rate Changes from 2019 to 2022 by Patterns of Change	49
EXHIBIT 20. Distribution of U.S. School District High School Graduation Rate Changes from 2019 to 2022 by Patterns of Change and State	50

Introduction

The Nation's Educational Attainment Challenge

For most of the 20th century, rising educational attainment among our nation's youth drove the country's prosperity. The rapid expansion of high schools in the first half of the century, followed by rapid growth in college enrollments in the second half, gave the United States the most educated populace in the world through the 1970s. Then the rest of the world started catching up, and educational attainment in the United States slowed down. High school graduation rates stagnated at around 72% between 1970 and 2005. Growth in college attainment slowed, with advances primarily fueled by female students closing prior gaps with male students and ultimately surpassing them (Balfanz et al., 2016). Consequently, by the 21st century, the United States no longer had the world's most educated populace.

This helped trigger a response. By the 21st century, it became widely understood that a more educated population resulted in better economic, social, and health outcomes. Recognition of this, combined with the realization that the 21st century's good jobsones that provide access to a middle-class life—increasingly required more than a high school education, propelled action (Carnevale et al., 2022). Federal, state, and local government came together with education, business, and civil rights leaders and organizations and philanthropic foundations to launch and sustain national efforts from roughly 2005 to 2020; the collective goal was to raise both high school graduation rates and postsecondary enrollment and attainment (Balfanz & Bridgeland, 2024). These efforts were successful. High school graduation rates rose from 72% in 2001 to 86% in 2019, with gains driven by historically underserved student populations: Black, Latino, and low-income students, and students with disabilities.

College enrollment rates also increased considerably for the same groups, and for the first time, by the late 2010s, low-income students were enrolling in college right after graduating high school at the same rate as middle-income students. Eighty percent of the high school graduating class of 2013 would, by their mid-20s, enroll in a higher education institution. College degree attainment rates also increased in this period, though not at the same rate as enrollments.

Colleges and nonprofits were also, by the mid-2010s, beginning to mobilize to address the college completion challenge. Early innovators, like Georgia State University were showing that college attainments could be increased for all students, and historically underserved students in particular, by using data analytics to more effectively deploy increased student support efforts (Atwell et. al, 2021).

Then a once-in-century pandemic hit, interrupting schooling for most students—and the essential learning, guidance, and well-being supports they received in schools. For the first time since 2005, high school graduation rates declined in 2021, as did the percentage of recent high school graduates enrolled in college. Even as high school graduation rates and college enrollments began to rebound in the years since the height of the pandemic, there are clear signs—such as high school chronic absenteeism rates hitting 40% or more in many locales—that an easy "return to normal" is not in the offing. These pandemic impacts coincided with 20 years of growth in the cost of college and, in many locales, declines in state and federal aid to higher education and college students. This made the cost of college, particularly costs associated with attending without completing, much more prohibitive for students.

The multidimensional impacts of the pandemic, combined with rapid rises in the cost of college for students and families and continuing challenges in increasing college completion, complicated the rationale that sought to make college enrollment and completion right after high school the dominant pathway to adult success. The idea that a college degree equals a good job and the most assured path to prosperity is now being challenged. The American educational attainment effort, which was re-awakened in this century's initial decades, has entered uncertain times.

The easy assertion that college for all represented the best way forward to ready the next generation for adult success has evolved to include more nuanced perspectives. These include views embracing variable pathways through postsecondary schooling and/or training to good jobs. Many are open to rethinking how the nation's youth obtain their education. At the same time, it remains true that increasing educational attainment through improved high school graduation rates and postsecondary degree or certification completion continues to matter.

DOCUMENTING THE NATION'S EFFORTS TO INCREASE EDUCATIONAL ATTAINMENT IN PANDEMIC-IMPACTED TIMES

The GRAD Partnership, a coalition of school districts and local and national nonprofits, is working collaboratively to develop the knowhow and tools to enable educational attainment to grow in productive and impactful ways in our current uncertain times. To chronicle these efforts and document the nation's progress in meeting its post-pandemic educational attainment challenge, we aim to issue an annual report to the nation. These Educating America reports build upon and expand the focus of the decade-plus of reports on Building a Grad Nation by the Everyone Graduates Center and Civic, which chronicled progress and challenges in improving high school graduation rates. The goal is to provide insight and annual data on how the nation is doing in increasing educational attainment and placing its youth and young adults on pathways to adult success.

In this first report, we highlight a series of attainment indicators, which include high school graduation rates, advanced course taking in high school, chronic absenteeism, achievement metrics, and college enrollment and attainment. These indicators provide a post-pandemic baseline from which future progress and setbacks can be measured. We also provide the first comprehensive look at the impact of the pandemic on high school graduation rates at the state and district level. We both describe the rate of improvements over the decade prior to the pandemic and analyze education outcomes during the 2020 to 2023 pandemic-impacted years. Finally, we include a series of learnings from the field to capture current efforts to solve the nation's educational attainment challenges. We conclude with some recommendations for steps forward.

Educational attainment involves both quantity and guality. It has traditionally been measured as total years of schooling (a measure of quantity) and degree attainment (a proxy for quality). In understanding the current state of educational attainment in the United States, we will focus on degree attainment but supplement it with other available measures of quantity and quality when they are available. Where possible, we will track not only high school, associate, and bachelor's degrees but also postsecondary certificates. We will track measures of high school engagement and preparation for success in college or postsecondary training to provide more insight into the skills high school graduates possess. We will also include emerging metrics of college quality and impact as they become available.



State of Educational Attainment and Engagement—2024

As the nation begins to move beyond the pandemic's immediate impacts, we can begin to understand how the pandemic (from its start in the spring of 2020, into its height in 2020–21, through 2021–22—the first year of return to full-time, in-school learning for many) disrupted the nation's decade-plus movement toward increased educational attainment.

What we find is a complicated story just beginning to unfold. Broad national patterns for high school graduation, college enrollment, and college completion during the pandemic years seem to indicate only modest pandemic impacts that either rapidly recovered or are moving steadily toward recovery. However, when we look at how the pandemic affected students in middle school and the early years of high school, we see more worrying signs.

The pandemic interrupted more than a decade of continuous national progress in raising high school graduation and college enrollment and completion rates. This is particularly true for historically underserved students, who drove most of the nation's educational attainment gains in the decade before the pandemic. At the national level, the declines during the pandemic's peak year (2020–21) were relatively small, even though they affected tens of thousands of students. High school graduation rates, for example, declined by less than a percentage point. Moreover, these modest declines reversed in the following year, bringing high school graduation rates back to slightly above pre-pandemic levels in 2021–22. Interpretation of these minimal swings in high school graduation rates between 2020 and 2022 needs to be tempered by the understanding that graduating from high school is a long process that begins when a student enters formal schooling. Thus, high school graduation rate data in 2020 to 2022 is capturing the pandemic's impacts only on students nearing the end of their secondary education. This includes students from the class of 2020, who experienced the pandemic's effects on their education experience in just the last three months of their senior year; the class of 2021, who experienced the pandemic during the end of 11th grade and all of 12th grade; and the class of 2022, who experienced it during the end of 10th grade and all of 11th grade but were largely back in school for their senior year.

The pandemic's full impact on high school graduation rates and college attainment will not be known until those students who experienced the pandemic in the early years of elementary school work their way through high school. Moreover, analysis of change in high school graduation rates during the pandemic years at the state and local levels shows much more variation, with both larger drops and bigger gains than the national average. This tells us that there is not one story of the impact of the pandemic on educational attainment, but rather multiple state and local stories. Where you lived, in good part, influences both the immediate and longer-term impacts of the pandemic on educational attainment.

At a national level, college enrollments were more deeply affected during the pandemic years than high school graduation rates; this is also showing signs of rebounding, though not as rapidly. Six-year college completion rates appear to have remained stable but, like high school graduation rates, provide insight only into the pandemic's very immediate impact on students who had already been enrolled in college for a year or more.

HIGH SCHOOL GRADUATION RATES

National Progress

The national on-time graduation rate reached an all-time high of 86.6% by spring 2022.¹ This marks an increase of 7.6 percentage points from 79% in 2011, the first year the four-year adjusted cohort graduation rate (AGCR) was reported. It also marks an emphatic rise from 71% in 2001, when the average freshman graduation rate was still used, which closely approximated the ACGR. That has translated into more than 5.5 million more students graduating instead of dropping out between 2001 and 2022.

The nation saw continuous improvement in graduation rates from 2007 to 2020. Improvements were most rapid in the years from 2010 to 2013, when high school graduation rates increased by more than one percentage point per year. Growth continued from 2014 to 2019 but at a slower rate, closer to .5 percentage points a year.

The national graduation rate continued to climb at the first spring of the pandemic in 2020, when graduating seniors were two months or so from graduation; the national rate hit an all-time high of 86.5% in 2020. It then declined for the first time since 2006, dropping to 86.1% in 2021, at the height of the pandemic—a small dip. In 2022, and approaching the tail end of the pandemic, the national graduation rate bounced back to slightly above pre-pandemic levels at 86.6%.

1 This estimate excludes the states of New Mexico and Oklahoma, for which data had not been reported.

EXHIBIT 1.



Averaged Freshman Graduation Rate (AFGR) and Four-Year Adjusted Cohort Graduation Rate (ACGR), by State, 2002–2022

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

The steady growth in national graduation rates over the past two decades has been primarily driven by those groups of students that have typically been underserved. From 2011 to 2022, the growth in the graduation rates of Black students (+14.1), Hispanic students (+11.8), and Native American students (+6.7) have all outpaced the growth in the graduation rates of white students over the same period (+5.9). The growth of Black and Hispanic students in particular has almost doubled the national average growth over that time period (+7.6). Graduation rates for students from low-income backgrounds (+11.4), English language learners (+15.1), and students with disabilities (+12.3) have also grown at almost double the national rate from 2011 to 2022.

These high rates of growth among subgroups mean that equity gaps have closed substantially over the past 11 years. However, even though many of these student subgroups have hit new highs in terms of their graduation rates, many continue to struggle and require further support. The graduation rates of Native American students, English language learners, and students with disabilities all remain in the low 70s—far below national averages (with one in four students of these backgrounds failing to graduate with their cohort). The graduation rates of Black, Hispanic, and low-income students continue to lag in the low 80s, despite significant gains over the past decade, and one in five students in these categories still do not graduate high school on time.

Student Subgroup	2011 ACGR	2022 ACGR	Graduation Rate Change, 2011 to 2022	One-Year Change, 2021 to 2022
All	79.0%	86.6%	7.6%	0.5
Black	67.0%	81.1%	14.1%	0.7
Hispanic	71.0%	82.8%	11.8%	1.1
Asian	87.0%	93.7%	6.7%	0.6
Native	65.0%	72.5%	7.5%	-1.2
White	84.0%	89.9%	5.9%	0.1
Low Income	70.0%	81.4%	11.4%	0.7
English Learners	57.0%	72.1%	15.1%	0.8
Students with Disabilities	59.0%	71.3%	12.3%	1.1

EXHIBIT 2. 2022 ACGR by Select Subgroup

STATE-LEVEL PROGRESS

The progress of the past decade has varied considerably across states. Twelve states experienced graduation rate growth of more than 10 percentage points since 2011, while 17 more states saw their rates grow by 5 to 9 percentage points. Eight states grew by 3 to 5 points; another eight states grew by fewer than 5 percentage points, while five states saw their graduation rates decline. The change in overall distribution and range of graduation rates from 2011 to 2022 reflects the improvements almost all states experienced. In 2011, no state had a graduation rate above 90%, while in 2022, five states had rates above 90%. Similarly, in 2011 there were 12 states with a rate below 75%, but none by 2022. In 2011, the lowest state-level graduation rate was 62%, while the highest was 88.3% (a gap of 26.3 percentage points).

In 2022, the lowest graduation rate of any state was 77.3%, while the highest was 91.2% (a gap of 13.9 percentage points, which is just

about half of what it was in 2011). Thus, though there has been limited growth for states at the highest range of graduation rates, those at the bottom have experienced substantial growth, suggesting that students in all parts of the country are now enjoying better high school outcomes and lifelong career opportunities.

At the same time, the drop in high school graduation rates that coincided with the pandemic did set some states back. In 2020, there were 10 states with graduation rates of 90% or higher, but only five in 2022. And the number of states with graduation rates below 80% increased slightly from three to four. However, the growth over the past decade remains firmly established; the number of states with graduation rates between 85% and 89% increased in 2022. Twenty-seven states now have graduation rates within 5 percentage points of 90%.

EXHIBIT 3.

Map of All States with 2022 ACGR, Color Coded



State	Regulatory Adjusted Cohort Graduation Rate, All Students: 2021–22	State	Regulatory Adjusted Cohort Graduation Rate, All Students: 2021–22	State	Regulatory Adjusted Cohort Graduation Rate, All Students: 2021–22
West Virginia	91.2%	Florida	87.3%	Rhode Island	83.3%
Tennessee	90.4%	Illinois	87.3%	Louisiana	83.1%
Wisconsin	90.3%	Nebraska	87.1%	Vermont	82.8%
Kentucky	90.1%	California	87.0%	Colorado	82.3%
Massachusetts	90.1%	Pennsylvania	87.0%	South Dakota	82.1%
lowa	89.9%	New York	86.7%	Wyoming	81.8%
Missouri	89.8%	North Carolina	86.4%	Nevada	81.7%
Texas	89.7%	Maryland	86.3%	Oregon	81.3%
Kansas	89.1%	Ohio	86.2%	Michigan	81.0%
Virginia	89.1%	Maine	86.1%	Idaho	79.9%
Connecticut	88.9%	Hawaii	86.0%	Alaska	77.8%
Mississippi	88.9%	Montana	85.8%	Arizona	77.3%
Alabama	88.2%	New Jersey	85.2%	DC	76.4%
Arkansas	88.2%	North Dakota	85.1%	New Mexico*	-
Utah	88.2%	Georgia	84.1%	Oklahoma*	_
Delaware	87.8%	South Carolina	83.8%		
Indiana	87.7%	Minnesota	83.6%	* Dat	a not available.
New Hampshire	87.7%	Washington	83.6%		

EXHIBIT 4.

State 2011 ACGR, by Range

State	2011 ACGR	State	2011 ACGR
85-	89%	75-	79%
lowa	88.3%	Wyoming	79.7%
Vermont	87.5%	Delaware	78.5%
Wisconsin	87.0%	Arizona	77.9%
North Dakota	86.3%	North Carolina	77.9%
New Hampshire	86.1%	Rhode Island	77.3%
Nebraska	86.0%	Minnesota	76.9%
Texas	85.9%	New York	76.8%
Indiana	85.7%	Washington	76.6%
Tennessee	85.5%	West Virginia	76.5%
80-	84%	California	76.3%
Illinois	83.8%	Utah	76.0%
Maine	83.8%	70-	74%
Massachusetts	83.4%	Michigan	74.3%
South Dakota	83.4%	Colorado	73.9%
New Jersey	83.2%	Mississippi	73.7%
Connecticut	83.0%	South Carolina	73.6%
Kansas	83.0%	Alabama	72.0%
Maryland	82.8%	Louisiana	70.9%
Pennsylvania	82.6%	Florida	70.6%
Montana	82.2%	65-	69%
Virginia	82.0%	Alaska	68.0%
Missouri	81.3%	Oregon	67.7%
Arkansas	80.7%	Georgia	67.5%
Hawaii	80.0%	60-	64%
Ohio	80.0%	New Mexico	63.0%
	1	Nevada	62.0%
** First Year of ACGR	data was 2012–13		
* First Year of ACGR d	ata was 2013–14	Idaho**	77.3%
<i>SOURCE:</i> NCES, US Depa	rtment of Education	Kentucky*	86.1%
		Oklahoma*	84.8%

EXHIBIT 5.

State 2022 ACGR and Change Since 2011, by Range

State	2022 ACGR	Change (% Point)	State	2022 ACGR	Change (% Point)
	90-94%			80-84%	
West Virginia	91.2%	14.7	Georgia	84.1%	16.6
Tennessee	90.4%	4.9	South Carolina	83.8%	10.2
Wisconsin	90.3%	3.3	Minnesota	83.6%	6.7
Kentucky**	90.1%	4.0	Washington	83.6%	7.0
Massachusetts	90.1%	6.7	Rhode Island	83.3%	6.0
	90-94%		Louisiana	83.1%	12.2
lowa	89.9%	1.6	Vermont	82.8%	-4.7
Missouri	89.8%	8.6	Colorado	82.3%	8.4
Texas	89.7%	3.8	South Dakota	82.1%	-1.3
Kansas	89.1%	6.1	Wyoming	81.8%	2.1
Virginia	89.1%	7.1	Nevada	81.7%	19.7
Connecticut	88.9%	5.9	Oregon	81.3%	13.7
Mississippi	88.9%	15.2	Michigan	81.0%	6.7
Alabama	88.2%	16.2	Oklahoma**/***	80.1%	-4.7
Arkansas	88.2%	7.5		75–79%	
Utah	88.2%	12.2	Idaho*	79.9%	2.6
Delaware	87.8%	9.3	Alaska	77.8%	9.8
Indiana	87.7%	2.0	Arizona	77.3%	-0.6
New Hampshire	87.7%	1.6	New Mexico***	76.9%	13.6
Florida	87.3%	16.7			
Illinois	87.3%	3.5	***	* 2021 ACGR; no 2022 data	available
Nebraska	87.1%	1.1	**	First Year of ACGR data wa	s 2012–13
California	87.0%	10.7	* F	irst Year of ACGR data was	5 2013–14
Pennsylvania	87.0%	4.4	SOUR	CE: NCES, US Department	of Education
New York	86.7%	9.9			
North Carolina	86.4%	8.5			
Maryland	86.3%	3.5			
Ohio	86.2%	6.2			
Maine	86.1%	2.3			
Hawaii	86.0%	6.0			
Montana	85.8%	3.6			
New Jersey	85.2%	2.0			
North Dakota	85.1%	-1.2			

9TH GRADE ON-TRACK DATA

The 9th grade on-track status, which examines whether a high school freshman has had a successful enough 9th grade year, is an early indicator of a student's progress toward graduation and their odds of being able to graduate in four years. Research has shown that being on track during the 9th grade, typically defined as earning the credits needed to be promoted to 10th grade on time combined with having limited course failures, is the strongest predictor of earning a high school degree (Allensworth & Easton, 2007; Roderick, 2021). Acknowledging the values of this measure, at least six states have incorporated 9th grade ontrack data into their accountability reports, from which we have been able to gather comparable data during the pandemic years for five states in this report: Connecticut, Delaware,² Illinois, Oregon,³ and Washington.⁴

From a pre-pandemic baseline in 2018–19 to the return to school year in 2021-22, all five of these states experienced significant drops in their 9th grade on-track rates. Illinois saw a 3.8 percentage point decline, Washington was 4.5 percentage points lower, Connecticut was 5.3 percentage points lower, and Oregon had the largest decline of all at 11.7 percentage points. Data for 2021-22 is missing for Delaware, but data from the following year (2022-23) shows a 3.5 percentage point decline from its prepandemic baseline. Several of the states had modest improvements the following year, but all except Illinois had 9th grade on-track rates in 2022-23 that were still noticeably below their pre-pandemic levels.

In four of the five states, declines in 9th grade on-track rates for low-income students were even greater. In 2021-22 or 2022-23, Connecticut, Delaware, Illinois, and Washington all saw declines of 6.2 to 7 percentage points from pre-pandemic levels in low-income students' 9th grade on-track rates. Oregon was the exception; its data indicates improved ontrack outcomes for low-income students in 2021-22 compared to pre-pandemic levels. When the larger declines in on-track rates for low-income students are combined with lower baselines prepandemic, four of the five states were reporting that between about half to a quarter of lowincome 9th grade students were not on track to graduation in the pandemic's aftermath.

