# KNOCKING At the college door

Projections of High School Graduates | December 2024



Patrick Lane Colleen Falkenstern Peace Bransberger



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### **About WICHE**

The Western Interstate Commission for Higher Education (WICHE) is a regional interstate higher education compact of 15 Western states and the U.S. Pacific Territories and Freely Associated States. Since 1953, WICHE has focused on its mission of expanding educational access and excellence for all residents of the West. By promoting innovation, cooperation, resource sharing, and sound public policy, WICHE strengthens higher education's contributions to the region's social, economic, and civic life. WICHE strives to provide access to postsecondary opportunities that are valuable and equitable so that all Western residents may realize their potential as individuals and contribute to the region's economic, social, and cultural vitality. Our work spans an array of important issues, including projecting future student pipelines, helping states and institutions meet behavioral health needs, and supporting informed policymaking.

### About Knocking at the College Door

*Knocking at the College Door* has been an important resource for policymakers, education decision-makers, researchers, and others since the first edition was produced in 1979. While that work originally focused only on the states in the WICHE region, there was immediate demand for broader projections that covered the entire country. We hope that it continues to help guide efforts across the country to better serve current and future students to enhance their ability to access better jobs, experience economic stability and higher earning potential, and contribute positively to their thriving communities.

This publication was prepared by the Policy Analysis and Research unit, which is involved in the research, analysis, and reporting of information on public policy issues of concern in the WICHE region. Inquiries regarding these data should be directed to Patrick Lane, Vice President, Policy Analysis and Research, at <u>plane@wiche.edu</u> or 303.541.0266. To download a copy of this report and access related data resources, please visit <u>wiche.edu/knocking</u>. Additional WICHE resources are available at <u>wiche.edu</u>.

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## FOREWORD

The 11th edition of *Knocking at the College Door* comes at a critical time for our country. Many sectors of the economy face workforce shortages, while higher education faces increasing skepticism about its value. Although these contemporary challenges may feel unique, there are remarkable parallels between these times and the context within which the Western Interstate Commission for Higher Education (WICHE) first began projecting numbers of high school graduates back in 1979. My predecessor, Phil Sirotkin, noted in the foreword to the first edition of *Knocking*:

After years of growth, higher education in the United States now faces a decline in the size of the traditional college-going population as well as shifting demographic patterns within that population. These enrollment factors and the pressures of inflation and constraints on government funds combine to present the most perplexing set of issues to face higher education planners and administrators in a generation.

At the time, there were serious concerns about what these declining numbers would mean for postsecondary enrollments as the youngest of the Baby Boomers began to finish college. However, what actually occurred was an increase in postsecondary enrollments, due to concerted efforts to better serve students.

We are now at a similar inflection point. Much like in 1979, the data and analyses within these pages will likely fuel further concerns for those across higher education as we witness the arrival of a moment that has long been predicted: the peak and subsequent decline in the number of high school graduates. Adding to the uncertainty are the long-term effects of the COVID-19 pandemic, which contributed to fluctuations in K-12 enrollments and to the phenomenon of learning loss across all levels of education.

Collectively, we must respond to these challenges and concerns, not for the sake of maintaining the broad enterprise that is higher education, but because of our commitment to the principle that higher education provides immense value for society as a whole and for the individuals who complete high-quality postsecondary credentials. We must, however, examine the current state of our sector and recognize where (and why) institutions, as well as our higher education systems more broadly, sometimes fall short. Importantly, our answer to the challenges facing postsecondary education must be grounded in sound data and facts. That is what this report offers.

The information in the pages that follow will be used by policymakers, education decisionmakers, researchers, and others for a range of important uses. While this report helps shed light on these important issues, it is essential to also recognize that it is simply one piece of a larger story. A convergence of factors complicates and brings nuance to this story. The nation's declining birth rates, the waning confidence in the value of higher education and in most of our major U.S. institutions, growing labor shortages, the racial and ethnic diversification of our population, and the lingering impacts of a global pandemic on generations to come, all deserve our urgency and action. But first, they require our inquiry and understanding.