This paints a more worrisome picture of the longer-term versus shorter-term impacts of the pandemic on graduation rates. In all these states, the decline in 9th grade on-track rates in 2021–22 or 2022–23 was considerably greater than declines in their high school graduation rates. This suggests that students who were 7th graders at the start of the pandemic and may have spent most of their 8th grade year participating in school virtually struggled more in the 9th grade year than pre-pandemic cohorts. As a result, these students may bear more of the brunt of the pandemic's impact on high school graduation rates than students who experienced the pandemic as 10th and 11th graders.

Two other findings in the 9th grade on-track data are worthy of note. Like graduation rates, most states witnessed an increase in 9th grade on-track rates during the year in which the pandemic began (2019–2020). This suggests that not having to take final exams or maintain

² Two academic years during the pandemic of 2020-2021 and 2021-2022 are missing from Delaware's data.

³ Oregon reported two sets of data: the full academic year number for students enrolled for a full academic year and the number of all students enrolled on the first day of May. We used the full-year number in this report.

⁴ Washington defines their ninth grade on-track status as passing all attempted courses.

a passing grade all the way through their second-semester courses both enabled more students to graduate and allowed them to be viewed as on track to graduation.

It furthermore suggests that, going forward, providing continued or even intensified supports during the final months of the 9th and 12th grade years may have value. Across many states, some students appear to be falling off track to graduation in April and May: times when schools sometimes ease up supports as the school year is winding down.

Another interesting finding from the available 9th grade on-track data calls for further investigation. In four of the five states for which we have data, students with disabilities—in a reversal from typical patterns—fared better than general education students in both 9th grade on-track and high school graduation rates in the years closest to the pandemic (2021–22 and 2022–23).

EXHIBIT 6.

9th Grade On-track: All Students, by State



EXHIBIT 7.





EXHIBIT 8. 9th Grade On-track: Low-income Students, by State



HIGH SCHOOL ATTENDANCE AND ADVANCED COURSE TAKING

Educational attainment in its broadest sense means becoming more educated. As such, years of schooling alone is an imperfect measure. To gain a deeper understanding of the extent to which increases in additional years of schooling are equated with being more educated, we examine several additional indicators. First, we look at attendance as a proxy for engagement and consistent participation in schooling. We then examine several measures of academic achievement and challenge.

Rising Chronic Absenteeism

Chronic absenteeism, defined as students missing 10% or more of school days, provides us with a sense of how many students in each state are taking advantage of the opportunities to learn that are in front of them. If a student is not in school ("at their desk," so to speak), then they will obviously miss the material covered in their classes and potentially, because of insufficient prior preparation, miss out on the chance to participate in various advanced courses and programs. Chronic absenteeism can impact educational attainment on two levels: First, in elementary and middle school, it lessens each year of schooling's impact on knowledge and skill acquisition, and weakens students' connection to school in general. Second, in addition to the same impacts in earlier years, chronic absenteeism in high school can often lead to increased course failures, which greatly increases the odds of not graduating from high school and earning postsecondary degrees.

Nationally, almost one-third of students (30.1%) were chronically absent from school during the 2021–22 school year. This was almost double the rate from before the pandemic (16.2% in 2017–18). Nearly two-thirds of schools (65%) had 20% or more of their students who were

chronically absent. When absenteeism at a school rises to levels where 20% or 30% or more of students are chronically absent, it has a systemic effect on the quality of the learning in classrooms. Teachers at these schools face a mounting challenge to keep pace with a course curriculum and implement a program effectively.

Chronic absenteeism rates were even higher in 2021–22 at the high school level. Thirty-five percent of high school students missed 10% or more of school, and in half of the nation's high schools, at least one-third of the students were chronically absent. Most stunningly, in 28% of high schools, half or more of the students were chronically absent in 2021–22. In these schools, interrupted learning was the norm for most students. This suggests that, at least for high school students, 2021–22 needs to be viewed more as the third year of direct pandemic impacts on school outcomes, rather than the first year of restarting.

High schools also are larger, on average, than elementary or middle schools. When very high rates of chronic absenteeism are combined with larger school size, the challenge of responding to the sheer number of chronically absent students can become overwhelming. In 2020–21, about 5,000 high schools had 400 or more chronically absent students. Essentially half of all high school students (49%) attended one of these schools.

Although chronic absenteeism rates rose in nearly every school, there were still considerable differences across states. Part of this was states starting from different pre-pandemic baselines, and part may be differential impacts or responses to the pandemic. In 15 states, high school chronic absenteeism rates rose to 40% or more. In five states, they were nearly half as high, ranging between 20% and 25%.

EXHIBIT 9A.

Opportunities to Learn: High School Chronic Absence

Akatage Akabama 26.8% 25% 6% 128 58 28 34 Alabama 54.6% 75% 54% 36 13 6 13 Arizona 51.5% 80% 56% 109 47 27 167 Arkansas 27.2% 29% 7% 84 31 9 24 California 32.6% 59% 38% 476 316 197 633 Colorado 41.5% 62% 34% 104 57 37 111 Connecticut 27.6% 32% 11% 62 42 19 24 Delaware 28.7% 54% 15% 10 10 11 11 Districtof 68.0% 84% 73% 10 10 12 12 Georgia 32.8% 48% 19% 71 55 69 20 12 Idaho* - - -	State Name	% of High School Students Chronically Absent, 2022	% of High Schools With Chronic Absence Rates >= 33%	% of High Schools With Chronic Absence Rates >= 50%	# of High Schools With 100–199 Chronically Absent Students	# of High Schools With 200–299 Chronically Absent Students	# of High Schools With 300–399 Chronically Absent Students	# of High Schools With 400 Or More Chronically Absent Students
Aska 54.6% 75% 54% 36 13 6 13 Arizona 51.5% 80% 56% 109 47 27 16 Arkansas 27.2% 29% 7% 84 31 9 24 California 32.6% 59% 38% 476 316 197 633 Colorado 41.5% 62% 34% 104 57 37 116 Connecticut 27.6% 32% 11% 62 42 19 24 Delaware 28.7% 54% 15% 10 10 10 11 Elsiritiof 68.0% 84% 73% 10 10 6 13 Elsiritiof 68.0% 84% 19% 71 55 69 200 Hawaii 35.7% 68% 27% 7 10 10 22 Idaha* $ -$ Illinois 38.4% 53% 26% 124 68 64 214 Indiana 31.9% 38% 19% 59 70 28 55 Louislana 21.9% 26% 11% 62 49 27 22 Marka 32.9% 69% 21% 41 18 13 60 Marka 32.9% 69% 21% 41 18 13 60 Indiana 31.9% 69% 21% 61 31 42		35.1%	51%	28.4%	4,694	2,868	1,796	4,803
Arizona 51.5% 80% 56% 109 47 27 16 Arkansas 27.2% 29% 7% 84 31 9 24 California 32.6% 59% 38% 476 316 197 633 Colorado 41.5% 62% 24% 194 633 116 Connecticut 27.6% 32% 11% 62 42 19 24 Delaware 28.7% 54% 15% 10 10 10 11 Districtof 68.0% 84% 73% 10 10 6 13 Portida 41.9% 67% 41% 136 73 62 413 Georgia 32.8% 48% 19% 71 55 69 200 Hawaii 35.7% 68% 27% 7 10 10 22 Idabo* $ -$ Illinois 38.4% 53% 26% 124 68 64 210 Indiana 31.9% 38% 19% 95 53 32 92 Iowa 35.5% 37% 11% 62 49 27 28 Kansas 44.2% 25% 31% 95 7 42 Maine 38.3% 69% 21% 41 18 13 62 Maine 38.3% 69% 21% 26 29 36 124 <	Alabama	26.8%	25%	6%	128	58	28	34
Arkansas 27.2% 29% 7% 84 31 9 22 California 32.6% 59% 38% 476 316 197 633 Colorado 41.5% 62% 34% 104 57 37 116 Connecticut 27.6% 32% 11% 62 42 19 24 Delaware 28.7% 54% 15% 10 10 10 11 Districtof 68.0% 84% 73% 10 10 6 13 Florida 41.9% 67% 41% 136 73 62 411 Georgia 32.8% 48% 19% 71 55 69 200 Hawaii 35.7% 68% 27% 7 10 10 22 Idaho* $ -$ Illinois 38.4% 53% 20% 124 68 64 210 Indiana 31.9% 38% 19% 95 53 32 92 Iowa 35.5% 37% 11% 63 24 9 42 Kentucky 32.8% 53% 31% 99 70 28 57 Maire 38.3% 69% 21% 41 18 13 66 Maryaland 39.5% 68% 37% 26 29 36 14% Minesota 40.8% 64% 42% 152 63	Alaska	54.6%	75%	54%	36	13	6	13
California 32.6% 59% 38% 476 316 197 633 Colorado 41.5% 62% 34% 104 57 37 118 Connecticut 27.6% 32% 11% 62 42 19 62 Delaware 28.7% 54% 15% 10 10 10 11 Districtof 68.0% 84% 73% 10 10 6 13 Florida 41.9% 67% 41% 136 73 62 413 Georgia 32.8% 48% 19% 71 55 69 200 Hawaii 35.7% 68% 27% 7 10 10 27 Idaho* -	Arizona	51.5%	80%	56%	109	47	27	167
Colorado 41.5% 62% 34% 104 57 37 116 Connecticut 27.6% 32% 11% 62 42 19 24 Delaware 28.7% 54% 15% 10 10 10 11 Districtof 68.0% 84% 73% 10 10 6 13 Florida 41.9% 67% 41% 136 73 62 413 Georgia 32.8% 48% 19% 71 55 69 200 Havaii 35.7% 68% 27% 7 10 10 27 Idaho* $ -$ Illinois 38.4% 53% 26% 124 68 64 210 Indiana 31.9% 38% 19% 95 53 32 92 Icwa 35.5% 37% 11% 63 24 9 47 Kentucky 32.8% 53% 31% 59 70 28 57 Louisiana 21.9% 26% 11% 62 49 27 22 Maine 38.3% 69% 21% 41 18 13 66 Maryland 39.5% 68% 37% 26 29 36 124 Miscissippi 37.5% 54% 25% 130 94 37 66 Misrigan 42.9% 25% 130 94 37	Arkansas	27.2%	29%	7%	84	31	9	24
Connecticut27.6%32%11%62421926Delaware28.7%54%15%10101011District68.0%84%73%1010613Florida41.9%67%41%1367362413Georgia32.8%48%19%715569200Hawaii35.7%68%27%7101022Idaho*Illinois38.4%53%26%1246864210Indiana31.9%38%19%95533292Iowa35.5%37%11%6324944Kansas34.2%42%12%3625744Kentucky32.8%53%31%59702855Louisiana21.9%26%11%62492722Maine38.3%69%21%4118136Maryland39.5%68%37%262936124Minesota40.8%64%44%152603188Mississippi37.5%54%24%81561938Missouri24.9%20%11%68383944	California	32.6%	59%	38%	476	316	197	633
Delaware 28.7% 54% 15% 10 10 10 10 District of Columbia 68.0% 84% 73% 10 10 6 11 District of Columbia 41.9% 67% 41% 136 73 62 413 Florida 41.9% 67% 41% 136 73 62 413 Georgia 32.8% 48% 19% 71 55 69 200 Hawaii 35.7% 68% 27% 7 10 10 27 Idaho* -	Colorado	41.5%	62%	34%	104	57	37	118
Number Numer Numer Numer <td>Connecticut</td> <td>27.6%</td> <td>32%</td> <td>11%</td> <td>62</td> <td>42</td> <td>19</td> <td>26</td>	Connecticut	27.6%	32%	11%	62	42	19	26
Columbia 68.0% 68% 73% 10 10 10 6 11 Florida 41.9% 67% 41% 136 73 62 413 Georgia 32.8% 48% 19% 71 55 69 200 Hawaii 35.7% 68% 27% 7 10 10 22 Idaho* $ -$ Illinois 38.4% 53% 26% 124 68 64 210 Indiana 31.9% 38% 19% 95 53 322 920 Iowa 35.5% 37% 11% 63 24 9 42 Kansas 34.2% 42% 12% 36 25 7 42% Kansas 34.2% 53% 31% 59 70 28 57 Louisiana 21.9% 26% 11% 62 49 27 22 Maine 38.3% 69% 21% 41 18 13 66 Maryland 39.5% 68% 37% 26 29 36 12% Michigan 44.3% 72% 45% 277 152 83 16% Mississippi 37.5% 54% 24% 81 56 19 38 Missoripi 24.9% 24.9% 24.9% 81 56 19 38	Delaware	28.7%	54%	15%	10	10	10	11
Georgia 32.8% 48% 19% 71 55 69 200 Hawaii 35.7% 68% 27% 7 10 10 220 $1daho^*$ $ -$ Illinois 38.4% 53% 26% 124 68 64 210 Indiana 31.9% 38% 19% 95 53 32 92 Iowa 35.5% 37% 11% 63 24 9 42 Kansas 34.2% 42% 12% 36 25 7 42% Kentucky 32.8% 53% 31% 59 70 28 57 Louisiana 21.9% 26% 11% 62 49 27 22% Maine 38.3% 69% 21% 41 18 13 66% Massachusetts 32.6% 45% 25% 130 94 37 62% Minesota 40.8% 64% 44% 152 60 31 88% Mississippi 37.5% 54% 24% 81 56 19 38%		68.0%	84%	73%	10	10	6	13
Havaii 35.7% 68% 27% 7 10 10 21 Idaho* — …	Florida	41.9%	67%	41%	136	73	62	413
Idaho* — … <td>Georgia</td> <td>32.8%</td> <td>48%</td> <td>19%</td> <td>71</td> <td>55</td> <td>69</td> <td>200</td>	Georgia	32.8%	48%	19%	71	55	69	200
Illinois 38.4% 53% 26% 124 68 64 210 Indiana 31.9% 38% 19% 95 53 32 92 Iowa 35.5% 37% 11% 63 24 9 42 Kansas 34.2% 42% 12% 36 25 7 42 Kentucky 32.8% 53% 31% 59 70 28 57 Louisiana 21.9% 26% 11% 62 49 27 25 Maine 38.3% 69% 21% 41 18 13 66 Maryland 39.5% 68% 37% 26 29 36 126 Michigan 44.3% 72% 45% 277 152 83 168 Minesota 40.8% 64% 44% 152 60 31 88 Missoispipi 37.5% 54% 24% 81 56	Hawaii	35.7%	68%	27%	7	10	10	21
Indiana 31.9% 38% 19% 95 53 32 92 Iowa 35.5% 37% 11% 63 24 9 44 Kansas 34.2% 42% 12% 36 25 7 44 Kentucky 32.8% 53% 31% 59 70 28 55 Louisiana 21.9% 26% 11% 62 49 27 28 Maine 38.3% 69% 21% 41 18 13 66 Maryland 39.5% 68% 37% 26 29 36 126 Massachusetts 32.6% 45% 25% 130 94 37 62 Minhesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38	Idaho*	_	-	-	-	_	_	_
Iowa 35.5% 37% 11% 63 24 9 42 Kansas 34.2% 42% 12% 36 25 7 47 Kentucky 32.8% 53% 31% 59 70 28 57 Louisiana 21.9% 26% 11% 62 49 27 29 Maine 38.3% 69% 21% 41 18 13 69 Maryland 39.5% 68% 37% 26 29 36 126 Minesachusetts 32.6% 45% 25% 130 94 37 66 Mississippi 44.3% 72% 45% 277 152 83 166 Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 36 Missouri 24.9% 20% 11% 68 38<	Illinois	38.4%	53%	26%	124	68	64	210
Kansas 34.2% 42% 12% 36 25 7 47 Kentucky 32.8% 53% 31% 59 70 28 57 Louisiana 21.9% 26% 11% 62 49 27 28 Maine 38.3% 69% 21% 41 18 13 6 Maryland 39.5% 68% 37% 26 29 36 126 Massachusetts 32.6% 45% 25% 130 94 37 62 Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 43	Indiana	31.9%	38%	19%	95	53	32	92
Kentucky 32.8% 53% 31% 59 70 28 57 Louisiana 21.9% 26% 11% 62 49 27 28 Maine 38.3% 69% 21% 41 18 13 68 Maryland 39.5% 68% 37% 26 29 36 126 Massachusetts 32.6% 45% 25% 130 94 37 66 Michigan 44.3% 72% 45% 277 152 83 168 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 44	Iowa	35.5%	37%	11%	63	24	9	42
Louisiana 21.9% 26% 11% 62 49 27 28 Maine 38.3% 69% 21% 41 18 13 6 Maryland 39.5% 68% 37% 26 29 36 126 Massachusetts 32.6% 45% 25% 130 94 37 62 Michigan 44.3% 72% 45% 277 152 83 168 Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38	Kansas	34.2%	42%	12%	36	25	7	47
Maine 38.3% 69% 21% 41 18 13 6 Maryland 39.5% 68% 37% 26 29 36 126 Massachusetts 32.6% 45% 25% 130 94 37 62 Michigan 44.3% 72% 45% 277 152 83 168 Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 43	Kentucky	32.8%	53%	31%	59	70	28	51
Maryland 39.5% 68% 37% 26 29 36 126 Massachusetts 32.6% 45% 25% 130 94 37 62 Michigan 44.3% 72% 45% 277 152 83 168 Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 43	Louisiana	21.9%	26%	11%	62	49	27	29
Massachusetts 32.6% 45% 25% 130 94 37 62 Michigan 44.3% 72% 45% 277 152 83 168 Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 43	Maine	38.3%	69%	21%	41	18	13	6
Michigan 44.3% 72% 45% 277 152 83 168 Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 43	Maryland	39.5%	68%	37%	26	29	36	126
Minnesota 40.8% 64% 44% 152 60 31 88 Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 43	Massachusetts	32.6%	45%	25%	130	94	37	62
Mississippi 37.5% 54% 24% 81 56 19 38 Missouri 24.9% 20% 11% 68 38 39 43	Michigan	44.3%	72%	45%	277	152	83	168
Missouri 24.9% 20% 11% 68 38 39 43	Minnesota	40.8%	64%	44%	152	60	31	88
	Mississippi	37.5%	54%	24%	81	56	19	38
Montana 45.3% 57% 24% 16 9 4 16	Missouri	24.9%	20%	11%	68	38	39	43
	Montana	45.3%	57%	24%	16	9	4	16

* Data for Idaho and Washington are not included due to wide discrepancies between federally reported and state reported data on chronic absenteeism for the 2021-22 school year.