Released every four years, *Knocking at the College Door* has provided trusted and reliable data at the state, regional, and

Demography need not be destiny. There are proven approaches to increasing student access and success, especially for those whom higher education has not historically served well. Higher education is recognizing the different, yet valuable pathways that students of all ages may take to contribute to the workforce in meaningful ways.

national levels for more than four decades. This edition of *Knocking* also focuses on COVID-19's impact on the nation's education pipeline. The data suggest that a sizable number of K-12 students may have left education altogether, while the students who remain in our educational systems face learning deficits.

Demography need not be destiny. There are proven approaches to increasing student access and success, especially for those whom higher education has not historically served well. Higher education is recognizing the different, yet valuable pathways that students of all ages may take to contribute to the workforce in meaningful ways. Even if those pathways do not always look like they did in the past, research and data tell us that such pathways will increasingly require education and training after high school. I am confident that higher education will rise to these challenges and provide solutions to the issues we face through innovation and collaboration.

On the subject of collaboration, I would be remiss if I did not thank our partners in this work, College Board and Lumina Foundation, which made this report possible through their generous financial support. Our team at WICHE is committed to making this information and future analyses available, and I trust that *Knocking* will continue to be a valuable resource for key decision-makers across the West and beyond.



Demarci K. Michel

Demarée K. Michelau President Western Interstate Commission for Higher Education (WICHE)

## ACKNOWLEDGMENTS

*Nocking at the College Door* is truly a team effort that spans the country. First and foremost, WICHE is extremely grateful for long-term and collaborative relationships with the College Board, which has sponsored this work since the 1984 edition, and Lumina Foundation. Together their financial support has enabled this work.

Additionally, *Knocking* would not be possible without assistance in gathering the necessary data from state departments of education. Staff from those agencies — likely already stretched thin by the demands of their regular work — have been incredibly generous in working with WICHE staff to secure the data behind the graduate numbers in our projections. In return for their collaboration, we hope that this resource contributes to their states' efforts to improve student access and success at every level.

WICHE staff consulted with numerous data experts along the way to guide this work, including experts in state demography (Sam Wolkenhauer in Idaho, Elizabeth Garner in Colorado, and Rena Cheskis-Gold of Demographic Perspectives) and experts in population and enrollment trends, including Myra McGovern with the National Association of Independent Schools, the National Center for Higher Education Management Systems (NCHEMS), and the Georgetown Center on Education and the Workforce, and others too many to name but no less important for ensuring the quality of these projections.

Additionally, WICHE relied on a number of highly skilled and talented consultants to assist in bringing the *Knocking* report and web resources to life. Fablefox Marketing, Ryan Huff, and Communication**Works** have provided comprehensive guidance for our outreach and communications efforts; Cassandra Schoon provided copyediting; the Bross Group assisted in web development; and JG Research supported data preparation and analysis.

The report and additional resources also required substantial contributions from across WICHE. Melissa Sanders, Administrative Assistant III, assisted in data collection and project management and administration; Isabella Ciarico, Digital Communications Coordinator, developed social media campaigns and webpage content; Jeanette Porter, Senior Administrative Coordinator, assisted in publishing archived editions; Joseph Garcia, Senior Graphic Designer, developed beautiful branding and the overall design for the report and web assets so this information, while complex and nuanced, is accessible, usable, and attractive; Melanie Sidwell, Director of Communications, provided invaluable editing and direction while also keeping the numerous different pieces moving forward; and Demarée Michelau, President, provided guidance, encouragement, and strategic direction.

## INTRODUCTION

The 11th edition of *Knocking at the College Door* from the Western Interstate Commission for Higher Education (WICHE) comes as higher education faces headwinds new and old. As each edition of this report does, *Knocking* illustrates the contours of these challenges with the addition of four years of new data. This edition, however, examines data and evidence from a new layer of complexity for the first time — the impact of the COVID-19 pandemic on enrollment and graduation numbers.