EXHIBIT 9A. CONTINUED

Opportunities to Learn: High School Chronic Absence

State Name	% of High School Students Chronically Absent–2022	% of High Schools With Chronic Absence Rates >= 33%	% of High Schools With Chronic Absence Rates >= 50%	# of High Schools With 100–199 Chronically Absent Students	# of High Schools With 200–299 Chronically Absent Students	# of High Schools With 300-399 Chronically Absent Students	# of High Schools With 400 Or More Chronically Absent Students
Nebraska	33.2%	20%	8%	21	6	3	27
Nevada	44.2%	65%	37%	21	10	9	56
New Hampshire	37.5%	68%	26%	21	17	9	13
New Jersey	20.5%	15%	5%	120	70	28	58
New Mexico	43.7%	63%	37%	37	19	12	41
New York	41.8%	63%	42%	380	300	165	251
North Carolina	35.9%	52%	25%	95	82	71	193
North Dakota	28.3%	25%	10%	8	4	5	7
Ohio	42.1%	58%	36%	257	151	97	181
Oklahoma	28.4%	17%	5%	45	18	9	44
Oregon	48.6%	86%	49%	81	37	21	88
Pennsylvania	33.1%	46%	24%	242	145	92	137
Rhode Island	43.5%	60%	37%	19	9	8	17
South Carolina	33.0%	50%	15%	44	38	35	84
South Dakota	33.0%	36%	12%	8	4	4	11
Tennessee	30.3%	37%	17%	93	62	47	79
Texas	36.2%	49%	29%	332	187	97	549
Utah	28.9%	33%	12%	44	41	32	43
Vermont	38.3%	77%	23%	27	8	3	5
Virginia	24.0%	24%	4%	92	50	52	87
Washington*	_	_	_	_	_	_	
West Virginia	41.0%	72%	29%	36	25	14	30
Wisconsin	31.9%	36%	18%	106	40	33	58
Wyoming	47.7%	71%	46%	11	5	5	10

* Data for Idaho and Washington are not included due to wide discrepancies between federally reported and state reported data on chronic absenteeism for the 2021-22 school year.

Advance course taking in high school has grown, but the need for significant improvement remains.

There is strong evidence that high school students who take courses that approximate the college level increase their odds of earning postsecondary degrees. There is still debate as to why this occurs, but the most straightforward explanation is that taking and succeeding in college-like or college-level courses in high school both gives students experience with college courses' expectations and demands before they are in college and increases their confidence that they can succeed in college. The combination of better preparation and gains in self-efficacy in turn leads to better performance in college.

There has been considerable growth in students taking college-like or college-level courses in high school over the past decade or more. In some locales, community colleges have seen high school student participation in dualenrollment courses become a major source of their enrollment growth.

As seen in Exhibit 9b, nationally as of spring 2021, half of schools (55.7%) offered Advanced Placement (AP) courses and almost two-thirds (65.5%) offered dual-enrollment (DE) programs. But while the majority of schools in the country are able to offer students the chance to complete postsecondary level coursework, only 17% of high school students enrolled in an AP course during the 2021–22 school year and only 10% were enrolled in a DE program. As is almost always the case with education outcome and attainment data, underneath national averages there is considerable state variation. The percentage of high school students enrolled in AP classes ranges from 7% to 40% across states. There are four states (California, Alabama, Michigan, and Massachusetts) with less than 5% of high school students in dualenrollment classes, and four states (Wisconsin, lowa, Idaho, and Hawaii) with 20% to 25% of their high school students in dual-enrollment courses. Some states appear to be focusing on one type of college-level course over another, with either AP or DE states emerging. Thus, states that are low in one category are often higher in another. There are also some states with a more balanced portfolio.

In addition to substantial variation across states in high school students' opportunity to take college-level courses and national participation levels below direct-from-high-school college enrollment rates, existing research has shown that not all students within the same school have equal access to college-level courses. This is particularly true for students from historically underserved groups. Thus, there are significant inequities across and within schools in access to college-like or college-level courses. This raises significant concerns about continued gains in educational attainment, given growing evidence that taking and succeeding in college-like or college-level courses in high school increases the odds of postsecondary degree completion.

One innovative development working to change this is the National Education Equity Lab, which brings college courses from leading higher education institutions into Title I high schools. In this program, cohorts of students, supported by a classroom teacher and university teaching fellows, take the same college courses as students from the participating universities. Initial results indicate that these efforts are creating new pathways from Title I high schools to more selective institutions.

EXHIBIT 9B.

Opportunities to Learn: Advanced Placement and Dual Enrollment

State Name	% of Schools Offering an Advanced Placement Program	% of Schools Offering an AP Program That Allow Student Enrollment Via Self-Selection	% of Students Enrolled in an AP Course	% of Schools Offering a Dual Enrollment/Dual Credit Program	% of Students Enrolled in a DE Course
National Average	55.7%	73.0%	17.3%	65.5%	9.8%
Alabama	65.7%	86.6%	11.8%	87.7%	6.1%
Alaska	21.9%	71.2%	7.3%	26.5%	1.6%
Arizona	41.6%	83.4%	12.1%	45.1%	11.0%
Arkansas	84.8%	87.8%	17.6%	84.0%	9.0%
California	53.0%	75.0%	20.7%	37.4%	4.6%
Colorado	55.1%	60.9%	16.4%	71.0%	9.1%
Connecticut	86.1%	67.8%	22.3%	80.1%	13.1%
Delaware	66.7%	89.5%	12.7%	64.9%	9.3%
District of Columbia	78.0%	71.9%	23.7%	57.1%	1.5%
Florida	53.7%	86.0%	20.1%	55.4%	7.6%
Georgia	74.3%	74.3%	19.0%	82.4%	6.3%
Hawaii	59.7%	100.0%	40.2%	83.8%	19.9%
Idaho	31.5%	46.6%	9.4%	70.6%	21.7%
Illinois	53.7%	74.5%	22.8%	68.0%	10.9%
Indiana	74.5%	75.7%	15.1%	84.7%	20.7%
lowa	51.1%	99.4%	11.5%	94.0%	24.7%
Kansas	28.8%	74.0%	10.6%	86.0%	14.6%
Kentucky	52.2%	80.3%	17.5%	59.9%	15.1%
Louisiana	46.7%	74.0%	10.7%	75.1%	6.7%
Maine	72.2%	78.0%	13.6%	67.2%	8.8%
Maryland	81.1%	81.0%	29.6%	70.3%	5.3%
Massachusetts	80.3%	63.7%	19.5%	52.0%	2.6%
Michigan	40.8%	68.7%	13.0%	56.0%	4.6%
Minnesota	24.6%	82.3%	15.4%	46.3%	9.9%
Mississippi	55.1%	65.8%	9.1%	84.5%	10.3%
Missouri	41.8%	73.3%	12.6%	82.6%	12.8%
Montana	35.5%	86.9%	12.0%	66.7%	10.3%

EXHIBIT 9B. CONTINUED

Opportunities to Learn: Advanced Placement and Dual Enrollment

State Name	% of Schools Offering an Advanced Placement Program	% of Schools Offering an AP Program That Allow Student Enrollment Via Self-Selection	% of Students Enrolled in an AP Course	% of Schools Offering a Dual Enrollment/Dual Credit Program	% of Students Enrolled in a DE Course
Nebraska	36.7%	73.2%	15.6%	86.0%	16.5%
Nevada	58.1%	38.7%	17.2%	62.3%	6.3%
New Hampshire	73.2%	74.6%	12.3%	74.7%	8.8%
New Jersey	79.7%	51.0%	19.5%	64.7%	11.3%
New Mexico	47.2%	81.2%	17.3%	82.3%	11.1%
New York	73.1%	71.2%	18.6%	70.9%	16.7%
North Carolina	65.4%	85.7%	14.8%	70.2%	9.1%
North Dakota	24.8%	85.4%	9.9%	76.9%	8.6%
Ohio	53.8%	51.6%	9.8%	80.3%	9.2%
Oklahoma	57.2%	74.2%	12.5%	83.2%	9.5%
Oregon	43.5%	75.7%	12.4%	54.3%	11.8%
Pennsylvania	81.4%	60.6%	12.4%	71.0%	5.1%
Rhode Island	81.0%	82.4%	19.0%	76.2%	6.1%
South Carolina	71.9%	81.8%	12.0%	89.8%	7.2%
South Dakota	22.9%	70.5%	8.6%	70.5%	9.9%
Tennessee	59.9%	76.1%	11.0%	79.0%	15.1%
Texas	54.8%	67.4%	22.5%	70.1%	11.3%
Utah	48.0%	91.0%	13.4%	58.1%	17.1%
Vermont	80.3%	79.6%	10.6%	81.7%	6.0%
Virginia	88.9%	87.8%	22.8%	96.4%	10.3%
Washington	39.5%	78.0%	15.4%	50.2%	17.7%
West Virginia	71.8%	86.0%	11.4%	73.8%	9.6%
Wisconsin	72.8%	84.7%	21.5%	78.1%	22.3%
Wyoming	32.7%	78.8%	10.3%	63.5%	11.0%

SECONDARY SCHOOL IMPROVEMENT INDEX

As high school graduation rates rose steadily for two decades, concerns grew that progress could signal lowered standards rather than improvement in young people's education. To examine this concern, as part of the annual Building Grad Nation reports, Everyone Graduates Center and Civic authors created and reported on a Secondary School Improvement Index, which combines four outcomes of academic success and educational attainment that are measured uniformly across states. The GRAD Partnership continues here to examine state-level progress on this index in our Educating America reports. In addition to the percentage of students who graduate on time as measured by the adjusted cohort graduation rate, the index also factors in the percentage of students scoring proficient in reading and mathematics on the eighth grade NAEP exam and the percentage of high school student graduates who score a three or higher on Advanced Placement (AP) tests. These additional measures help indicate the extent to which improvements in educational attainment as captured by high school graduation rates are accompanied by improvements or steady states in the learning outcomes for secondary school students.

Eighth grade NAEP scores are used because they measure the academic skills with which students are entering high school. Increases in proficiency rates indicate that elementary and middle schools within a state are increasing their capacity to prepare students to enter high school on a pathway to postsecondary success. AP scores of three or higher capture the percentage of high school students who demonstrate the ability to do college-level work. At the same time as national high school graduation rates were rising by 7.6 percentage points, from 79% in 2011 to 86.6% in 2022, the percentage of students receiving at least a three on an AP exam were similarly rising by 4.5 percentage points, from 17.1% to 21.6%. Thus, even as more students were graduating from high school, an increasingly larger proportion of graduates were completing college-level courses before finishing high school.

NAEP proficiency, however, paints a troubling picture. In the decade before the pandemic, improvement across states in 8th grade proficiency on NAEP exams was mixed. As of 2020, at the onset of the pandemic, 24 states had improved their 8th grade reading scores and 14 had improved their math scores between 2011 and 2020. By 2022, at the tail-end of the pandemic, only nine states had higher 8th grade reading proficiency rates than in 2011, and only one state had higher math scores.

Before the pandemic, 13 states improved on all four indicators between 2011 and 2020, demonstrating that they were increasing high school degree attainment and improving the academic skills of entering high school students and high school graduates. An additional 15 states were increasing high school graduation rates, the percentage of students earning a three or better on AP test, and 8th grade NAEP proficiency in either math or reading-all evidence of increases in both the quantity and quality of education. Following the pandemic, only one state still had increases across all four measures, while eight more were still showing increases from 2011 in high school graduation rates, AP scores, and reading proficiency on the 8th grade NAEP exam.

The bulk of evidence from the Secondary School Improvement Index supports a picture of prepandemic improvements in other education outcomes and graduation rates over the past decade; however, this is somewhat countered by not all states having these outcomes. As with what was observed with high school graduation rates and 9th grade on-track rates, students who experienced the pandemic during the middle-grade years entered high school less well-prepared to succeed in high school than prior cohorts. This appears particularly so with mathematics, where 21 states witnessed 10 percentage point or greater drops from 2011 in 8th grade students scoring at the proficient level. Given the importance of STEM occupations for both access to upward mobility and national productivity, this is another warning flag of potential long-term pandemic impacts on educational attainment. Given the

timing of the pandemic for 8th graders who took the 8th grade NAEP test in 2021–22, it is also not surprising that this would be one of the biggest impacts. These students first experienced the pandemic at the end of their 6th grade year and then had much or all of their 7th grade year interrupted as they were schooled virtually or in blended formats neither of which, on average, is equal to inperson instruction as students are moving from arithmetic to mathematics. Then their 8th grade year was marked by high rates of chronic absenteeism, continued school closures or quarantines, and teacher shortages. Thus, many had their entire middle-grade education interrupted, which is particularly challenging for a cumulative subject like mathematics, and perhaps to a greater degree in the middle grades, where students must master substantial new content to obtain proficiency.

EXHIBIT 10.

State	High Graduatio	School on Rate	High School A Greate	AP Scores er Than 3	8th Grade F Prof	teading ficiency	8th Gra Mathematics Pro	de NAEP oficiency	Total Index Score
National Average	7.6		4.5		-2.2	▼	-0.8	•	1.9
		S	itates That Sho	wed Impr	ovement on	All 4 Indi	cators		
Tennessee	4.4		5.5		1.0		0.9		11.8
		St	ates That Show	wed Impro	ovement on 3	8 of 4 Ind	icators		
District of Columbia	17.4		17.0		6.1		-0.6	•	39.9
Louisiana	12.1		6.3		4.6		-3.4	•	19.6
California	11.0		4.7		6.2		-2.4	•	19.5
Georgia	17.1		3.4		3.0		-4.1	•	19.4
Mississippi	13.9		3.4		1.0		-1.5	▼	16.7
Nevada	19.7		1.1		2.5		-7.8	▼	15.5
Utah	12.2		0.3		0.2		-0.4	•	12.3
Hawaii	6.0		6.9		4.7		-7.8	•	9.8
		St	ates That Show	wed Impro	ovement on 2	2 of 4 Ind	icators		
Alabama	16.2		5.1		-3.5	▼	-1.4	•	16.4
Florida	16.3		5.2		-0.4	▼	-4.8	▼	16.3
New York	9.7		6.9		-2.8	▼	-1.6	▼	12.2
West Virginia	13.2		1.4		-2.5	▼	-6.2	▼	5.9
Illinois	3.3		8.9		-1.5	▼	-6.3	•	4.4
South Carolina	9.8		3.5		0.0	=	-9.7	▼	3.6

Secondary School Improvement, 2011–2022

EXHIBIT 10. CONTINUED

Secondary School Improvement, 2011–2022

State	High Graduatio	School on Rate	High School / Great	AP Scores er Than 3	8th Grade Pro	Reading ficiency	8th Gra Mathematics Pro	de NAEP oficiency	Total Index Score
Rhode Island	6.3		8.9		-2.1	▼	-10.3	•	2.9
Indiana	1.7		5.6		-1.2	▼	-4.0	▼	2.1
Michigan	7.0		3.8		-3.9	•	-5.4	•	1.5
New Mexico**	13.6		2.3		-3.7	•	-11.1	•	1.1
Arkansas	7.2		4.4		-2.0	•	-10.3	▼	-0.7
Oregon	13.3		1.4		-4.9	•	-10.7	▼	-0.9
Wisconsin	3.3		5.8		-2.5	•	-7.8	▼	-1.1
Missouri	8.8		4.2		-6.8	•	-7.6	▼	-1.4
Idaho*	2.6		1.6		-1.8	•	-4.4	▼	-2.0
Ohio	6.2		4.7		-3.8	•	-9.9	▼	-2.8
Nebraska	1.1		3.9		-6.0	•	-1.8	▼	-2.8
North Carolina	8.4		3.2		-5.4	•	-11.6	▼	-5.4
lowa	1.9		2.0		-3.9	•	-5.5	▼	-5.5
Virginia	7.1		0.4		-4.8	•	-8.5	•	-5.8
New Jersey	2.2		7.3		-3.2	•	-13.7	•	-7.3
Washington	7.6		2.6		-5.2	▼	-12.6	▼	-7.7
Wyoming	1.8		4.5		-8.0	▼	-6.1	▼	-7.8
Connecticut	5.9		4.4		-9.9	•	-8.2	•	-7.8
Massachusetts	7.1		7.1		-6.3	▼	-16.2	▼	-8.3
Colorado	8.3		4.8		-6.1	•	-15.6	•	-8.7
Kentucky*	4.0		2.9		-7.3	•	-9.2	•	-9.6
Pennsylvania	4.0		5.2		-7.4	▼	-11.5	▼	-9.7
Delaware	9.8		1.9		-8.9	▼	-13.6	▼	-10.8
Texas	3.7		5.1		-3.3	▼	-16.2	▼	-10.8
Minnesota	6.6		2.1		-9.6	▼	-16.1	▼	-17.0
New Hampshire	1.7		2.6		-6.8	▼	-14.6	▼	-17.1
Maryland	3.3		0.9		-7.2	▼	-15.8	▼	-18.7
Maine	2.1		0.8		-9.2	▼	-14.5	▼	-20.8
Kansas	6.1		0.3		-9.7	▼	-17.6	▼	-20.8
Montana	3.8		3.4		-12.4	▼	-17.1	▼	-22.3
		St	tates That Sho	wed Impro	vement on	1 of 4 Indi	cators		
Arizona	-0.7	▼	2.8		-0.1	▼	-7.7	▼	-5.6
Alaska	9.8		-0.6	▼	-5.0	▼	-11.9	▼	-7.7
South Dakota	-0.9	▼	0.6		-4.2	▼	-9.4	▼	-13.9
North Dakota	-0.9	▼	5.7		-7.0	▼	-14.4	•	-16.5
Vermont	-4.2	▼	3.2		-9.9	▼	-19.1	▼	-30.0
		St	tates That Sho	wed Impro	vement on	0 of 4 Indi	cators		
Oklahoma*/**	-4.7	0.0	-1.2	•	-5.4	▼	-11.4	•	-22.7

* Initial ACGR scores are taken from 2013 for Kentucky and Oklahoma and from 2014 for Idaho, because those states were not yet reporting ACGR in 2011.

** Final ACGR scores are taken from 2021 for New Mexico and Oklahoma because NCES did not report 2022 ACGR for those states.

POSTSECONDARY OUTCOMES

When we examine recent trends in postsecondary outcomes using data from the National Student Clearinghouse, we find a pattern similar to that of high school graduation rates, but with a few noticeable differences: We see improvements in the decade prior to the pandemic followed by recent declines over the two to three years surrounding the pandemic, and current indications of at least a partial rebound.

After steady growth in the first half of the past decade, college enrollment rates were already showing a decline in the years right before the pandemic. From 2018 to 2019, enrollment rates declined in 33 of the 50 states. National rates declined by only a modest 1%. Declines in 2020 and 2021, during the height of the pandemic, were substantially larger at almost 3% per year, and 44 states in 2020 and 42 states in 2021 experienced a drop in the number of students enrolling in postsecondary education. Declines slowed in 2022 to almost no change (down 0.4%), before experiencing a modest rebound of growth in 2023 (1%) in which 36 of the 51 states experienced increases in the number of students enrolling, perhaps following a wave of students who delayed enrollment during the pandemic years. Still, by 2023, significant declines in the pandemic years combined with smaller declines in the years immediately before the pandemic meant that most states had lower college enrollment rates after the pandemic than five years before it. This raises an additional caution sign in terms of a continued rise in national educational attainment rates.

College completion rates do not look as cautionary as enrollment rates. Looking at

six-year completion rates, the percentage of students earning a postsecondary award or diploma increased from 52.9% for the cohort of students who began postsecondary schooling in 2009 to 60.7% for the 2013 cohort. Over the past three years, completion rates have remained essentially unchanged at 62.2%. All but three states have seen their six-year postsecondary completion rates increase over the past decade. In part, though, the more stable completion rates could be a result of using a six-year metric; most of the students who experienced the pandemic while enrolled in college have not reached the six-year mark, especially those who experienced it in their freshman and sophomore years.



EXHIBIT 11.