Our demographic analysis, inclusive of those additional four years of data, remains consistent with previous editions. The data, as interpreted through our projection model, show that the United States is about to produce the highest number of high school graduates since WICHE began publishing this series in 1979 (and most likely in our nation's history). This peak will be followed by a period of steady declines that continue through the end of our projections in 2041. This should by no means be surprising, as the main contributing factor — births 18 years earlier — has predicted this trend since the Great Recession.

Often referred to as the "demographic cliff," this inflection point comes as other challenges loom. Concerns about college affordability, questions about the value of postsecondary education, and a favorable labor market with relatively high starting wages and low unemployment put additional pressures on already declining postsecondary enrollment.

However, earning a college degree generally pays dividends in terms of lifetime earnings, greater resiliency during economic downturns, and non-economic benefits like better health outcomes and civic participation.<sup>1</sup> Further, research continues to show that training and skills developed beyond high school will be even more valuable in the coming years.<sup>2</sup>

Yet higher education must recognize and remedy the areas where the perceived value of a postsecondary degree falls short for students and employers. The sector must support new and improved pathways that are responsive to the needs of society and of future students who may be less likely to follow the same path as students of the past. WICHE believes that one way the postsecondary enterprise can respond is by improving student access and success, which can create a countervailing force against looming demographic pressures.

Additionally, the COVID-19 pandemic has added substantial uncertainty across all levels of education. The analyses that follow show that some questions — particularly about lower-than-projected enrollments in earlier grades — will necessitate close monitoring and further research. This will be especially true for a better understanding of the effect of the pandemic on different student populations.

To that end, consider the following key findings from the 11th edition of *Knocking*:

The total number of high school graduates is expected to peak in 2025 and then decline steadily through 2041. The projected decreases in the number of graduates are primarily driven by the continuing declines in the number of births 18 years earlier.

The proportion of future graduating classes that come from underrepresented racial and ethnic backgrounds — particularly Hispanic and Multiracial graduates — will continue to increase. These trends have been consistent since WICHE first produced projections by race and ethnicity and this finding remains true in these projections.

**Compared to 2023, 38 states are projected to see a decline in the number of graduates by 2041, as most regions in the U.S. continue to shrink.** The Midwest and Northeast have already experienced declines in the total number of graduates. The South will continue to defy broader national trends with growth followed by a slight decline at the end of the projections, while the West more closely mirrors national projections.

**COVID-19's impact on the education pipeline will be felt for years to come.** The first graduating classes following the onset of the COVID-19 pandemic do not appear to have been substantially impacted in number as they are quite close to previous projections. However, there is a decline in enrollments in earlier grades, which produces slightly lower estimates of future graduating classes. The available information does not provide clear conclusions about what has happened to these students nor about whether the impacts have affected different student populations more than others.

With ever-improving research about what works in helping students succeed in higher education, numerous evidence-based policy and practice interventions can help offset the coming demographic declines. These include adopting research-backed approaches to increase the percentage of recent graduates going to postsecondary education and to boost retention and completion once they enroll. This report concludes with a summary of some policies and practices with reasonably strong evidence behind them. Additionally, attracting and serving adult learners must be an essential part of the approach. While most working in higher education know the importance of serving adults and how the so-called "typical" college student does not look so typical anymore, about two-thirds of college students are under the age of 25, meaning that even with a complementary focus on adults, the size and makeup of high school graduation classes is essential information.<sup>3</sup>

The imperative is clear. Labor market projections continue to show that future jobs will still require more degree holders than the country is currently on pace to produce.<sup>4</sup> An increased focus on improving outcomes for students who have been historically underserved by higher education must counteract the demographic trends ahead. Urgent action is needed to ensure that more students can gain the skills and knowledge to improve their own life

outcomes and have positive impacts on society. Students who obtain postsecondary degrees will, in turn, become the highly skilled workers — the healthcare workers who care for our friends and families, the teachers who educate future generations of students, the engineers who design everything from ships to software, and so many others across industries — who our nation depends on and who are essential to keep our communities thriving.

## Knocking's Methodology and Adjusting for COVID-19

WICHE's methodology is based on data on births, enrollment numbers for grades one through 12 (foregoing kindergarten numbers due to volatility), and the numbers of graduates in each state. This information is used to calculate progression rates and project future years of enrollment and graduates. The projections of future enrollments and graduates are built on an assumption that trends and policy changes affecting enrollment — including immigration, mortality, retention, and progression — will continue. In the near term, this generally holds true, but like any model of the future, the farther out the forecast reaches, the greater the uncertainty inherent in the projections.

The strength of the WICHE model is that it captures many different factors — including immigration, mortality, stop-outs, and other events impacting enrollments and graduates — that impact future numbers without modeling them individually.

Due to data anomalies resulting from the pandemic, WICHE has made slight adjustments to the methodology to account for the 2020-21 school year, which showed dips in progression rates across most public school enrollments, measured by the rate at which students progress from one grade to the next. Those rates have generally rebounded to prepandemic levels in the two subsequent years of data analyzed, suggesting that this is a one-time impact. WICHE adjusted the weighting of its model to account for this, using an approach that produces results nearly identical to the traditional model without perpetuating what seems to be a one-time drop in public school progression rates. More detailed information on the approach is provided in the Technical Appendix.

## HIGH SCHOOL GRADUATE PROJECTIONS BY TOTAL NUMBER

## The total number of high school graduates is expected to peak in 2025 and then decline steadily through 2041.

For the last three editions of *Knocking at the College Door*, WICHE has projected a peak in the number of high school graduates (between 3.8 and 3.9 million) in 2025. In the years following 2025, individuals born in 2008 and after (when births fell more sharply due to the Great Recession) will begin graduating from high school.

The latest available data confirm while there are periods of projected relative stability (e.g., 2028-29 through 2034-35), the overall national trend is a downward slope to below 3.4 million by 2041. Based on the most recent available data, WICHE projects that 2041 will see about 13% fewer graduates than in 2025, as can be seen in Figure 1.



Figure 1. High school graduates, reported (2009 to 2023) and projected (2024 to 2041)

Although this report focuses primarily on the number of high school graduates, it is important to recognize that K-12 systems have already been grappling with this peak and subsequent decline as lower enrollments have been making their way through earlier grades. Additionally,

some states and regions are already in the midst of steady declines, a trend that is presented in greater detail in the section of this report focusing on geography. Figure 2 shows the change in the projected number of graduates at four points in time compared to 2023.



Figure 2. High school graduates, projected change from 2023

As most institutions of higher education and training programs draw from a state or regional pool of graduates, it is essential for postescondary policymakers and practitioners to understand the geographic variation behind these numbers. While the topic is explored in detail in a later section of this report, consider that, compared to 2023 (the last year of reported data), only 12 states and the District of Columbia are projected to see an increase in the total number of graduates in 2041, while 38 states will see a decline. Additionally, while the decline between 2023 and 2041 is projected to be about 10% nationally, seven states will see a decline of greater than 20%. In terms of total numbers, five high-population states (California, Illinois, Michigan, New York, and Pennsylvania) are projected to account for about three-fourths of the expected decline in total projected graduates between 2023 and 2041.

This broad and substantial decline is primarily dependent on two key factors: the number of births in previous years and the rate at which students progress through school and earn a high school diploma. Other factors like net migration and mortality also contribute to the total number of high school graduates.

#### **Births**

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Both the total number of births and fertility rates, defined by the U.S. Centers for Disease Control and Prevention as the number of births per 1,000 women between the ages of 15 and 44, have been declining since 2007, as can be seen in Figure 3. Births in the U.S. have dropped by about 1% in virtually every year from 2008 to 2023, including a stark 4% decrease in 2020. There was a slight uptick from 2020 to 2021, though declines resumed the following year. Smoothing out the steeper one-year drop in 2020 and the slight increase from 2020 to 2021 results in a fairly consistent trendline.