Postsecondary Enrollment by State

	Fall 2018	Fall 2019		Fall 2020		Fall 2	Fall 2021		Fall 2022		Fall 2023	
State	Enrollment	Enrollment	% Change from Previous Year	% Change from 2018 to 2023								
National	17,964,446	17,788,464	-1.0%	17,310,903	-2.8%	16,879,736	-2.6%	16,805,057	-0.4%	16,972,573	1.0%	-5.8%
Alabama	273,881	269,766	-1.5%	261,129	-3.2%	261,528	0.2%	261,192	-0.1%	267,435	2.4%	-2.4%
Alaska	24,732	22,164	-10.4%	20,087	-9.4%	19,449	-3.2%	19,190	-1.3%	19,425	1.2%	-27.3%
Arizona	454,303	470,525	3.6%	472,112	0.3%	482,134	2.1%	485,266	0.6%	489,057	0.8%	7.1%
Arkansas	147,914	146,624	-0.9%	138,908	-5.3%	132,879	-4.3%	133,415	0.4%	137,733	3.2%	-7.4%
California	2,594,638	2,553,509	-1.6%	2,474,427	-3.1%	2,331,586	-5.8%	2,327,814	-0.2%	2,379,280	2.2%	-9.1%
Colorado	304,219	296,926	-2.4%	289,302	-2.6%	295,608	2.2%	285,493	-3.4%	285,516	0.0%	-6.6%
Connecticut	194,942	180,505	-7.4%	171,154	-5.2%	168,299	-1.7%	168,711	0.2%	164,573	-2.5%	-18.5%
Delaware	59,905	60,059	0.3%	57,878	-3.6%	53,525	-7.5%	55,304	3.3%	55,506	0.4%	-7.9%
District of Columbia	83,275	80,316	-3.6%	82,014	2.1%	77,191	-5.9%	81,111	5.1%	80,110	-1.2%	-4.0%
Florida	922,511	929,712	0.8%	944,975	1.6%	909,852	-3.7%	905,945	-0.4%	906,792	0.1%	-1.7%
Georgia	513,247	521,713	1.6%	519,232	-0.5%	517,047	-0.4%	512,883	-0.8%	533,776	4.1%	3.8%
Hawaii	55,182	54,453	-1.3%	53,885	-1.0%	53,637	-0.5%	53,297	-0.6%	53,998	1.3%	-2.2%
Idaho	115,611	117,873	2.0%	116,914	-0.8%	117,768	0.7%	117,732	0.0%	120,216	2.1%	3.8%
Illinois	651,571	635,420	-2.5%	606,142	-4.6%	599,035	-1.2%	595,985	-0.5%	607,692	2.0%	-7.2%
Indiana	370,107	363,143	-1.9%	351,252	-3.3%	341,060	-2.9%	340,803	-0.1%	351,439	3.1%	-5.3%
lowa	206,811	201,002	-2.8%	189,738	-5.6%	185,235	-2.4%	182,397	-1.5%	180,566	-1.0%	-14.5%
Kansas	193,235	189,660	-1.9%	180,634	-4.8%	175,688	-2.7%	172,220	-2.0%	175,852	2.1%	-9.9%
Kentucky	240,910	245,173	1.8%	245,612	0.2%	241,636	-1.6%	243,319	0.7%	253,146	4.0%	4.8%
Louisiana	231,391	228,449	-1.3%	225,115	-1.5%	224,404	-0.3%	212,694	-5.2%	205,714	-3.3%	-12.5%
Maine	71,965	71,981	0.0%	70,004	-2.7%	68,521	-2.1%	72,501	5.8%	73,199	1.0%	1.7%
Maryland	351,436	349,563	-0.5%	351,693	0.6%	336,670	-4.3%	320,589	-4.8%	329,370	2.7%	-6.7%
Massachusetts	475,544	473,229	-0.5%	455,904	-3.7%	441,842	-3.1%	434,414	-1.7%	448,976	3.4%	-5.9%
Michigan	522,579	510,396	-2.3%	463,585	-9.2%	454,151	-2.0%	450,138	-0.9%	452,689	0.6%	-15.4%
Minnesota	302,051	296,994	-1.7%	287,633	-3.2%	280,288	-2.6%	268,846	-4.1%	273,420	1.7%	-10.5%
Mississippi	163,966	166,941	1.8%	155,812	-6.7%	150,769	-3.2%	141,759	-6.0%	145,651	2.7%	-12.6%
Missouri	341,024	330,464	-3.1%	314,688	-4.8%	315,548	0.3%	309,488	-1.9%	310,926	0.5%	-9.7%
Nevada	112,625	114,766	1.9%	110,532	-3.7%	108,410	-1.9%	106,902	-1.4%	104,709	-2.1%	-7.6%
New Hampshire	55,745	54,936	-1.5%	53,135	-3.3%	51,468	-3.1%	49,048	-4.7%	47,528	-3.1%	-17.3%

EXHIBIT 11. CONTINUED

Postsecondary Enrollment by State

	Fall 2018	Fall 2019		Fall 2020		Fall 2021		Fall 2022		Fall 2023		
State	Enroliment	Enrollment	% Change from Previous Year	% Change from 2018 to 2023								
New Jersey	392,909	391,339	-0.4%	375,279	-4.1%	357,987	-4.6%	364,677	1.9%	356,541	-2.2%	-10.2%
New Mexico	116,246	112,805	-3.0%	101,439	-10.1%	96,015	-5.3%	99,534	3.7%	100,871	1.3%	-15.2%
New York	1,166,330	1,150,461	-1.4%	1,105,101	-3.9%	1,080,647	-2.2%	1,061,136	-1.8%	1,056,172	-0.5%	-10.4%
North Carolina	548,251	557,672	1.7%	547,989	-1.7%	540,479	-1.4%	540,002	-0.1%	541,043	0.2%	-1.3%
North Dakota	51,307	50,877	-0.8%	49,606	-2.5%	49,198	-0.8%	49,583	0.8%	50,345	1.5%	-1.9%
Ohio	607,538	590,875	-2.7%	577,781	-2.2%	554,029	-4.1%	541,166	-2.3%	542,728	0.3%	-11.9%
Oklahoma	188,940	184,894	-2.1%	183,053	-1.0%	177,681	-2.9%	176,981	-0.4%	180,258	1.9%	-4.8%
Pennsylvania	722,235	703,803	-2.6%	684,367	-2.8%	695,293	1.6%	679,623	-2.3%	671,514	-1.2%	-7.6%
Rhode Island	71,174	71,500	0.5%	66,632	-6.8%	66,586	-0.1%	66,785	0.3%	67,391	0.9%	-5.6%
South Carolina	231,902	233,981	0.9%	228,201	-2.5%	231,288	1.4%	237,156	2.5%	241,761	1.9%	4.1%
South Dakota	48,293	47,284	-2.1%	45,980	-2.8%	45,392	-1.3%	45,292	-0.2%	46,200	2.0%	-4.5%
Tennessee	306,774	308,274	0.5%	291,945	-5.3%	290,693	-0.4%	289,106	-0.5%	287,634	-0.5%	-6.7%
Texas	1,574,124	1,543,653	-1.9%	1,532,058	-0.8%	1,499,414	-2.1%	1,528,873	2.0%	1,543,320	0.9%	-2.0%
Utah	227,971	232,658	2.1%	240,259	3.3%	237,008	-1.4%	239,726	1.1%	249,466	4.1%	8.6%
Vermont	41,947	38,893	-7.3%	37,623	-3.3%	35,348	-6.0%	36,476	3.2%	35,586	-2.4%	-17.9%
Virginia	499,462	499,258	0.0%	509,874	2.1%	507,396	-0.5%	506,694	-0.1%	512,518	1.1%	2.5%
Washington	321,763	330,242	2.6%	312,746	-5.3%	277,120	-11.4%	285,126	2.9%	292,136	2.5%	-10.1%
West Virginia	85,943	83,937	-2.3%	78,577	-6.4%	74,642	-5.0%	73,314	-1.8%	73,568	0.3%	-16.8%
Wisconsin	294,528	303,772	3.1%	293,682	-3.3%	294,339	0.2%	298,222	1.3%	294,157	-1.4%	-0.1%
Wyoming	30,364	29,291	-3.5%	28,559	-2.5%	27,105	-5.1%	28,455	5.0%	28,148	-1.1%	-7.9%

NOTE: Counts include both undergraduate and graduate students, although undergraduate students accounted for 83% of enrollments nationally in the fall of 2022.

EXHIBIT 12.

Six-Year Postsecondary Completion Rates by State

State	2009 Cohort (Spring 2015)	2010 Cohort (Spring 2016)	2011 Cohort (Spring 2017)	2012 Cohort (Spring 2018)	2013 Cohort (Spring 2019)	2014 Cohort (Spring 2020)	2015 Cohort (Spring 2021)	2016 Cohort (Spring 2022)	2017 Cohort (Spring 2023)	Change 2009 to 2017
National	52.9	54.8	56.9	58.3	60.7	61.0	62.2	62.3	62.2	9.3
Alabama	58.0	51.6	53.3	55.6	57.1	56.8	60.1	60.5	59.6	1.5
Alaska	††	††	††	††	32.1	33.8	35.2	34.6	34.3	2.3
Arizona					54.2	53.7	53.5	52.9	54.1	0.0
Arkansas	47.8	50.2	52.0	53.7	57.0	56.0	58.9	59.3	59.8	12.0
California	44.5	47.6	51.1	52.2	54.1	54.4	55.3	55.5	55.5	11.0
Colorado	52.9	53.1	55.3	57.3	59.2	60.7	62.1	61.3	61.6	8.7
Connecticut	61.6	62.3	64.3	64.2	67.7	66.2	67.9	67.6	67.1	5.6
Delaware	69.5	71.5	74.4	74.1	*	76.1	*	*	62.2	-7.3
Florida	54.2	54.7	53.5	56.2	57.4	58.6	60.4	60.7	60.5	6.3
Georgia	51.5	52.4	57.9	60.6	61.3	62.2	62.6	62.5	62.3	10.7
Hawaii	45.2	46.7	48.0	49.4	50.2	49.3	52.3	53.0	54.0	8.8
Idaho	42.7	42.8	45.0	45.0	44.8	54.5	53.3	53.4	55.7	13.0
Illinois	58.0	59.7	60.9	61.8	63.4	63.7	64.6	65.3	65.0	7.1
Indiana	63.5	66.0	59.2	60.7	63.6	63.6	65.5	66.4	68.3	4.7
lowa	59.7	66.1	66.2	67.7	69.2	69.1	70.0	69.9	70.2	10.5
Kansas	52.5	56.1	57.3	57.3			60.0	60.6	60.8	8.3
Kentucky	51.0	52.0	52.0	56.2	56.9	57.6	60.3	61.4	60.5	9.6
Louisiana							56.1	57.1	55.5	-0.7
Maine	56.0	56.7	58.4	60.5	60.6	61.7	62.9	63.3	63.1	7.0
Maryland	52.3	52.7	54.8	56.7	58.5	59.4	60.0	61.0	62.6	10.3
Massachusetts	66.4	66.9	69.1	70.6	73.1	73.8	73.5	74.4	73.3	6.9
Michigan	50.5	52.8	55.4	57.0	60.7	59.8	61.4	62.1	63.4	12.9
Minnesota	64.8	66.2	68.1	69.0	70.6	68.8	69.9	70.1	70.5	5.7
Mississippi	49.7	50.6	51.7	53.7	57.4	58.5	59.6	59.9	59.0	9.4
Missouri	53.5	55.4	55.9	57.1	59.0	59.8	62.9	61.5	62.4	8.9
Montana	49.2	50.7	53.4	53.3	54.6	55.5	55.7	55.6	57.0	7.8
Nebraska	55.0	55.4	58.2	59.3	62.8	62.2	63.2	62.7	63.2	8.2
Nevada	29.0	31.0	35.9	35.4	38.9	39.9	44.5	43.2	43.1	14.0
New Hampshire	74.2	68.7	70.9	68.7	66.6	63.7	64.3	62.8	63.1	-11.1

(blank) Lower than 65% coverage in either the entering cohort year, or four years prior to the entering cohort year.

* Fewer than three institutions

th Results are not reported because the cohort includes both two-year and four-year enrollments.

EXHIBIT 12. CONTINUED

Six-Year Postsecondary Completion Rates by State

State	2009 Cohort (Spring 2015)	2010 Cohort (Spring 2016)	2011 Cohort (Spring 2017)	2012 Cohort (Spring 2018)	2013 Cohort (Spring 2019)	2014 Cohort (Spring 2020)	2015 Cohort (Spring 2021)	2016 Cohort (Spring 2022)	2017 Cohort (Spring 2023)	Change 2009 to 2017
New Jersey	51.0	53.3	55.1	56.4	60.3	61.9	63.1	62.7	62.6	11.6
New Mexico	43.2	41.5	44.0	43.9	46.9	48.6	49.6	49.1	51.3	8.1
New York	57.9	61.7	63.2	64.4	67.3	67.6	68.4	69.1	68.3	10.4
North Carolina	54.2	55.9	56.6	58.8	62.3	63.4	65.1	65.6	66.0	11.8
North Dakota	61.2	62.8	62.0	65.9	66.7	67.3	68.6	67.5	68.7	7.5
Ohio	53.0	53.3	55.5	58.8	62.9	64.1	66.1	66.0	66.5	13.5
Oklahoma					52.8	51.8	52.8	52.9	53.1	0.3
Oregon	48.3	49.1	52.6	55.0	56.9	58.3	57.1	56.9	55.6	7.3
Pennsylvania	65.9	66.5	69.1	69.4	70.7	70.3	72.5	71.9	71.6	5.7
Rhode Island	65.5	66.1	71.4	71.7	73.9	73.7	74.4	76.5	74.2	8.7
South Carolina	54.1	55.6	57.2	58.1	59.3	60.2	61.8	62.5	62.8	8.7
South Dakota	63.4	61.8	66.7	67.9	68.3		69.2	69.4	69.3	5.9
Tennessee	52.9	53.6	55.5	57.8	60.3	60.6	59.4	60.3	59.5	6.6
Texas	49.0	48.9	52.1	53.1	56.5	57.0	58.2	57.6	57.3	8.3
Utah	41.3	42.5	47.3	47.9	51.3	51.9	55.3	56.4	56.9	15.6
Vermont	68.7	66.7	70.7	72.3	75.1	72.2	74.4	73.7	74.1	5.5
Virginia	61.0	62.4	63.7	64.8	65.8	65.1	66.9	67.5	67.8	6.8
Washington	53.6	54.6	57.7	57.9	59.6	58.3	59.5	58.7	56.7	3.1
West Virginia					57.5	57.8	59.1	59.4	59.2	1.7
Wisconsin	62.0	63.4	65.7	66.8	69.2	68.5	70.3	70.0	69.9	7.9
Wyoming	50.4	49.7	53.2	53.0	56.9	56.5	57.6	58.2	60.0	9.6

(blank) Lower than 65% coverage in either the entering cohort year, or four years prior to the entering cohort year.

* Fewer than three institutions

†† Results are not reported because the cohort includes both two-year and four-year enrollments.

SUMMING UP THE STATE OF EDUCATIONAL ATTAINMENT IN 2024

The pandemic interrupted continual improvements, which had often been happening over a decade or more, in the nation's educational attainment across multiple dimensions, including high school graduation rates, college enrollment rates, and middle grades education achievement. National averages, moreover, obscure significant state variations, with some states seeing substantial regressions and others only short-term declines followed by quick recovery. This is an important point: Where you lived during the pandemic years impacted the extent to which the pandemic slowed down educational attainments. We will explore this in more detail for high school graduation rates in the next section.

It is also clear that where a student was in their progression through secondary school and into and through college interacted with the pandemic to create smaller and larger effects. Existing evidence indicates the potential for much larger impacts on educational attainment for students who experienced the pandemic right before critical education transitions.

Two of the strongest impacts observed are for middle grade students who were in 6th or 7th grade when the pandemic occurred. These students had considerably lower 9th grade ontrack rates and NAEP proficiency scores than prior cohorts, indicating that they entered high school less prepared to navigate the oftentreacherous 9th grade transition or partake in advanced mathematics courses. By contrast, on a national level, students who were juniors and seniors when the pandemic hit did not experience strong impacts on their graduation or AP success rates, but their college enrollment rates declined significantly.

This suggests that pandemic impacts on educational attainment could have a long tail because students who, for example, experienced the pandemic right before the transition to middle schools are not yet captured in secondary school attainment data. In addition, the wild card for a prolonged period of pandemic impacts on educational attainment is chronic absenteeism. More detailed research is needed to understand how a large increase in elementary and middle school students being chronically absent may impact future high school graduation rates and academic achievement levels, as well as college enrollment and attainment. The 9th graders who attended high schools where chronic absenteeism was normative (i.e., where the number of chronically absent students exceeded 400) are high school seniors this year. The impact this will have on high school graduation and college success rates remains to be seen.



Featured In-Depth Analysis

The Immediate Impact of the Pandemic on High School Graduation Rates: 2020 to 2022
Introduction

The COVID-19 pandemic was the largest shock to the U.S. education system since K-12 education became universal.

Emergency school closures and the need for an instantaneous shift to virtual learning caught everyone by surprise in the spring of 2020. This was followed by remote or hybrid learning with masking and social distancing through all or most of the 2020–21 school year in many locales. It was a new experience for all, with everyone trying to make it work as best they could. The 2021–22 school year was a hoped-for return to normal, but instead, it brought continued sporadic quarantines, teacher and staff shortages, and a doubling of chronic absenteeism rates. Collectively, this led to substantial, multi-year interruptions to learning, and the academic, social, and well-being supports and connections provided by continual in-person schooling.

With these changes to schooling and the pandemic's impact on parental employment and family well-being came concomitant rises in student social isolation and mental health challenges, including anxiety, depression, and suicidality (U.S. Centers for Disease Control and Prevention, 2023; YouthTruth, 2021). Moreover, 204,000 U.S. children experienced the trauma of losing a parent or other in-home caregiver to COVID-19 during the pandemic (Treglia et al., 2022), and many other students faced the loss of extended family members, teachers, mentors, or friends.

The pandemic's negative impacts on student learning in reading and mathematics have been well-documented (e.g., Fahle et al., 2024; Kuhfeld et al., 2022), as has the substantial increase in chronic absence (Chang et al., 2023; Dee, 2024; Malkus, 2024), which is both consequence and cause of student disconnection and disengagement from schooling. By comparison, the pandemic's effects on educational attainment, particularly at the high school level, have been less welldocumented, although recent analyses have begun to investigate both graduation rate trajectories (Sparks, 2022; National Center for Education Statistics, 2024) and factors linked to differences in graduation rate trends (Harris et al., 2024). Thus, as summarized in the first section of this report, broad national trends in high school graduation rates between 2000 and 2022 have been documented.

What is not well-understood is how high school graduation rates during the immediate years of the pandemic varied across states and districts, and what factors led to different outcomes across different locales. In short, for the high school graduating classes of 2020, 2021, and 2022, how did where they attended high school shape how the pandemic impacted their high school graduation rates?

An array of factors linked to the pandemic likely influenced high school graduation rates between 2019 and 2022. Some of these factors were likely to drive down graduation rates. These factors include high school students' increased disengagement from school due to school closures, emergency remote learning, and absence due to illness, as well as increased need to work to support family, increased mental health challenges, and increased caregiving responsibilities.

Other factors may have pushed graduation rates up. For example, many states, districts, and schools waived some high school graduation requirements or eased academic pressures on students during the pandemic. In states that previously required students to pass exit exams to earn their diplomas, exams were waived. Some state school boards also allowed local school districts to waive credit and graduation requirements that were above state minimums. Local districts and schools adopted less-stringent grading policies and offered flexibility on deadlines.

Moreover, these competing factors pushing down and pulling up graduation rates likely varied by place both across states and within states across school districts. Research on pre-pandemic graduation rates has highlighted substantial district and state-level variability (e.g., Atwell et al., 2021; Princiotta, 2019), and we expect that rapid pandemic-era shifts in the public health, public policy, economic, and education environments fueled even greater levels of variation in graduation rates at the state and district level. Relatively modest changes in high school graduation rates nationally may mask substantially divergent shifts at state and local school district levels.