Source: U.S. Centers for Disease Control and Prevention, "WONDER: Natality information." https://wonder.cdc.gov/natality.html.

While the COVID-19 pandemic appears to have produced a brief upturn in births, the number of babies born nationally continued on a downward trajectory through the most recent years of available data.<sup>5</sup>

The steadily declining number of births leads to the projected declines in high school graduates in the coming years because the relationship between births and high school graduates 18 years later is strong, as can be seen in Figure 4. While the relationship slightly

diverges at the outset of the years shown, that is a period when improvements in high school graduation rates offset birth declines. Starting with the 1997 birth cohort (corresponding roughly to 2015 graduates), the two trendlines follow each other closely.



Figure 4. Births and projected high school graduates 18 years later

Sources: U.S. Centers for Disease Control and Prevention, "Births, provisional data for 2023" and WICHE analysis of state graduation data.

#### **High School Graduation Rates**

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The second key factor for estimating the number of future high school graduates is the rate at which students progress through the educational system. Improving high school graduation rates, which are a measure of one part of the overall K-12 completion rate, would help offset the projected declines in the number of graduates, but such progress — which is by no means guaranteed — is highly unlikely to completely halt the decline. At a national level, in 2041, the country would have to graduate more than 95% of the students enrolled in ninth grade in 2037 to match the number of high school graduates projected for 2025. Over the past five cohorts, the average rate averaged around 88%.

National high school graduation rates do show improvement over time. In 2010, the adjusted cohort graduation rate (ACGR) for public high school students was 80%; this increased to 87% in 2021-22.<sup>6</sup> Though high school graduation rates are not perfectly comparable to the progression rates calculated through our model, the improvement in the underlying rates in our model is evident. However, improvements at the scale necessary to offset the declines in the total population and produce a similar number of graduates would be unprecedented.



Figure 5. Four-year adjusted cohort graduation rate (ACGR) over time

Source: National Center for Education Statistics, 2024, "Digest of Education Statistics, 2023." Note: Graduation rates in this table are four-year adjusted cohort graduation rate.

While graduation rates, especially the four-year graduation rates in Figure 5, are not a perfect proxy for overall progression through the K-12 system and do not provide a direct and complete correlation to the number of graduates, it holds true that improving high school graduation rates will improve the number of future graduates, assuming the same number of incoming students. In several previous editions of this report, the projected number of graduates has slightly underestimated the actual total number of graduates, likely due to broad progress in improving high school graduation rates.

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Because there will be fewer students overall, even with vast improvements in rates, the number of graduates will still decline. Additionally, progress on high school graduation rates has plateaued in the most recent years of available data, suggesting that substantial improvement may not be likely in coming years.

## Number of Graduates and Graduation Rates: A Nuanced Difference

WICHE's projections are distinct from other graduation metrics in important ways. They are counts of high school graduates and the projected counts of future graduates. WICHE's methodology does include a computed ratio of the number of 12th graders to graduates, but this ratio is not directly analogous to graduation rates. The adjusted cohort graduation rate referenced in this report is defined by the U.S. Department of Education as the number of students graduating with a high school diploma within four years divided by the number of students starting in that cohort, net any adjustments (typically for students who transfer elsewhere or mortality).<sup>7</sup>

One key distinction between federally defined cohort graduation rate data and WICHE's use of school data is the precision in tracking student movement in and out of schools. Graduation rate data are explicitly adjusted for transfers in and out, mortality, and other defined circumstances. WICHE's methodology *implicitly* reflects these circumstances through sheer numeric changes.

WICHE has provided a detailed comparison of its projections to data about the federally defined adjusted cohort graduation rate in previous editions of *Knocking at the College Door*.<sup>8</sup> That analysis indicates that the number of total annual high school graduates strongly follows "on-time" graduate trends, but the on-time graduation rates imply 6% fewer total graduates due to the number of students graduating five or more years after starting high school.<sup>9</sup>

And importantly, graduation rates and, more broadly, overall high school completion vary by subpopulation of students.<sup>10</sup> More comprehensive data about total annual high school graduates may be particularly consequential for student populations that have lower on-time graduation rates.