The present study is the most comprehensive investigation yet into the relationship between the COVID-19 pandemic and high school graduation rate trends, covering public school districts in the 50 states and the District of Columbia. It addresses national, state, and school district graduation rate trajectories prior to and during the pandemic years 2020–22.

This study also provides the strongest evidence to date regarding the impacts of key state and district policies and actions during the pandemic on high school graduation rates. Specifically, it identifies the effects on district high school graduation rates of state waivers of high school exit exam requirements, district and school closures, and remote and hybrid learning due to the pandemic.

RESEARCH QUESTIONS AND ANALYTIC APPROACH

The analysis seeks to answer three research questions to advance our understanding of the immediate impact of the pandemic on high school graduation rates beyond broad national trends:

How did U.S. national graduation rate trends shift from pre- to post-pandemic by student race, ethnicity, family economic disadvantage, English learner status, and student disability status?

How did pre- to post-pandemic public high school graduation rate trends vary by state and by school district?

During the COVID era, to what extent did remote and hybrid learning, school district closures, and high school exit exam waivers affect school district graduation rates?

To answer these questions, we draw on six years of high school graduation rate data sourced from the U.S. Department of Education, data on school closures from the Centers for Disease Control (Zviedrite et al., 2024), data on learning modalities during 2021 from the COVID-19 School Data Hub (2023), and data we newly compiled on high school exit exams from various online sources. Our analyses relied on descriptive statistics and fixed effects modeling, which provides relatively strong evidence on the relationship between graduation rates and predictive factors by accounting for both observed and time-constant unobserved differences between school districts and states. Because federal graduation rate data

is substantially blurred for small school districts (that is, presented as a range, like 70–89%, as opposed to a single point estimate, such as 74%), district-level analyses were limited to those districts with more than 60 students in their graduating cohorts.

The analyses examine on-time four-year graduation rates, as defined by the federal definition of the adjusted cohort graduation rate (ACGR). This is the metric used by all states for federal school accountability; it is collected annually by the U.S. Department of Education and published one to two years later by NCES. Thus, when examining the impact of the pandemic on high school graduation rates in 2020, it is important to note that it is only students in the 2020 cohort who were in their fourth year of high school (as high school seniors) whose path to graduation as measured by the ACGR was impacted by the pandemic's onset in March of 2020. For the 2021 cohort, students will have been impacted during their third and fourth years in high school as juniors and seniors. For the 2022 cohort, pandemic impacts will have been felt by students in their second, third, and fourth years of high school, when they were sophomores, juniors, and seniors. See Appendix A for additional technical details on the study.

Learnings from the Field

Unveiling the Struggle: Preliminary Insights on Factors Influencing High School Graduation Persistence among Students with Disabilities

SAASHYA RODRIGO, PH.D., NATIONAL CENTER FOR LEARNING DISABILITIES

Students with disabilities (SWDs) face numerous barriers during their K–12 education journey that influence their rate of high school completion. Notably, SWDs leave high school without reaching graduation at more than twice the rate as their nondisabled peers (National Center for Education Statistics, U.S. Department of Education, 2024). There are considerable gaps in our understanding of the factors that prompt students to leave high school before completion. What we do know is that SWDs experience difficulties related to attendance, behavior, and course grades—three key predictors of high school graduation—to a greater extent than their peers without disabilities.

- Attendance: SWDs are more than 50% more likely to be chronically absent than students without disabilities (U.S. Department of Education, 2016). Chronic absenteeism is a major barrier in the pathway to graduation. For SWDs, chronic absenteeism not only reduces engagement in coursework, but it also hinders access to the interventions and services they need to be successful.
- Behavior: SWDs are more than twice as likely to receive out-of-school suspension than students without disabilities (U.S. Department of Education Office of Civil Rights, 2014). Out-of-school suspensions neither address the root causes of behavioral issues nor help students learn better ways to communicate and resolve conflicts. Similar to absenteeism, suspension reduces engagement and interferes with access to special education services (Leung-Gagné et al., 2022).
- **Course Grades:** SWDs consistently score lower in mathematics and reading than students without

disabilities (U.S. Department of Education, 2022). Lack of success in high-stakes courses such as Algebra 1 and English 1 increases students' risk of leaving high school before completion (Baker et al., 2020; Zablocki & Krezmien, 2013).

To better understand the barriers SWDs face in their path to high school graduation, the National Center for Learning Disabilities, in partnership with WestEd, is conducting a series of qualitative interviews with young adults (ages 18–24) with disabilities who either considered leaving high school before finishing but ultimately graduated or who left high school without graduating. Below is a description of four major themes that have emerged from preliminary analysis of the 12 interviews completed thus far.

SELF-ADVOCACY AND RESILIENCE

Across participants, chronic difficulties within their K-12 school experiences required extensive persistence and self-advocacy, which in turn supported a developing resilience. Resilience is defined as the ability to adapt and keep going, even when faced with challenges or disruptions (Masten, 2014). In this study, resilience stemmed from a need to advocate and fight for oneself. For example, many participants reported being denied services or being told that they would not succeed. These negative high school experiences cultivated a sense of resiliency that pushed them to advocate for their needs. Others cultivated a sense of resilience through their strong desire for a better life that could be unlocked through high school graduation. Of the study participants who considered leaving high school but ended up graduating, several expressed that this internal drive to push for a more desirable future played a major role in their decision to complete high school.

CHOICE IN SCHOOL COURSES AND ACTIVITIES

Participants also explained that being able to choose their own extracurricular activities and elective classes helped them gain a sense of autonomy and agency, setting them up for success and making their high school experience more positive. On the other hand, when asked about aspects of high school that felt frustrating, participants mentioned not having the opportunity to select the classes and activities they were interested in. Participants often highlighted how this differed from the experiences of their peers without disabilities, who, in their perspective, had much more agency and choice over their high school experiences. Several participants mentioned that they were not able to or were denied the opportunity to take electives in which they were interested or knew they could succeed. This led to them feeling like they were failures and dampened their interest in school and sense of belonging. Conversely, one participant mentioned that the opportunity to take theater, an activity they loved, played a major role in their sense of belonging and influenced them to remain in school.

THE NEED FOR TEACHER ADVOCATES

Another theme was the desire for knowledgeable teacher advocates who believed in students' success. When participants were asked about what influenced them to leave high school without graduating, several mentioned that their teachers served as major barriers in their high school journey. Participants reported feeling like their teachers were biased against them and did not believe that they could be successful in school. Participants mentioned that poor teacher-student relationships and experiences of bullying by teachers caused them to feel like they did not belong in school. For example, participants reported difficulties receiving the legally mandated disability accommodations and modifications they needed to succeed because teachers provided them either inconsistently or not at all. Another participant mentioned that they were discouraged from taking

an Advanced Placement (AP) class that they were motivated to take because their teacher said they would be unable to use their accommodations and modifications on the AP exam and therefore wouldn't pass the class.

PEER RELATIONSHIPS

Peer relationships emerged as a strong influence on whether participants remained in high school through graduation. Peers were said to positively influence school connectedness and sense of belonging. For participants whose parents did not complete high school, peers were found to be a source of help and support in ways that their families could not be. Others also discussed how school friends provided them with support that teachers couldn't or wouldn't provide. One participant mentioned how having friends created a sense of healthy competition, which motivated them to do better in school. However, they lost this sense of connectedness to school when the COVID-19 pandemic caused schools to proceed remotely. The decline in connectedness was so strong that this participant reported having to take alternative classes during their senior year to prevent them from leaving high school before completion.

CONCLUSION

Although these findings are preliminary and therefore subject to change as we obtain more data, it is important to note the importance of these four themes and the impact that they have on all students, but especially SWDs. Given the inequities and struggles that SWDs face in their high school journey, it is vital that we cultivate and emphasize a sense of self-advocacy and resilience, provide SWDs choice in their school classes and activities, ensure access to knowledgeable teacher advocates, and support the development of strong peer relationships within our school system.

THE COVID STORY: FINDING #1

Students from historically underserved populations, in most cases, experienced wider swings in high school graduation rates during the pandemic years than the national average. Students with disabilities experienced the largest gains in graduation rates between 2019 and 2022, and American Indian and Alaska Native students were the only student group investigated with a lower national graduation rate in 2022 than in 2019.

FINDINGS

In the three years before the pandemic, graduation rate gains were seen for all racial and ethnic groups and for students with disabilities, English learners, and economically disadvantaged youth (Exhibit 13 and Appendix B, Exhibit B.1). In fact, some of the largest average annual gains were among certain historically disadvantaged student groups, including students who were English learners (1.4 points per year), American Indian and Alaska Native (0.95 points per year), Black (0.9 points per year), Hispanic (0.85 points per year), or economically disadvantaged (0.85 points per year). By comparison, average point-per-year increases were 0.7 for Asian students, 0.55 for students with disabilities, and 0.40 for white students.

For many historically disadvantaged student groups, when the pandemic struck in 2019–20, graduation rates increased more than the overall national increase of 0.7 points. Relatively large rises were evident for students with disabilities (2.4 points), English learners (2.1 points), Black students (1.5 points) and those who were economically disadvantaged (1.3 points). Other racial and ethnic groups saw graduation rate gains that were roughly on par with the national average change (0.6 points for American Indian and Alaska Native students, 0.8 for Hispanic students, and 0.8 for white students). Asian or Pacific Islander student graduation rates were the only exception to this change, holding relatively steady at 92.5% (a decline of 0.1 percentage points).

In the 2020–21 school year, the first national dip in the U.S. adjusted cohort graduation rate occurred (the ACGR was first collected in 2010-11), and most—but not all—student groups saw declines as well. American Indian Alaska Native students saw the largest graduation rate decline in 2020-21 (1.0 points), and declines were also evident among Hispanic students (0.7 points), economically disadvantaged students (0.6 points), Black students (0.6 points), and white students (0.4 points). Graduation rates among students with disabilities (a decrease of 0.1 points) and English learners (no change) held relatively steady, while graduation rates among Asian and Pacific Islander students increased (0.6 points).

In 2021–22, when the national ACGR rebounded by 0.5 points to hit its all-time high, graduation rates increased, on average, for students who were Hispanic (1.0 points), had disabilities (0.9 points), were English learners (0.8 points), were economically disadvantaged (0.6 points), were Asian or Pacific Islander (0.6 points), or were Black (0.5 points). Meanwhile, graduation rates held steady for American Indian and Alaska Native and white students (no change for either group). By 2022, students who identified as American Indian and Alaska Native were the only group of students investigated whose graduation rate remained lower than it had been in 2019.

EXHIBIT 13.



U.S. Adjusted Cohort Graduation Rate by Race and Ethnicity: 2017-2022

NOTE: States missing source data are excluded for specific years: Illinois (2020 and 2021), New Mexico (2022), Oklahoma (2022), Texas (2020), and Washington (2021). If a student identified as Hispanic or Latino, then they were not included in the other racial categories. *SOURCE*: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

Looking across the pandemic-era data, it is evident that the graduation rate trajectories of certain student groups differed from the broad national pattern in either the magnitude or the direction of year-to-year changes. For example, students with disabilities saw larger graduation rate increases than the nation at large in both 2020 (a 2.4 point increase, compared to an increase of 0.7 nationwide) and 2022 (a 0.9 increase compared to an increase of 0.5 points nationwide), as well as near-stability in 2021, a year when the national graduation rate declined (a decline of 0.1 points compared to a decline of 0.4 points nationwide). Hispanic students had initial gains on par with national gains in 2020 (0.8 for Hispanic students vs. 0.7 points

nationwide), followed by an above-average decline in 2021 (0.7 for Hispanic students vs. 0.4 points nationwide), and then the most robust recovery in 2022 (1.0 for Hispanic students vs. 0.5 points nationwide). Asian and Pacific Islander students saw stability in 2020 when the nation's graduation rate increased (a decline of 0.1 for Asian and Pacific Islander students vs. a gain of 0.7 points nationwide), increases in 2021 when the nation's graduation rate dipped (an increase of 0.6 for Asian and Pacific Islander students vs. a decline of 0.4 points nationwide), and continued increases in 2022, when the U.S. graduation rate rebounded (a gain of 0.6 points for Asian and Pacific Islander students vs. a gain of 0.5 points nationwide).

THE COVID STORY: FINDING #2

National data shows high school graduation rates ending up marginally higher in 2022 than prior to the pandemic in 2019, but state data tells a much more complicated story. After three years of pandemic impacts, some states ended up with substantially lower graduation rates in 2022 than in 2019. Others ended up with substantially higher graduation rates. Pre-pandemic, 36 states had positive graduation rate trends; during the pandemic years, just 23 did. State trends fit into one of four groups: 1) improvements both before and during the pandemic years, 2) improvements before the pandemic and declines during it, 3) declines before the pandemic and gains during it, and 4) declines both before and during the pandemic years. The national graduation rate rebound from 2021 to 2022 was driven by substantial changes in a few large states. California was the biggest positive contributor, and New Jersey and Florida had the biggest negative impacts.

In Exhibit 14, the X-axis represents the average annual change in the adjusted cohort graduation rate during the pre-pandemic period (2017 to 2019). The Y-axis represents the average annual change in the ACGR from 2019 through 2022. The size of the bubble representing each state is proportional to the number of students in that state's 2022 ACGR cohort. States with worsening trends are below the dashed line, and jurisdictions with improving trends are above the dashed line. Jurisdictions with positive pandemic-era trends are in the top half of the graph (above the X-axis), and states with negative pandemicera trends are in the bottom half. States with positive pre-COVID-19 trends are in the right half of the graph (to the right of the Y-axis) and those with negative pre-COVID-19 trends are in the left half. Exhibit 15 shows the average annual change in ACGR by state from 2019 to 2022. States are rank-ordered by their average annual ACGR change to ease comparisons.

Related findings regarding state graduation rate trends include (see Appendix B, Exhibit B.2 for detailed state graduation rate trajectories):

• Thirty-one states saw trends worsen from the pre-pandemic era to the pandemic era

(below the dotted line in Exhibit 14). In comparison, 19 jurisdictions saw improving trends post-pandemic.

- Five jurisdictions saw absolute pandemicera graduation rate gains that averaged a point per year or more, led by the District of Columbia (2.5 points per year) and Ohio (1.4 points per year) (Exhibits 14 and 15).
- Four states saw absolute pandemic-era graduation rate losses that averaged a point per year or more, with Oklahoma (2.5 points per year) and New Jersey (1.8 points per year) showing the biggest losses (Exhibits 14 and 15).
- Eighteen states had downturns: graduation rates trending down in the COVID-19 period after trending up in pre-COVID-19 era (bottom-right quadrant of Exhibit 14). The largest downturn was evident in Oklahoma (decline in trend of 3.5 points).
- Eighteen states had continued gains: graduation rates that were trending up both pre- and post-pandemic (upperright quadrant of Exhibit 14). Continued gains states with the largest average postpandemic gains were Mississippi and New York (1.3 points per year).

- Eight states had continued losses: declining graduation rates in both the pre-COVID-19 and the COVID-19 eras (bottom-left quadrant of Exhibit 14). Among these states, Vermont had the largest COVID-19 era decline (0.6 points per year, respectively).
- Seven jurisdictions had upturns: graduation rates that trended upward during the pandemic period after trending downward previously (upper-left quadrant of Exhibit 12). The biggest upturns were evident in the District of Columbia (-2.2 to +2.5 points per year) and Ohio (-1.1 to +1.4 points per year).

EXHIBIT 14.

Average Annual Change in Adjusted Cohort Graduation Rate by State during the Pre-COVID-19 (2017–2019) and COVID-19 (2019–2022) Eras.



Average Annual Graduation Rate Change: 2017–2019

NOTE: Because of missing 2022 data, New Mexico and Oklahoma cohort size is based on 2021 data and average annual graduation rate change for the 2019–2022 period is based on 2019–2021 data.

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

EXHIBIT 15.

Average Annual Change in Adjusted Cohort Graduation Rate by State During the COVID-19 Era: 2019–2022



NOTE: Because of missing 2022 data, New Mexico and Oklahoma average annual graduation rate change for the 2019–2022 period is based on 2019-2021 data.

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

Some states influenced national graduation rate trajectories more than others. The influence of state graduation rate changes on national graduation rate changes is a function of the magnitude of changes in the state's graduation rate, as well as the number of students in a state's graduation cohort relative to the rest of the country over time (see Appendix B, Exhibit B.3 for detailed state graduation cohort size trajectories).

California was by far the largest positive contributor to the national graduation rate rebound in 2022, with its shifts from 2021 to 2022 in graduation rate and cohort size adding nearly half a percentage point to the national graduation rate (Exhibit 14). New York was the next most influential positive contributor, adding one tenth of a percentage point. In contrast, both New Jersey and Florida pushed graduation rates lower nationally than they would have been otherwise (declines of 0.1 and 0.2 percentage points, respectively).

State policy shifts likely played a role in these national impacts. California waived all local graduation requirements that exceeded state requirements (California Department of Education, n.d.). It also increased state-level funding on top of the influx of federal relief dollars (Governor of California website, n.d.). New York was the largest state to waive its exam requirements for high school graduation. The negative direction of New Jersey's high school graduation rates may have, in part, been the result of a non-pandemic-related factor; in the 2021-22 school year, to be in federal compliance, the state adopted a stricter definition of "on-time graduation with a regular diploma," which is needed to count as a high school graduate for federal high school graduation rate accountability.

EXHIBIT 16.

State Contributions to the National Adjusted Cohort Graduation Rate Rebound: 2021 to 2022



NOTE: Because of missing 2022 or 2021 data, Illinois, New Mexico, Oklahoma, and Washington were excluded from this analysis. *SOURCE*: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

THE COVID STORY: FINDING #3

School district graduation rate trends and trajectories during the pandemic years were highly variable both nationally and within states. Some districts came out of the pandemic years with higher graduation rates, others emerged with lower rates, and some saw little change. Slightly less than a third of school districts ended the pandemic years with lower graduation rates in 2022 than in 2019, and a similar percentage had higher graduation rates in 2022 than in 2019. More than a third of districts (38%) maintained stable graduation rates, with gains and losses nearly balanced between 2019 and 2022. During the pandemic years, 43% of districts showed recovery after initial declines, and 40% continued to face challenges, with many experiencing fluctuating or declining graduation rates.

High school students graduate from high schools located in school districts. National events, such as a pandemic, federal emergency school funding in response to it, and state policies on graduation requirements, influence graduation rates. However, it is how students experience national and state conditions locally and the actions taken at the school and district level in response to them that fully determine their impact on high school graduation rates. Thus, it is at the school district level that we see the greatest variation in changes in high school graduation rates during the pandemic. Within each state, where students went to school strongly influenced the pandemic's impact on the likelihood that they would graduate with their class. Some districts demonstrated remarkable resilience, maintaining or improving their graduation outcomes, while others faced substantial setbacks.

We conducted two sets of analyses to explore the variation of school district graduation rates during the pandemic years. The first looks at the big picture and examines changes in graduation rates before the pandemic in 2019 to the end of the pandemic years in 2022. The second analysis looks at year-to-year patterns examining changes across three time periods: 2019–20, 2020–21, and 2021–22.

Only school districts reporting high school graduation (ACGR) data on 60 or more students were included in the analyses. Changes in school district graduation rates across the periods 2019–20, 2020–21, and 2021–22 were organized into five categories based on the pooled standard deviation.

"Substantial Losses" is defined as a change below -6.13 points (-1 standard deviation [SD]), while "Moderate Losses" falls between -6.13 and -1.23 points (-1 SD to -0.2 SD). Changes within the range of -1.23 to 1.23 points are considered "Stable" (±0.2 SD). "Moderate Gains" is identified when changes are between 1.23 and 6.13 points (0.2 SD to 1 SD), and any change above 6.13 points is categorized as "Substantial Gains" (1 SD).