### Beyond the Cliff: Navigating the Shifts of Student Demographics

News reports and policy briefs routinely refer to the pending decline in the school-age population as "an enrollment cliff."<sup>11</sup> While the cliff metaphor is useful to illustrate the impending demographic shift for policymakers, the reality will be a slower and steadier decline, which has important implications for institutions of higher education, workforce training systems, and state and federal policymakers.

It is crucial to recognize this difference — between a sudden vertical drop and a sustained decline over a long period of time — because the changes to the education pipeline are projected to last into the foreseeable future. While the relatively slow nature of the decline gives policy leaders, decision-makers, and systems some time to adjust and adapt, it is essential to recognize that future demographics do not call for a one-time adjustment, but

rather a new and sustained approach to serving students. Hopefully, most states, systems, and institutions have already moved beyond planning for this change and have long been working hard to implement these new practices.

It is also essential to recognize that the decline in high school graduates is a separate issue from postsecondary enrollments, which have trended down since 2010.<sup>12</sup> Declining high school graduate numbers will likely put additional

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While the relatively slow nature of the decline gives policy leaders, decisionmakers, and systems some time to adjust and adapt, it is essential to recognize that future demographics do not call for a one-time adjustment, but rather a new and sustained approach to serving students.

pressure on postsecondary enrollments. This trend has already emerged in the Northeast and Midwest and will begin to affect more states in coming years. Although there will be fewer total high school graduates, there are still more than enough potential students to minimize the impact on postsecondary education. Consider that, in 2023, the matriculation rate for high school graduates enrolling in a postsecondary institution was 61%.<sup>13</sup> In order to maintain the same number of entering postsecondary students in the face of a 10% decline in the number of high school graduates, the matriculation rate from high school to college would have to increase to over 68%. While that increase is not possible overnight, growth of that magnitude over time has happened at different points in recent history, at least partially due to major economic shifts.<sup>14</sup> For example, between 1990 and 2005, the percentage of high school graduates going on to college increased from 60% to 68%.<sup>15</sup> Additionally, increasing postsecondary retention and completion would help stem a potential decline in the number of individuals earning postsecondary credentials. Making such progress may be possible, but it will require collaboration between the federal government and states, continued adoption of evidence-based policies and practices, and a renewed commitment across higher education to providing different pathways that accommodate today's contexts and students. While such models are emerging in some places, scaling them broadly is the next challenge. The concluding section of this report focuses in greater detail on some possible approaches.

## PUBLIC HIGH SCHOOL GRADUATE PROJECTIONS BY RACE AND ETHNICITY

## The number of graduates who identify as Hispanic or Multiracial is expected to grow.

Underrepresented students continue to increase as a proportion of total graduating classes from public high schools and are projected to continue doing so in coming years. These trends have persisted in virtually all editions of *Knocking at the College Door* since the first detailed analysis by race and ethnicity was possible in 1998.<sup>16</sup> Importantly, this section refers only to public high school students and graduates because detailed race and ethnicity data from private high schools are not available.<sup>17</sup> Figure 6 on the next page shows the total projected change in graduates by race and ethnicity, while Figure 7 shows the percent change compared to 2023 (the last year of reported data on the number of public high school graduates).

Given the long-term nature of these projections, changes in categorization and definitions affect the projections for extended periods of time. WICHE utilizes federally defined categories for race and ethnicity categorization and definition, with further detail provided in the box below. The definitional changes explain why trendlines for Asian and Native Hawaiian/Other Pacific Islander (NH/OPI) categories cannot be separately projected past 2034-35 and are combined beyond that. More detail is provided in the <u>Technical Appendix</u>.





Note: The Asian and Native Hawaiian/Other Pacific Islander (NH/OPI) populations can only be projected separately to 2034 due to changes in federal data reporting on births.



Figure 7. Percent change in public high school graduate projections by race and ethnicity

Notes: The Asian and Native Hawaiian/Other Pacific Islander (NH/OPI) populations can only be projected separately to 2034 due to changes in federal data reporting on births.

#### White Public Graduates

There were about 1.6 million White public graduates in the Class of 2023, a number that represents about 47% of the total public graduating class. Interestingly, this is just under the total number of White graduates reported for the Class of 1996 in the first edition of *Knocking* to provide projections by race and ethnicity.<sup>18</sup> The proportion of U.S. public high school graduates identifying as White has been declining since the projections by race and ethnicity began in 1998. White students are projected to remain a plurality of public high school graduates through the end of the projections in 2041 but are projected to decrease in number to 1.2 million in 2041, representing a decline of about 26%. In 2041, they will make up about 39% of the total public graduating class.

This is a steeper projected rate of decline in White public high school graduates than had been projected by pre-pandemic data. It is amplified by the more than 3% (750,000) decrease in White public school students in grades one to 12 by 2022-23 compared to what was expected based on previous projections. These consistent projected declines (with small gains projected in 2038 before the decreases begin again) reflect ongoing decreases in the number of White births.



Figure 8. Projected total and percent change in White public graduates through 2041



WICHE describes student populations using terminology consistent with federal definitions. Detailed data on race and ethnicity for private school students are not available, so WICHE cannot produce similar projections for those students. The federal approach is based on two questions. The first asks whether the student is Hispanic. An affirmative answer on this question categorizes the student as Hispanic, no matter which races are indicated in the second question, which inquires about racial identity. This approach is shown in Figure 9.

The Multiracial category is discussed in greater detail below, shedding light on the variable and evolving racial and ethnic profile of U.S. youth. The nuances in these categories and in individuals' self-identification should be kept in mind when reviewing these projections. Some patterns may be influenced by how families and students identify, which can change over time.

Federal data reporting on race and ethnicity is also slated to change to a new approach by 2029 based on a single question with additional categories that is intended to provide more accurate information.<sup>19</sup>





Note: This represents how to categorize or group students for reporting aggregated data, whereas the individual students' record may retain their specific category selections. For further details, see U.S. Department of Education, 2007, "Final Guidance on Maintaining, Collecting, and Reporting Racial and Ethnic Data to the U.S. Department of Education": https://www.federalregister.gov/documents/2007/10/19/E7-20613/ final-guidance-on-maintaining-collecting-and-reporting-racial-and-ethnic-data-to-the-us-department. WICHE makes projections using a legacy category 'Asian/Pacific Islander' despite the separate race categories students may attest to in the schema above due to the recency with which practices on reporting births changed.

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### **Hispanic Public Graduates**

Hispanic public graduates are projected to be a consistent contributor to the nation's public high school graduate pool in the coming years, with almost 944,000 graduates in 2023, growing to almost 1.1 million graduates by 2041. In 2023, Hispanic public high school graduates made up 27% of the total public graduating class, increasing to 36% in 2041. Previously, Hispanic public high school graduates had been predicted to stay relatively steady in number from 2025 to 2035. These updated projections confirm that consistency but also indicate some increase after 2038, corresponding with increases in births to Hispanic mothers after 2020.<sup>20</sup>

There was an overall decrease in public school enrollments between 2019-20 and 2022-23 for most other populations compared to previous projections. However, there were 1% more Hispanic students enrolled in public schools in the 2022-23 school year than pre-pandemic data would have suggested. This marginal difference is within the range of typical statistical error in projections, so it does not necessarily provide any information about Hispanic public school students' status during and after the pandemic.



Figure 10. Projected total and percent change in Hispanic public graduates through 2041

## **Black Public Graduates**

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There were just over 480,000 Black public graduates in 2023, accounting for just under 14% of the total public graduating class. By 2041, the total number is projected to decline by about 100,000 students to 373,000, which would represent about 12% of the total public graduating class. This projected reduction in the number of Black public high school graduates reflects a combination of recent public school enrollment reductions, as well as the ongoing decline of infants born to Black mothers — 22% fewer since the peak in 2007 and 10% fewer since 2019, including a 4% annual decline between 2022 and 2023. It is also important to recognize a large number of youth identify as Black in combination with another race or ethnicity, and such youth are then categorized as Multiracial. As is discussed in greater detail below, youth identifying as both Black and White represent the largest racial combination with the Multiracial category, amounting to about 1.7 million youth. This, along with Black students who also identify as another race or as Hispanic.