Learnings from the Field Teachers Are the Heart of the System

ANGELA JERABEK, BARR CENTER

We know that to best support students' academic and non-academic needs, we need teachers who can see both barriers and opportunities. Because teachers are the heart of our education system, the relationships in which they engage are imperative: staff-tostudent, student-to-student, and staff-to-staff. Our engagement in the GRAD Partnership has been a wonderful opportunity to reinforce the learnings that BARR (Building Assets, Reducing Risks) has been seeing across the country.

Students thrive when teachers use relationships and data to create solutions while working together. Educators also benefit from training and support to identify, share and interpret qualitative and quantitative data. BARR works with existing school staff to enhance their skills through training, coaching, and continuous improvement practices. BARR coaches support schools in implementing the model, focusing on building relationships and using data to understand and support students better. This approach helps teachers improve their use of data and fosters systemic change and growth.

Educators thrive when they are provided with the structure to collaborate, innovate, and create change within their own school systems, eliminating "silo work." In many schools, staff often work in isolation, making it difficult to address students' holistic needs and to collaborate effectively with colleagues. Research shows that educators are vital to students' success and that relational dynamics within a school are key to both student and teacher resilience. Building strong connections among students, teachers, and staff should be a priority for all schools. The collaborative approach enhances teachers' self-efficacy and fosters a sense of collective efficacy, where a group believes in its ability to achieve goals through coordinated efforts.

Teacher teams foster stronger relationships among staff, which is fundamental to creating a supportive and collaborative environment within schools. These relationships not only enhance the sense of community among educators but also contribute to a positive school climate. Increased knowledge about students' needs further boosts teachers' professional self-esteem and well-being. When teachers feel confident in their understanding of students, they are better equipped to address academic and non-academic challenges.

The GRAD Partnership helps BARR amplify not only our broader evidence, but also individual success stories like Johnson Central High School, a National Spotlight School based in Johnson County, Kentucky. This school was recognized for reducing chronic absenteeism from 20% to 2%. The GRAD Partnership hosted a webinar featuring the school's leadership so that schools around the nation could learn from the best practices this school put in place to address chronic absenteeism.

The evidence is clear: When teachers are given the tools and support to work together, they can create meaningful change that benefits themselves and their students. Collaborative efforts eliminate isolated work, enabling educators to address students' holistic needs more effectively. As teachers feel more confident and supported, their ability to address academic and non-academic challenges improves, leading to a more effective and cohesive education system. Through initiatives like BARR, schools can ensure that has all teachers and students have the opportunity to thrive in a nurturing and collaborative community.

Our collaboration with the GRAD Partnership has confirmed our belief that teachers are the cornerstone of the education system, and their relationships with students and colleagues are crucial for fostering a supportive learning environment. Student success systems demonstrate the impact of enhancing teacher skills through training, coaching, and continuous improvement practices. By focusing on building relationships and effectively using data, student success systems help educators collaborate, innovate, and drive systemic change within their schools.



DISTRICT GRADUATION RATE CHANGES (2019–2022)

Nationwide Trends in District Graduation Rate Changes

Exhibit 17 shows the distribution of district graduation rate changes between 2019 and 2022 across the country, based on 6,989 school districts included in the analysis. Overall, slightly more than a third of districts maintained stable graduation rates (37.7%). Districts with substantial improvements and those with substantial losses in graduation rates were

comparable in number. Slightly less than a third had higher graduation rates at the end of the pandemic years than before the pandemic began (Moderate Gains: 23.0%; Substantial Gains: 8.8%). Similar percents had lower graduation rates (Moderate Losses: 22.0%; Substantial Losses: 8.6%).

EXHIBIT 17.





Change Category

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

This shows that in about one-sixth of the nation's school districts, the pandemic years had a large impact on a high school student's likelihood of graduating. In about 9% of school districts, graduation rates improved by six percentage points or more. In another 9%, high school graduation rates declined by six percentage points or more. This created a pandemic-influenced 12-point gap in graduation rates between the districts that saw the greatest gains and declines in high school graduation rates from 2019 to 2022.

State-Level Trends in District Graduation Rate Changes

When examining the data at the state level, we gained a clearer picture of the trends within the state. The following section explores these state-level trends. Exhibit 18 illustrates the distribution of district ACGR changes between 2019 and 2022. Each bar represents a state and is divided into five segments, corresponding to the percentage of districts in that state falling into one of five categories: Substantial Gains, Moderate Gains, Stable, Moderate Losses, or Substantial Losses. States are sequenced based on the percentage of districts that saw gains (represented by dark orange and light orange bars, respectively). Detailed district-level data can be found in Appendix B, Exhibit B.4.

The results reveal both substantial variation among school districts within states and differences between states where district outcomes predominate (Exhibit 18). For example, Ohio exhibited prevalent gains amongst its school districts, with only a minimal number experiencing declines. In contrast, New Jersey had the greatest preponderance of school districts experiencing declines, yet it still had some districts that achieved substantial gains. States like Texas demonstrated stability as the most common trend among its school districts, as well as broadly equal numbers with gains and declines. Meanwhile, states like Rhode Island exhibited a balanced distribution of gains, stability, and losses. No school districts in Alabama, Hawaii, Maryland, Montana, North Dakota, Nebraska, and New Hampshire experienced substantial gains, while Maryland had no districts with substantial losses.

Key findings regarding the distribution of district graduation rate changes between 2019 and 2022 include:

- Seven states saw gains in graduation rates as the most common trend amongst their school districts, as reflected in the cumulative percentages in the Substantial Gains and Moderate Gains categories.
- Thirteen states experienced the most widespread declines in graduation rates amongst their school districts, as reflected in the cumulative percentages of the Moderate Losses and Substantial Losses categories.
- Fourteen states showed stability as the dominant trend across their school districts.
- Twelve states had roughly equal numbers of school districts experiencing different outcomes. Three had a balanced distribution across gains, losses, and stability; six states had a balanced split between stability and losses; two states had a balanced distribution between stability and gains; and one state had a balanced distribution between losses and gains.

The details for each group of states can be referenced in Appendix B, Exhibit B.5.



Distribution of U.S. School District High School Graduation Rate Changes from 2019 to 2022 by State

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

Patterns of District ACGR Change Across 2019–20, 2020–21, and 2021–22

EXHIBIT 18.

At the national level, each year of the pandemic had a distinct outcome on high school graduation rates. After the pandemic first arrived in March 2020, national graduation rates rose slightly for the class of 2020. In the following year (2020–21), they declined and then rebounded in 2021–22. At the school district level, a much wider range of outcomes occurred. This can be seen in an analysis of the year-to-year patterns in school district high school graduation rates during the pandemic years.

To capture patterns in year-to-year change in high school graduation rates from 2019 to 2022,

we coded each year-to-year change as either a gain, a loss, or stable.⁵ Based on these yearly patterns, districts were further categorized into six overarching classifications to describe their patterns over time:

- Consistent Gains: Districts maintained steady improvement in graduation rates across all years.
- Consistent Losses: Districts exhibited a continuous year-to-year decline in graduation rates.
- 3. **Stable:** Districts remained stable, showing minimal changes in annual graduation rates across the entire period.

⁵ Gains refer to both substantial and moderate gains, while losses include substantial and moderate losses. Moderate gains are identified when changes fall between 1.23 and 6.13 points (0.2 SD to 1 SD), and any change above 6.13 points (above 1 SD) is categorized as substantial gains. Substantial losses are defined as a change of more than -6.13 percentage points (below -1 SD), whereas moderate losses fall between -6.13 and -1.23 points (between -1 SD and -0.2 SD). Changes within the range of -1.23 to 1.23 points (±0.2 SD) are considered stable.

- 4. **Recovery:** Districts showed a mix of patterns but ultimately demonstrated recovery from earlier declines.
- 5. **Fluctuating Downward:** Districts showed mixed trends that, despite fluctuations, ultimately resulted in a decline.
- 6. **Mixed:** Districts exhibited fluctuating trends without a clear or consistent pattern of improvement or decline.

Appendix B, Exhibit B.6 presents examples of different combinations of these patterns across the years for further illustration.

Distribution of U.S. School Districts by Patterns of High School Graduation Rate Changes Across 2019-2022

Exhibit 19 presents the distribution of school districts based on changes in their graduation

rates across three time periods: 2019-20, 2020–21, and 2021–22. Though many districts showed signs of recovery, others continued to face challenges. Less than half of the districts (43%) followed the national pattern and experienced recovery, with their graduation rates rebounding after initial declines. About 41% of the districts faced challenges in maintaining their graduation rates. Roughly one in five districts (21%) experienced a fluctuating but ultimately downward trend, and 20% of districts exhibited fluctuating results with no clear upward or downward trend. A smaller proportion (14%) maintained stable graduation rates with minimal changes across the three periods. Very few districts demonstrated either consistent improvement (1.3%) or consistent declines (0.8%) throughout the entire period.

EXHIBIT 19.

Distribution of U.S. School District High School Graduation Rate Changes from 2019 to 2022 by Patterns of Change



SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

Variations in U.S. School District Graduation Rate Change Patterns by State Across 2019-2022

Though the national analysis offers a broad overview of district graduation rate trends, a closer examination at the state level revealed differences in how districts fall into each category. The following analysis provides a more detailed view of the varying trends in district performance across different states. Exhibit 20 and Appendix B, Exhibit B.6 illustrate the proportion of districts in each state that falls into each category. The states are ordered based on the cumulative percentage of Consistent Gains (dark orange) and Recovery (light orange). Several interesting trends in district graduation rate trajectories emerged across states. Delaware stood out with 73% of its districts showing consistent gains, and it also had the fewest districts experiencing downward fluctuations, reflecting strong, stable improvement. Nevada had a high recovery rate amongst its districts, but some districts showed both fluctuating downward and mixed trends.

EXHIBIT 20.





SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

Similarly, North Carolina demonstrated that though recovery was the dominant trend, a notable portion of districts experienced mixed or fluctuating downward results. Pennsylvania mirrored this pattern, with a similar number of districts experiencing mixed and downward fluctuations. Maryland offered a balanced picture, where most districts managed to maintain or improve graduation rates, though some still showed fluctuating trends.

Florida, on the other hand, had roughly equal numbers of districts either fluctuating downward or showing recovery. Meanwhile, Kentucky, although largely characterized by downward trends, had some districts that managed to recover, showing resilience amid broader declines. For a complete list of states in each category, see Appendix B, Exhibit B.7.

Key findings regarding state patterns of annual changes in district graduation rates between 2019 and 2022 include:

- In only 22 states did more than 40% of districts demonstrate the national pattern of recovery from initial declines.
- In 10 additional states, about one-third of districts had a recovery pattern, with most showing a balance of other trends.
- In five states, more than 30% of districts exhibited fluctuating downward trends in graduation rates, with no balance across other categories.
- **Four states** had relatively equal numbers of districts with recovery, stable, and fluctuating downward trends.

The details for each group of states can be referenced in Appendix B, Exhibit B.8.

Building on the state-level analysis, the district-level findings reveal that though the national pattern holds true for most students, it primarily reflects the experiences of a subset of large districts in states with high enrollments. These large districts shape national trends but do not fully represent the diversity of outcomes across smaller or lesspopulous districts. A closer look at how the pandemic affected graduation rates by district shows that location influenced the impact. Students experienced a wider range of outcomes—fluctuating, stable, or decreasing rates-rather than the straightforward national trend of decline followed by recovery. This suggests that local understanding and context-specific actions will be required to address declines.

Learnings from the Field

Rural Student Success: Early Learnings from the Field

TAYLOR MCCABE-JUHNKE, RURAL SCHOOLS COLLABORATIVE

The substantial variation in school district and state graduation rate trajectories during the pandemic era begs the question of which, if any, pandemic-related policy changes may have contributed. Recall that some changes, like school closures and emergency remote or hybrid learning may have driven graduation rates down, while other changes, like easing graduation requirements may have lifted them up. Moreover, the fact that policy changes varied by place may help explain why graduation rates played out differently in different locales. Of all the pandemic-related policy shifts that may have made a difference, we were able to examine three, thanks to readily available or newly collected data: state waivers of high school exit exam requirements, district and school closures, and remote and hybrid learning due to the pandemic.

If a school's 9th grade class has only four students, how should they measure student success? One student out sick equates to a 25% absenteeism rate. For rural school communities, data may tell only part of the story. Small schools have unique contexts and certainly face some challenges (e.g., teacher shortages, funding, capacity). Troublingly, the national narrative rarely celebrates rural assets (strong relationships, community support, and flexibility). By building on the strengths of being small, tight-knit, and iterative, rural schools have an immense opportunity to improve student success.

Rural Schools Collaborative (RSC), a national nonprofit network, is a founding organizational member of the GRAD Partnership for Student Success, partnering to launch student success systems in rural schools. Through RSC's Regional Hub Network, rural school cohorts piloted these systems with the help of local Intermediaries. RSC network partners supported 20 total schools in two rural regions; the Northern California cohort was supported by North State Together and the Black Belt of Alabama and Mississippi was supported by the University of West Alabama.

From 2022 to 2024, these 20 schools piloted the GRAD Partnership student success systems framework, targeting long-term improvement in attendance, course performance, behavior, and graduation rates. With strong relationships, community assets, and school connectedness at the heart of this work, the rural pilot schools are already seeing encouraging results.

One rural school counselor from Northern California says, "To improve attendance, we've focused on positive approaches. Instead of punishments, we celebrate students with recognition programs, awards, and rewards. We also create personalized plans for students who struggle to come to school regularly, including extra help with schoolwork, counseling, or referrals to community resources."

Positive relationships and school connectedness are often a hallmark of small and rural schools. Backed by the research of the student success systems framework, many rural school leaders doubled down on student agency, belonging, and connectedness initiatives.

"Because a large portion of our student population comes from lower-income families, students often have after-school jobs to help support their families, so they aren't able to participate in a lot of after-school activities and sports," says a rural school leader from Alabama.

"We try to find time during the school day for club and activity meetings to accommodate these students. Transportation to and from after-school activities is also a challenge, but several coaches have created an afternoon and summer bus schedule to pick up students for sports and practices."

With staff time a precious resource, rural schools are also looking for ways to engage the broader community for support: "While we communicate frequently with our students' parents/guardians, we often view them as passive participants," says one program leader in Northern California. "We need to find ways to bring parents into our hallway so that they feel like more equal partners in building our students' academic and, ultimately, life success." School leader perspectives are an important litmus test, but are these efforts also resonating with the students? One 11th grader in an Alabama rural school says, "I used to be a shy kid and had a hard time making friends. Once I began this program, I found a sense of belonging and realized it is OK to be me, regardless of what others think."

Challenges still remain for these schools, with about 25% of participants reporting parental engagement, turnover, transportation, and limited resources as ongoing barriers.

Yet with recent research linking school connectedness and student outcomes, these rural schools are building on their strengths and formalizing efforts to use data to build and measure strong relationships. "Students love being celebrated for their efforts! After the first year, we saw a big 20% drop in chronic absenteeism," says one rural counselor in California.

Overall, these cohorts report decreases in behavior infractions, course failures, and absenteeism rates. Though data isn't everything, it can certainly be a helpful tool for timestrapped, caring adults to know where to focus their time and energy.

"Through our student success system, we were discovering students who were struggling with addiction or having suicidal ideations, and we were able to intervene and provide support," says Demopolis High School Principal Terina Gantt.

"These systems aren't just creating productive citizens; they're saving lives."

THE COVID STORY: FINDING #4

Policy responses to COVID-19 impacted district graduation rates. The greater the proportion of time spent in remote or hybrid learning in 2021, the lower school district graduation rates were in that same year. When the dozen states with high school exit exam requirements waived them in response to the pandemic, district graduation rates in those states improved. Emergency school closures in 2021 and 2022 also decreased graduation rates slightly.

In 2021, more time spent in remote and hybrid learning was linked to lower district graduation rates, controlling for exit exam waivers, COVID-related temporary school and district closures, demographic characteristics, and unobserved time-constant differences across districts (Appendix B, Exhibit B.9). Based on our model results (see Appendix A for technical details), a school district adopting 100% remote learning in 2020-21 (as opposed to 100% in-person learning) would be associated with a 0.9 percentage point decrease in the 2021 school district graduation rate (b=-0.85, t=-2.97, p=0.003). The effect of hybrid learning relative to in-person learning was also negative, corresponding to a 0.4 percentage point decrease in 2021 (b=-0.42, t=-2.58, p=0.010). On weighted average, for students enrolled in U.S. public school districts with more than 60 students in their graduation cohort, 25% of the 2020-21 school year was remote learning; this is because some school districts were remote learning for most or all of the year, some were remote learning for part of the year, and some were never fully remote. As a result of these shifts to remote learning, an estimated 7,400 students failed to graduate on time, and the average school district's graduation rate decreased by an estimated 0.2 percentage points in 2021. At the same time, 32% of the 2020-21 school year was hybrid learning based

on the weighted average; the average school district's graduation rate decreased by an estimated 0.13 percentage points in 2021 due to the shifts to hybrid learning, resulting in an estimated 4,700 students failing to graduate on time. In total, an estimated 12,200 students did not graduate on time, which represents approximately 2.8% of the total 432,800 ungraduated students in 2021 in school districts with more than 60 students in their graduation cohort.

In 2022, a continuing negative effect of hybrid learning during the prior school year on district graduation rates was detected (b=-0.64, t=-3.36, p=0.001). Increased time spent in hybrid learning during the 2020-21 school year is associated with lower graduation rates in 2022. A school district spending 100% of the 2020–21 school year in hybrid learning would have a 2022 district graduation rate that was 0.6 percentage points lower than it would have been if learning was 100% in-person during the prior school year. Counterintuitively, the reverse was true for virtual learning (b=0.93, t=3.17, p=0.002). That is, although 2021 graduation rates were lower with higher amounts of virtual learning in the 2020-21 school year, this was not the case for 2022 graduation rates, which were actually higher in districts with higher amounts of virtual learning during the prior school year.



When states waived exit exams, district graduation rates increased, on average,

after accounting for demographics, COVID-19 closures, learning modality, and unobserved time-constant differences across districts. As of 2019, 12 states had exit exams that students were required to pass in order to graduate: Florida, Louisiana, Maryland, Massachusetts, Mississippi, New Jersey, New Mexico, New York, Ohio, Texas, Virginia, and Washington (National Center for Fair and Open Testing, 2019). Each of these states waived exit exam requirements in 2020, with the exception of New Mexico, which waived them in 2021 (Sparks, 2020; Warniment, 2021). In states that waived exit exams, school district graduation rates were about 0.7 percentage points higher than they would have been otherwise (b=0.69, t=5.95, p<0.001). As a result, in school districts with more than 60 students in their graduation cohort, an

estimated total of 20,600 additional students graduated high school in the years 2020–22 than would have if the exit exams had remained in place in those years.

The more time a district's schools were temporarily closed due to COVID-19 in 2021 or 2022, the lower the district's graduation rate in those years. Specifically, a 10 percent relative increase in the average number of days that high schools were closed in a district was associated with a 0.3 percentage point decrease in graduation rates during the year of closure (b=-.03, t=-4.09, p<0.001). The weighted mean number of school closure days was three days in 2021 and .79 days in 2022. This reduction in graduation rates corresponds to approximately 2,700 fewer students graduating on time in 2021 and 750 fewer students graduating on time in 2022.

Learnings from the Field

Building a Cohesive System of Support

JENNY SCALA & MARIE SLATER, AMERICAN INSTITUTES FOR RESEARCH (AIR)

Districts and schools often use multiple system-wide approaches to identify students in need of support and provide appropriate interventions. Throughout the process of identifying and developing the four essential elements of student success systems, the GRAD Partnership heard repeated requests for clear guidance in coordinating and aligning existing frameworks. The GRAD Partnership engaged educators and student support personnel at two convenings to gather insights from the field on moving from existing student support systems to the student success systems of the future. Conversations from these convenings informed deeper learning on creating a unified system and provided a better understanding of key considerations for effective and responsive student success systems of the future.

Practitioners at these convenings voiced their desire for a cohesive system of support to address the school needs related to improving student academic and social needs, including addressing academic gaps, meeting students' basic needs, and developing social connections.

BUILD FROM EXISTING SYSTEMS

Two of the most common overarching frameworks in use by districts are Multi-Tiered

System of Supports (MTSS) and Early Warning Systems (EWS). However, additional systemwide approaches, such as Positive Behavior Intervention and Supports (PBIS), social and emotional learning (SEL), and student mental health services, are also regularly used to provide more nuanced support for students struggling with challenges not directly tied to academics. Considerations for a single cohesive system of support include integrating efforts across these frameworks and programs. MTSS and EWS were originally developed through different settings and contexts, but both serve the same core purpose of identifying students whom the system is not adequately serving and finding ways to meet those students' needs. Student success systems incorporate the proactive and preventative framework of an MTSS that is driven by research-based early warning indicators of an EWS to work in tandem as a single implementation process. This type of "braiding" existing efforts can help align efforts within, as well as across, schools.

Practitioners can look at existing strengths and gaps in their system-wide approaches to create a single framework by aligning current, and sometimes fragmented, implementation practices. A unified student success system provides one way of organizing a school community to support the progress and wellbeing of all students and can leverage existing strengths. Practitioners at the GRAD Partnership convenings noted that student success systems have the potential to create aligned language across buildings, offering better support connections between behavior, mental health, and academics from existing systems that have historically been implemented in silos.

THE ROLE OF DISTRICTS AND SCHOOLS

Though actions to carry out MTSS, EWS, and other frameworks mostly take place at the school level, districts are important partners in creating the conditions that ensure that student success systems integrate existing practices into a single, cohesive, district-wide system. Practitioners have articulated the different actions districts and schools can take to support developing a single cohesive system of support:

 Districts develop their capacity to integrate practices district-wide by sharing information across the system and providing clear connections between MTSS, PBIS, and SEL initiatives. Districts support school coordination and implementation by capturing information on what is working at scale, coordinating professional learning opportunities for school-level teams, and sharing resources and information across schools. Braiding funding streams may also help reduce the siloing effect caused by different grant opportunities. Schools develop cohesive systems by establishing clear processes for communicating across teams and coordinating support across available resources. Completing root cause analyses of school-level trends, then acting on and sharing the results to understand which interventions and adaptations have been successful can also help strengthen a coordinated student success system.

These insights can work with ongoing learning to help guide districts and schools with their efforts to develop student success systems that integrate existing frameworks and strategies into a single, cohesive system.

CONCLUSION

The story of the influences of the pandemic on U.S. high school graduation rates is substantially more complicated than it seems at first glance. Although the aggregate U.S. high school graduation rates showed relatively small fluctuations—first up, then down for the first time since states began measuring graduation rates using the adjusted cohort graduation rate, then up again to a new record high—the more closely we looked at high school graduation rate trajectories, the more complicated the picture became.

At a more granular level, we saw that, though many student groups roughly paralleled national trends overall, important differences were evident. Among historically disadvantaged racial and ethnic groups, we saw that Hispanic students saw the largest graduation rate gains nationwide from 2019 to 2022, but graduation rates among American Indian and Alaska Native students declined—the only racial or ethnic group to see a decline.

At the state level, we saw that some states demonstrated relatively little change in their graduation rate trajectories after the pandemic hit, whereas others saw substantial gains or losses, sometimes demonstrating either upturns or downturns from their pre-existing trends. Overall, fewer states had positive graduation rate trends in the pandemic era than in the pre-pandemic period. We also saw that the national graduation rate's rebound from 2021 to 2022 was substantially driven by graduation rate improvements in California and, to a lesser extent, New York.

At the district level, the picture was even more complex because substantial withinstate variability was evident. In all cases, states had some districts that saw high school graduation rate gains during the pandemic years, some that were relatively stable, and some that showed losses in graduation rates. A meaningful number of districts demonstrated either substantial gains or losses during the pandemic years. Many districts, though not a majority, did show a pattern of some loss followed by recovery.

Our statistical analysis of the policy changes driving some of this district and state variability demonstrates that emergency remote and hybrid learning in 2021 was linked to a decrease in the average school district's graduation rate; nationally, this led to an estimated 12,200 students failing to graduate on time in 2021. Emergency COVID-related school and district closures in 2021 and 2022 also had a negative effect on graduation rates, but the small amount of time associated with these closures meant that the overall impact was minimal, corresponding to about 3,500 additional nongraduates across 2021 and 2022. In comparison, an estimated 20,600 students graduated high school in the years 2020 through 2022 as a result of 12 states waiving their high school exit exams. Overall, the policy changes investigated in our analysis contributed to the net positive gains in graduation rates in the pandemic era.

Why the negative effect of hybrid learning on high school graduation rates in 2020–21 persisted to the 2021–22 school year but the effect of remote learning in 2020–21 on graduation rates flipped from 2020–21 to 2021–22 deserves additional research. One possibility is that schools that were mainly virtual in 2020–21 may have invested more the following year in student supports and in providing opportunities for students who were behind in credits the opportunity to catch up. Alternatively, or additionally, perhaps the contrast that students experienced in shifting from in-person to virtual learning and back strengthened students' engagement once learning shifted back to in-person.

The present analyses demonstrate that the influence of the pandemic on graduation rates was far from uniform across districts and states, as the forces pushing graduation rates down and pulling them up varied across geographic lines and over time. Where high school students went to school in their sophomore, junior and senior years—and the pandemic-related policies those districts implemented—shaped the extent to which pandemic influenced their likelihood of graduating from high school on time.

Although the present study offers the strongest evidence to date of the impacts of remote and hybrid learning, and high school exit exam waivers on high school graduation rates, the study is by no means complete when it comes to investigating factors likely linked to graduation rate trajectory changes. For instance, various local and state education agencies may have lowered the bar for graduation by easing grading policies, providing for flexibility in local graduation requirements when they exceeded state minimums, and offering additional opportunities for credit recovery. Other impacts of the pandemic, such as those on local labor markets, family income, parental and student well-being, and community health, surely also played a role.

More broadly, although this study examined graduation rates in the three years immediately following the start of the pandemic, we are only just beginning to see the impacts of the pandemic on high school attainment. After all, those students who were kindergarteners when COVID-19 first struck are now entering 5th grade. We know that these students are less likely to read at grade level or to know their math facts than their counterparts in prior cohorts. These students make up the graduating class of 2032.



Plotting a Path Forward

The state of educational attainment in America in 2024

is in flux. The pandemic and its aftereffects, combined with longer term trends impacting the cost of higher education, have destabilized a decade-long pre-pandemic trend of rising high school graduation rates and college enrollments. The evidence reviewed in this report indicates we are in a period of more variability by place; the pandemic has had different effects on educational attainment trends depending on where you live. There also may be variation based on the grade students were in when they experienced the impacts of the pandemic.

The challenge we face as a nation is not simply how to get everyone back on the college track, it is to ensure that all students graduate high school and have a supported pathway to a postsecondary degree, an industry valuable credential, or job training that puts them on track to adult success. How this is best done will vary by place, and likely by cohort. What is needed is national and state support for policies and practices that enable local customization and co-creation of effective strategies and approaches. The learnings and experiences of the GRAD Partnership's many partners provide insight into some critical building blocks toward this end.

MOVING FROM SILOED STUDENT SUPPORTS TO A UNIFIED STUDENT SUCCESS SYSTEM

Over the past 25 years, schools have seen student support efforts proliferate. Each arose from a response to a specific challenge of the moment. As a result, schools now have many student support efforts, each typically focused on one dimension of student need. They have PBIS team (Positive Behavior Intervention and Supports) for behavior. They have an RTI (Response to Intervention) or MTSS (Multi-Tiered System of Supports) team to provide academic supports, usually in math and reading. They have an attendance team to address chronic absenteeism. They may also have an Early Warning or On-Track team to keep students on the path to high school graduation, or a well-being team focused on mental health. In practice, each of these teams may only have one or two individuals doing most of the work, and each team often discusses the same student, but only in terms of the dimension they are focused on. Post-pandemic, with the rapid rise in the scale of student needs, these small, unidimensional student support teams are able to address just a fraction of the students in need of support; if a school has 200 chronically absent students, a one- or two-person attendance team is not going to be able to respond to all the circumstances and situations driving their absenteeism.

This is why the GRAD Partnership is committed to collectively working with schools, districts, and states to create <u>student success systems</u>, which unify all their student support efforts. The core feature of student success systems is fewer total meetings; the meetings that do occur collectively involve more adults working together with students and their families to address students' holistic needs. Such an approach has much more <u>evidence of success</u>, both pre- and post-pandemic, than current siloed student support efforts.

A student success system enables a high school to continually progress monitor all their students on key indicators of academic success, school connectedness, and wellbeing. It provides a real-time means of seeing if classroom-, school-, and district-level improvement strategies are working, and insight into where adjustments are needed. Student success systems also have the potential to be a major means through which high schools can customize and co-create with their community pathways to adult success, for all their youth.

School and district student success teams need easy access to actionable data and human insight in order to get the right supports and experiences to students at the right time.

For student success systems to work, school and district student success teams need ready access to holistic, actionable data. They also need organizational structures to pool their insights, and the insights of students and families, to understand the factors driving the identified student need and to devise effective solutions. Currently, it is the exception and not the norm for schools and districts to have both the data and human systems needed to most effectively support their students. Many schools and districts are rich in data, but poor in data integration. They have data systems containing their students' attendance patterns, behavioral and well-being information, and academic outcomes, but they have no ready means of showing how all these elements combine for a given student. Equally important, they have

no integrated data showing patterns, trends, and interactions across and between these critical student success indicators by subgroup, small group, and customized cohorts and at the classroom, grade, and school level.

Fortunately, momentum is starting to build in the right direction. Several states, including Rhode Island, Kentucky, Alabama, and Indiana, have recently created much improved state data systems, which can provide districts and school student success efforts with much more actionable and real-time data than before. This is also true at the district level, with examples being seen from Tulsa, Oklahoma, to Lowell, Massachusetts. Efforts are also emerging to work with the large student information systems providers or create tools to make student success data more readily and effortlessly available from their information systems. Artificial intelligence, as it becomes more stable and error-free, also has considerable potential to assist student success teams in identifying critical patterns, trends, and interactions in their students' data, which can enable more strategic interventions and actions.

As important as improved data systems and data use are to student success, they will have no impact without an effective human system to interpret the data and combine it with human insights to turn it into effective actions. Almost all student needs are multi-dimensional and vary over time. No data system can be as up-to-date or as accurate as conversations with a student and/or their caregivers. To get the full and/or real story also requires trust, which cannot be achieved without taking the time to build a human relationship. Schools are showing this can be done. Student success teams, which include school leaders, student support personnel, and, importantly, classroom teachers, have regularly scheduled time to

meet during the school day, on a weekly or bi-weekly basis. In their student success meetings, the team reviews attendance as well as academic and well-being data, monitors the impact of actions taken in prior meetings, and makes changes as needed. As importantly, they interact with the students who are signaling a need for additional support and their caregivers, which helps the team better understand both the root cause of the need and what will be an effective solution. This last step is crucial. If a school or team guesses wrong about the reason a student needs support and proposes an action not aligned with the actual cause, precious time is wasted, at best; at worst, the misaligned response could make the situation worse.

Additional people power is needed to provide evidence-based student supports at the required scale.

One of the more stunning statistics on the impact of the pandemic is that during the 2021-22 school year, there were nearly 5,000 high schools with 400 or more chronically absent students. High schools are not alone in having hundreds of chronically absent students—many large elementary and middle grade schools had 200 or more chronically absent students. The number of students per school with significant pandemic learning loss can be even higher. We have also seen dramatic increases in the number of students with mental health challenges. Existing student support systems were not designed for this scale of student need, nor are schools staffed sufficiently to address it. This is even more the case as federal pandemic relief dollars come to an end. Thus, it will be essential for schools to be able to form partnerships with local community organizations, AmeriCorps programs, and institutes of higher education,

as well as to implement peer-to-peer support programs. These partnerships are the only way to be able to amass enough person power to provide the evidence-based supports (such as high dosage tutoring, school-based mentoring, postsecondary advising, and success coaching) at the scale currently required.

A key resource for this work is <u>The National</u> Partnership for Student Success (NPSS), a coalition of more than 200 student support and community organizations that works with school districts to provide access to additional person power. NPSS provides technical assistance in partnership formation, has developed voluntary standards so principals can know if a community organization or university is providing evidence-based student supports, and produces a range of how-to guides for finding and organizing additional person power in schools to support student success. It recently documented that over the past two years, an estimated 325,000 additional adults have stepped up to provide person-powered evidence-based supports in schools.

One key source of person power that needs to continue to be developed is college students who receive federal work-study funding. They can provide community service in local K–12 schools or after-school programs serving as tutors, mentors, success coaches, and postsecondary advisors, instead of working on campus. So far, more than 50 universities and colleges across the nation have joined NPSS's <u>IHE Coalition</u> and pledged to increase the number of federal work-study students on their campus, providing critical person powered evidence-based student supports in local schools and after-school programs. More universities and colleges should join the effort. Another critical source of person power that needs further development is high school students, high school seniors in particular. Every year there are close to 4 million high school seniors in the United States. Many of them have completed nearly all the credits they need to graduate before the end of the year. This means they have time on their hands when they could be serving as tutors, mentors, and success coaches for younger students. We need to do the work to enable these students to earn certification and acknowledgment of the work they do in these roles and use it to create pathways to the teaching and counseling professions for those who find a calling in these roles.

Finally, AmeriCorps and National Service have played a vital role in providing more person power in our nation's schools to address the pandemic's academic and well-being consequences. Between 2022 and 2023, more than 50,000 AmeriCorps corps members served supporting students in schools. These programs need to continue and expand.

Bring families, youth, K–12, community organizations, higher education, and workforce training together at the local level to create supported pathways to adult success for all youth in their community.

In the 21st century, communities must not only graduate their students from high school, but also provide them with supported pathways to postsecondary schooling and training, which propels them to adult success. This requires much more collaboration between the K–12 public school system, local institutes of higher education, and employers than has historically been the norm. High school principals, undergraduate deans of local colleges and

universities, and hiring managers for the largest employers have traditionally not known each other, let alone closely collaborated to create pathways to adult success for the youth in their communities. This needs to change. High school principals, undergraduate deans, and local hiring managers shape youth development opportunities in their communities. Structures, resources, guidance, and examples are needed to bring these institutions and their leaders together with the families and youth of the community to create localized pathways from high school to and through postsecondary schooling and training. These provide youth with a sense of connection to each other and their community, and lead to family-supporting wage employment. Examples of how this work is starting to be done can be found at the Pathways to Adult Success website.

Through much of this work needs to be done locally, there are some crucial steps that can be taken at the state and national levels. Work being done in the youth development and career pathways domains needs to be brought together. Youth need both career and connection, and we need a one-system approach that provides it. Civic, JFF, and the Everyone Graduates Center are working on a future pathways effort which aims to provide a framework to achieve this. More work is also needed in data integration between the K-12, higher education, and workforce development domains. Each K–12 school district and the civic leaders in the community need to know how many postsecondary pathways of what type are needed for each graduating class of high school students, how well their youth are doing in existing pathways, and how many students do not have access to a strong pathway to adult success.

Secondary schools and colleges need to be redesigned to meet 21st century needs.

Providing all students with both the supports they need to succeed in school and strong postsecondary pathways to career and connection will require redesign of our education institutions. Both high schools as well as colleges and universities were designed and organized for the prior century. The growing high school redesign movement, which can be seen in the work of XQ, Transcend, Linked Learning, the Everyone Graduates Center's Cross-state High School Redesign Collaborative and Secondary School Redesign Showcase, among others, has shown how local redesign teams comprising school leaders, teachers, students, and community members can refashion and re-model 20th century high schools into educational institutions serving the current needs of their community. Similar innovations are occurring at colleges and universities, and can be seen in networks supported by the Carnegie Foundation for the Advancement of Teaching, among others.

EFFORTS TO BOOST EDUCATIONAL ATTAINMENT NEED TO BE HUMAN-CENTERED

Throughout the 20th century, efforts to increase educational attainment largely focused on increasing the supply of education institutions and opening up access to them. We built more high schools and institutions of higher education and worked to ensure historically marginalized students could participate. To enable all youth to succeed in school and attain the education they need to thrive requires more than access. Learning is hard work and requires years of sustained effort. Effort, in turn, is fueled by purpose, meaning, shared belief, and self-efficacy, which are socially and emotionally created. To succeed, our youth need strong learning experiences and agency, belonging and connection. Thus, it is essential that our efforts to boost educational attainment be human-centered. As we work to provide students with powerful educational experiences and create pathways to adult success for all, it is essential that we deeply engage our youth in these efforts as co-creators. We need to ensure that efforts to improve educational attainment are grounded in both the <u>science of learning and</u> <u>development</u>, and in the strong supportive adult and peer relationships and sense of connection to school and community which sustain educational participation.




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Appendix A. Technical Notes

To explore the impact of key factors on district graduation rates, a fixed effects model was used to examine the variation of the graduation rations over time due to school closures, remote learning, and waiver policies.

Fixed Effects Model Specification

 $\begin{aligned} \mathsf{ACGR}_{tij} &= \alpha_{ij} + \beta'\mathsf{DEMO}_{tij} + \gamma \mathsf{WAIVEDEXAM}_{tj} + \\ \zeta \mathsf{DAYSCLOSED}_{tij} + \delta'\mathsf{YEAR}_t + \lambda_0 \mathsf{REMOTE2021}_{ij} \\ &* \mathsf{Y2021}_t + \lambda_1 \mathsf{REMOTE2021}_{ij} * \mathsf{Y2022}_t + \pi_0 \\ \mathsf{HYBRID2021}_{ij} * \mathsf{Y2021}_t + \pi_1 \mathsf{HYBRID2021}_{ij} \\ &* \mathsf{Y2021}_t + \mu_{tij} \end{aligned}$

In this model, the Adjusted Cohort Graduation Rate (ACGR) in year t for district i in state j is a function of unobserved time-invariant individual district heterogeneity (α_{μ}), a vector of time-varying demographic factors (*DEMO*_{tii}), an indicator variable representing whether a state waived their exit exam in that or a prior year (WAIVEDEXAM.), a variable representing the average number of days high schools were closed in the district due to COVID in the 2020-2021 and 2021-2022 school years (DAYSCLOSED_{tin}, and a vector of year dummy variables (YEAR,) with 2018-2019 as the reference year. The model also includes as explanatory variables interactions between year dummies for 2021 and 2022 and variables representing the proportion of the 2021 school year that was remote-learning for a given school district (*REMOTE2021*,) and the proportion of the 2021 school year that was hybrid-learning (HYBRID2021_{tii}). The coefficients on these interaction terms represent the effect of being fully remote or fully hybrid during the 2021 school year (relative to being fully in-person), on the ACGR in the years 2021 and 2022. Because these effects are interaction terms, they are allowed to vary by year.

The specific demographic variables included in the model were district cohort size (logged due to the variable being right-skewed), percent American

Indian or Alaska Native, percent Asian or Pacific Islander, percent black or African American, percent Hispanic or Latino, percent two or more races, percent children with disabilities, percent economically disadvantaged, and percent English learner.

Data Sources

School Closures. Data on school closures were obtained from <u>CDC</u>¹, detailing the dates schools were closed and reopened. The mean number of closure days was calculated for each district, based on the total number of days schools were closed within the district.

Waivers for State Exit Exams. Data were newly compiled on high school exit exams from various public, online sources (e.g., National Center for Fair and Open Testing, 2019; Sparks, 2020; Warniment, 2021). During the post-COVID period, the variable was coded as 1 in states that waived an exit exam as of the year it was first waived. The variable was coded as 0 in all other cases.

Remote Learning. Instructional mode data were retrieved from <u>Covid-19 School Data Hub</u>.² The data file includes the proportion of the school year that each school offered instruction that was fully in-person, remote, and hybrid learning formats. The proportions across all modes sum to 1.

State-level graduation rate data was missing for:

- Illinois: 2020 and 2021
- New Mexico: 2022
- Oklahoma: 2022
- Texas: 2020
- · Washington 2021

The U.S. Department of Education imputed missing state data to calculate the national adjusted cohort graduation date.

¹ Zviedrite, N., Jahan, F., Moreland, S., Ahmed, F., & Uzicanin, A. (2024). COVID-19–related school closures, United States, July 27, 2020–June 30, 2022. Emerging Infectious Diseases, 30(1), 58-69. https://doi.org/10.3201/eid3001.231215

² COVID-19 School Data Hub. (2023). Percentage of school year spent in-person, hybrid, or virtual, school overall shares (Version 3/8/23). Data Resources. Retrieved from <u>https://www.covidschooldatahub.com/data-resources</u>

Appendix B. Additional Exhibits

EXHIBIT B.1.

U.S. Adjusted Cohort Graduation Rate by Disability, Economic Disadvantage, English Learner, and Homeless Status: 2017–2022



NOTE: States missing source data are excluded for specific years: Illinois (2020 and 2021), New Mexico (2022), Oklahoma (2022), Texas (2020), and Washington (2021).

SOURCE: Author analysis of U.S. Four-Year Adjusted-Cohort Graduation Rate and Cohort Count, ED Data Express, U.S. Department of Education.



EXHIBIT B.2. Adjusted Cohort Graduation Rate by State: 2017–2022



EXHIBIT B.3. Adjusted Graduation Cohort Size by State: 2017–2022

EXHIBIT B.4.

Number and Percentage Distribution of School Districts by Adjusted Cohort Graduation Rate Changes from 2019 to 2022 by State

2019 to 2022 by		Substanti		Moderat			Stable	Modera	te Gains	Substant	
State	Total	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Alabama	130	19	14.6	55	42.3	43	33.1	13	10.0	0	0.0
Alaska	18	1	5.6	7	38.9	6	33.3	3	16.7	1	5.6
Arizona	149	30	20.1	35	23.5	48	32.2	19	12.8	17	11.4
Arkansas	130	9	6.9	28	21.5	48	36.9	35	26.9	10	7.7
California	381	7	1.8	47	12.3	134	35.2	157	41.2	36	9.4
Colorado	80	11	13.8	15	18.8	27	33.8	13	16.2	14	17.5
Connecticut	121	4	3.3	32	26.4	58	47.9	24	19.8	3	2.5
Delaware	26	3	11.5	4	15.4	11	42.3	5	19.2	3	11.5
District of Columbia	11	1	9.1	2	18.2	1	9.1	5	45.5	2	18.2
Florida	70	5	7.1	14	20.0	24	34.3	21	30.0	6	8.6
Georgia	171	2	1.2	30	17.5	51	29.8	59	34.5	29	17.0
Hawaii	1	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0
Idaho	63	9	14.3	20	31.7	16	25.4	11	17.5	7	11.1
Indiana	264	41	15.5	67	25.4	113	42.8	35	13.3	8	3.0
Iowa	133	15	11.3	43	32.3	57	42.9	15	11.3	3	2.3
Kansas	94	4	4.3	12	12.8	43	45.7	21	22.3	14	14.9
Kentucky	139	15	10.8	54	38.8	54	38.8	14	10.1	2	1.4
Louisiana	86	7	8.1	18	20.9	19	22.1	26	30.2	16	18.6
Maryland	24	0	0.0	9	37.5	9	37.5	6	25.0	0	0.0
Massachusetts	264	9	3.4	44	16.7	125	47.3	72	27.3	14	5.3
Michigan	418	59	14.1	110	26.3	117	28.0	88	21.1	44	10.5
Minnesota	196	15	7.7	53	27.0	80	40.8	31	15.8	17	8.7
Mississippi	121	5	4.1	15	12.4	28	23.1	45	37.2	28	23.1
Missouri	193	19	9.8	50	25.9	86	44.6	34	17.6	4	2.1
Montana	31	1	3.2	18	58.1	6	19.4	6	19.4	0	0.0
Nebraska	47	3	6.4	13	27.7	20	42.6	11	23.4	0	0.0
Nevada	13	2	15.4	4	30.8	2	15.4	0	0.0	5	38.5
New Hampshire	60	5	8.3	18	30.0	23	38.3	14	23.3	0	0.0
New Jersey	297	126	42.4	99	33.3	47	15.8	21	7.1	4	1.3
New York	525	16	3.0	85	16.2	189	36.0	155	29.5	80	15.2
North Carolina	145	15	10.3	33	22.8	55	37.9	29	20.0	13	9.0
North Dakota	14	3	21.4	5	35.7	5	35.7	1	7.1	0	0.0
Ohio	547	8	1.5	45	8.2	170	31.1	185	33.8	139	25.4
Oregon	99	11	11.1	29	29.3	21	21.2	22	22.2	16	16.2
Pennsylvania	491	37	7.5	120	24.4	209	42.6	103	21.0	22	4.5
Rhode Island	36	4	11.1	9	25.0	11	30.6	11	30.6	1	2.8
South Carolina	74	2	2.7	18	24.3	30	40.5	20	27.0	4	5.4
South Dakota	28	7	25.0	6	21.4	9	32.1	3	10.7	3	10.7
Tennessee	118	5	4.2	23	19.5	59	50.0	30	25.4	1	0.8
Texas	570	17	3.0	108	18.9	322	56.5	98	17.2	25	4.4
Vermont	34	6	17.6	6	17.6	11	32.4	9	26.5	2	5.9
Virginia	121	4	3.3	26	21.5	51	42.1	36	29.8	4	3.3
Washington	156	23	14.7	40	25.6	57	36.5	28	17.9	8	5.1
West Virginia	52	4	7.7	19	36.5	19	36.5	9	17.3	1	1.9
Wisconsin	218	6	2.8	39	17.9	112	51.4	53	24.3	8	3.7
Wyoming	27	4	14.8	8	29.6	5	18.5	9	33.3	1	3.7

NOTE: Five states were excluded from this analysis due to missing district-level data: Illinois and Utah (missing in 2019), and Maine, New Mexico and Oklahoma (all missing in 2022). Substantial losses = below -6.13 points; moderate losses = -6.13 up to -1.23 points; stable = -1.23 through 1.23 points; moderate gains = above 1.23 through 6.13 points; substantial gains = above 6.13 points.

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express).

EXHIBIT B.5.

State Categorization based on Distribution of District Graduation Rate Changes from 2019 to 2022

Category	n	Criteria	States
States With Most Gains	7	More than 40% of districts were categorized as showing Gains, with higher percentages of districts experiencing Gains than Losses. Additionally, the distribution between Gains and Stable was not balanced.	Gains ≥ 50%: District of Columbia, Mississippi, Ohio, Georgia, California; 40%≤Gains<50%: Louisiana, New York
States With Most Losses	13	More than 40% of districts were categorized as showing Losses, with higher percentages of districts experiencing Losses than Gains. Additionally, the distribution between Losses and Stable was not balanced.	Losses ≥ 50%: New Jersey, Montana, North Dakota, Alabama; 40%≤Losses<50%: Kentucky, South Dakota, Nevada, Idaho, Alaska, Wyoming, West Virginia, Arizona, Michigan
States With Predominant Stability	14	More than 40% of districts were categorized as Stable, but did not show the Gains or Losses as the main trend. Additionally, the distribution between Stable, Losses and Gains was not balanced.	 Stable ≥50%: Hawaii, Texas, Wisconsin, Tennessee; 40%≤Stable<50%: Connecticut, Massachusetts, Kansas, Missouri, Pennsylvania, Nebraska, Delaware, Virginia, Minnesota, South Carolina
	3	Balanced across Stable, Gains, and Losses	30%≤Stable<40%: Colorado, Vermont, Rhode Island
States With Balanced Trends	6	Balanced between Stable and Losses	Losses ≥ 40%: Iowa, Indiana, Washington; 30%≤Losses<40%: New Hampshire, North Carolina, Maryland
	2	Balanced between Stable and Gains	30%≤Gains<40%: Arkansas, Florida
	1	Balanced between Losses and Gains	Losses ≥40%: Oregon

EXHIBIT B.6.

Example School District Adjusted Cohort Graduation Rate Trajectories Classified as Consistent (Gains, Losses, or Stable), Recovery, Fluctuating Downward, or Mixed



Examples of Districts with Consistent Trends Over Time



Examples of Districts with Recovery Trends Over Time

EXHIBIT B.6.

Example School District Adjusted Cohort Graduation Rate Trajectories Classified as Consistent (Gains, Losses, or Stable), Recovery, Fluctuating Downward, or Mixed—Continued



Examples of Districts with Fluctuating Downward Trends Over Time

Examples of Districts with Mixed Trends Over Time



SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

EXHIBIT B.7.

Number and Percentage Distribution of School Districts by Adjusted Cohort Graduation Rate Changing Patterns by State Across 2019–2020, 2020–2021 and 2021–2022

		Consistent Losses Fluctuating Downward			Stable		Mixed		Recovery		Consistent Gains		
State	Total	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%
Alabama	129	4	3.1	43	33.3	23	17.8	29	22.5	30	23.3	0	0.0
Alaska	18	1	5.6	2	11.1	3	16.7	6	33.3	6	33.3	0	0.0
Arizona	140	2	1.4	25	17.9	23	16.4	21	15.0	68	48.6	1	0.7
Arkansas	128	0	0.0	29	22.7	16	12.5	27	21.1	54	42.2	2	1.6
California	378	1	0.3	38	10.1	48	12.7	31	8.2	257	68.0	3	0.8
Colorado	78	1	1.3	19	24.4	7	9.0	17	21.8	29	37.2	5	6.4
Connecticut	117	0	0.0	24	20.5	21	17.9	28	23.9	44	37.6	0	0.0
Delaware	26	0	0.0	1	3.8	5	19.2	1	3.8	19	73.1	0	0.0
District Of Columbia	10	0	0.0	2	20.0	0	0.0	3	30.0	4	40.0	1	10.0
Florida	70	0	0.0	14	20.0	7	10.0	35	50.0	14	20.0	0	0.0
Georgia	168	0	0.0	26	15.5	15	8.9	39	23.2	82	48.8	6	3.6
Hawaii	1	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0
Idaho	62	1	1.6	24	38.7	3	4.8	12	19.4	19	30.6	3	4.8
Indiana	254	2	0.8	86	33.9	46	18.1	44	17.3	75	29.5	1	0.4
lowa	127	1	0.8	34	26.8	36	28.3	23	18.1	33	26.0	0	0.0
Kansas	87	1	1.1	13	14.9	12	13.8	16	18.4	44	50.6	1	1.
Kentucky	137	1	0.7	57	41.6	26	19.0	22	16.1	31	22.6	0	0.0
Louisiana	84	0	0.0	12	14.3	8	9.5	26	31.0	37	44.0	1	1.
Maryland	24	0	0.0	7	29.2	6	25.0	2	8.3	9	37.5	0	0.
Massachusetts	259	0	0.0	30	11.6	62	23.9	60	23.2	104	40.2	3	1.:
Michigan	397	8	2.0	91	22.9	33	8.3	73	18.4	189	47.6	3	0.
Minnesota	185	0	0.0	39	21.1	22	11.9	42	22.7	79	42.7	3	1.
Mississippi	113	0	0.0	9	8.0	7	6.2	27	23.9	66	58.4	4	3.
Missouri	184	1	0.5	39	21.2	36	19.6	34	18.5	73	39.7	1	0.
Montana	29	0	0.0	11	37.9	5	17.2	5	17.2	8	27.6	0	0.
Nebraska	45	1	2.2	10	22.2	8	17.8	9	20.0	17	37.8	0	0.
Nevada	13	0	0.0	4	30.8	0	0.0	2	15.4	7	53.8	0	0.
New Hampshire	58	0	0.0	13	22.4	7	12.1	11	19.0	27	46.6	0	0.0
New Jersey	295	7	2.4	164	55.6	14	4.7	51	17.3	59	20.0	0	0.
New York	511	0	0.0	64	12.5	62	12.1	108	21.1	266	52.1	11	2.
North Carolina	142	3	2.1	35	24.6	18	12.7	35	24.6	49	34.5	2	1.
North Dakota	14	0	0.0	3	21.4	1	7.1	5	35.7	5	35.7	0	0.
Ohio	523	2	0.4	36	6.9	72	13.8	87	16.6	311	59.5	15	2.
Oregon	97	2	2.1	18	18.6	2	2.1	26	26.8	46	47.4	3	3.
Pennsylvania	477	5	1.0	108	22.6	78	16.4	101	21.2	180	37.7	5	1.
Rhode Island	36	2	5.6	5	13.9	4	11.1	8	22.2	17	47.2	0	0.
South Carolina	74	0	0.0	15	20.3	11	14.9	20	27.0	26	35.1	2	2.
South Dakota	25	1	4.0	9	36.0	2	8.0	3	12.0	10	40.0	0	0.
Tennessee	116	0	0.0	20	17.2	28	24.1	13	11.2	55	47.4	0	0.
Vermont	33	2	6.1	8	24.2	2	6.1	6	18.2	14	42.4	1	3.
Virginia	120	0	0.0	21	17.5	13	10.8	49	40.8	37	30.8	0	0.
West Virginia	51	1	2.0	15	29.4	6	11.8	14	27.5	15	29.4	0	0.
Wisconsin	207	0	0.0	32	15.5	47	22.7	31	15.0	97	46.9	0	0.0
Wyoming	26	0	0.0	8	30.8	0	0.0	5	19.2	13	50.0	0	0.0

NOTE: Seven states were excluded from this analysis due to missing district-level data: Illinois (all missing in 2019, 2020, and 2021), and Maine, New Mexico and Oklahoma (all missing in 2022), Texas (all missing in 2020), Utah (all missing in 2019), and Washington (all missing in 2021). Consistent Gains = Districts maintained steady improvement in graduation rates across all years; Consistent Losses = Districts exhibited a continuous year to year decline in graduation rates. Stable = Districts remained stable, showing minimal changes in annual graduation rates across the entire period; Recovery = Districts showed a mix of patterns but ultimately demonstrated recovery from earlier declines. Fluctuating Downward = Districts with mixed trends that, despite fluctuations, ultimately resulted in a decline; Mixed = Districts that exhibited fluctuating trends without a clear or consistent pattern of improvement or decline.

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express).

EXHIBIT B.8.

State Categorization Based on Distribution of District Graduation Rate Changes Across 2019–2020, 2020–2021 and 2021–2022

Category		n	Criteria	States		
States With High Recovery Rates		22	More than 40% of districts demonstrated recovery in graduation rates. It does not re- flect a balance with the distribution of other categories, and the other categories do not emerge as the dominant trends.	 Recovery rates ≥50%: Delaware, California, Ohio, Mississippi, Nevada, New York, Kansas, Wyoming; 40% ≤ Recovery rates < 50%: Georgia, Arizona, Michigan, Oregon, Tennessee, Rhode Island, Wisconsin, New Hampshire, Louisiana, Minnesota, Vermont, Arkansas, Massachusetts, District of Columbia 		
	States With Higher Recovery, Balanced with Mixed Trends	2	A balanced distribution between districts showing recovery and mixed trends, with over 30% of districts showing recovery.	North Dakota, Alaska		
States With	States With Higher Recovery, but Balanced Between Mixed and Fluctu- ating Downward Trends	3	A balanced distribution between districts showing both fluctuating downward and mixed trends, with over 30% showing recovery.	Colorado, Pennsylvania, North Carolina		
High Recovery and Varied Trend Balances	States With High Recovery, but Balanced Between Mixed, Fluctuating Downward, and Stable Trends	3	A balanced distribution between districts showing stable, mixed, and fluctuating downward trends, with over 30% showing recovery	Missouri, Nebraska, Connecticut		
	States With High Recovery, but Balanced Between Fluctuating Downward and Stable Trends	2	A balanced distribution between districts showing fluctuating downward and stable trends, with over 30% demonstrating recovery.	Maryland, South Carolina		
States With Recovery Balanced by	States With Balanced Recovery and Fluctuating Downward Trends	3	A balanced distribution between districts showing recovery and those with fluctuating downward trends.	30% ≤ Recovery rates < 40%: South Dakota; 20% ≤ Recovery rates < 30%: Indiana, West Virgina		
Fluctuating and Stable Trends	States With Balanced Recovery, Stable, and Fluctuating Downwards	1	A balanced distribution between districts showing recovery and those with stable and fluctuating downward trends.	lowa		
States With High N	States With High Mixed Rates		More than 40% of districts showed mixed trends	Florida, Virginia		
States With High Stable Rates		1	More than 40% of districts demonstrated stability in graduation rates. It does not re- flect a balance with the distribution of other categories, and the other categories do not emerge as the dominant trends.	Hawaii		
States With High Fluctuating Downward Rates		5	More than 30% of districts showed fluctuating downward trends in graduation rates. It does not reflect a balance with the distribution of other categories, and the other categories do not emerge as the dominant trends.	New Jersey, Kentucky, Idaho, Montana, Alabama		

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).

EXHIBIT B.9.

Fixed Effects Model Results

Predictor	В	SE	t	
				р < 001
Cohort size (logged)	-2.79	0.51	-5.51	<.001
Exit exams waived	0.69	0.12	5.95	<.001
Year 2017	-0.75	0.07	-11.08	<.001
Year 2018	-0.15	0.06	-2.58	0.010
Year 2020	0.27	0.08	3.36	0.001
Year 2021	0.11	0.11	1.00	0.316
Year 2022	-0.09	0.12	-0.69	0.489
American Indian/ Alaskan Native	-0.06	0.04	-1.63	0.103
Asian	0.05	0.02	2.23	0.026
Black	-0.06	0.02	-3.38	0.001
Hispanic	-0.02	0.01	-1.70	0.090
Two or more races	-0.04	0.02	-2.09	0.037
Children with disabilities	-0.15	0.01	-16.05	<.001
Economically disadvantaged students	-0.01	0.00	-4.50	<.001
Limited English proficiency	-0.08	0.02	-4.44	<.001
School closure	-0.03	0.01	-4.09	<.001
Year 2021*Remote	-0.85	0.29	-2.98	0.003
Year 2022*Remote	0.93	0.29	3.17	0.002
Year 2021*Hybrid	-0.42	0.16	-2.58	0.010
Year 2022*Hybrid	-0.64	0.19	-3.36	0.001
Intercept	106.78	2.76	38.63	<.001

SOURCE: Author analysis of U.S. Department of Education data (ED Data Express and EDFacts).



Advancing Student Success Systems