A steeper rate of decline in Black public high school graduates is projected compared to the previous edition. This steeper decline is driven by a 3% decrease (about 229,000 fewer students) in Black public school students enrolled in grades one to 12. This decline results in fewer projected graduates, as those decreases perpetuate through the model.



Figure 11. Projected total and percent change in Black public graduates through 2041

## Asian and Native Hawaiian/Other Pacific Islander Public Graduates

Due to relatively recent changes in federal data reporting for births, WICHE is not yet able to produce full projections for Asian and Native Hawaiian/Other Pacific Islander (NH/OPI) students separately past the 2033-34 school year. Instead, WICHE reports the two categories separately through 2034 and a combined total through 2041. In recent years, Asian students comprised as much as 94% of this combined total.

The number of Asian public graduates is projected to increase from 206,000 in 2023 to about 213,000 in 2034. The number of Native Hawaiian/Other Pacific Islander graduates is projected to decrease slightly over that same time, dropping to just over 12,000 public graduates from about 13,000. Importantly, these projections do not include graduates from Guam, the Northern Mariana Islands, and American Samoa, or the other U.S. territories, which would increase the total in this category by several thousand. WICHE plans to release an update with numbers for the U.S. territories in 2025.

This overall trend for Asian and Native Hawaiian/Other Pacific Islander public high school graduates is driven by a 6% decrease in Asian and Native Hawaiian/Other Pacific Islander public school students in grades one to 12 by 2022-23 (229,300 students).





#### American Indian/Alaska Native Public Graduates

There were almost 30,000 American Indian/Alaska Native (AI/AN) public graduates in 2023, which is projected to decline to fewer than 18,000 public school graduates in 2041. The updated projections for American Indian/Alaska Native graduates from public high schools continue to indicate a consistent reduction in numbers. This prediction includes the previous apparent decline in this student population, but it is amplified by the 3% decrease in American Indian/Alaska Native public school students in grades one to 12 by 2022-23 (15,000 students).

It is essential, however, to recognize that these numbers are for individuals who identify exclusively as American Indian/Alaska Native, as both the Multiracial category and the Hispanic category capture an increasingly large proportion of students from this demographic (see discussion below). Individuals who identify as American Indian/Alaska Native are far more likely than individuals of other races/ethnicities to also identify as another racial or ethnic group relative to the size of their overall population.

While it is technically accurate to say that our model projects fewer future graduates who identify exclusively as American Indian/Alaska Native, other data sources suggest that the population of students and graduates who identify as American Indian/Alaska Native exclusively or in combination with other races or ethnicities is not declining in the same way. According to data from the U.S. Census Bureau, there are around 450,000 youth who identify as American Indian/Alaska Native and White, meaning they would be categorized as Multiracial.<sup>21</sup> This amounts to 10% of the Multiracial youth in U.S. Census data, so if one hypothesizes that somewhere around 10% of the Multiracial graduates are both White and American Indian/Alaska Native, the population of graduates in this category would grow substantially. Obviously, there are numerous other combination with some other identity, which would bolster the population further. Ultimately, our analysis of the U.S Census data suggests that only about one-fourth of youth who identify as American Indian/Alaska Native do so exclusively.<sup>22</sup>

Additionally, this total does not include graduates from students enrolled in Bureau of Indian Education (BIE) and Tribally controlled schools. While the data on those students do not allow for their inclusion in our modeling, additional information is provided below.

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Figure 13. Projected total and percent change in American Indian/Alaska Native public graduates through 2041

#### ESTIMATED ADDITIONAL AMERICAN INDIAN HIGH SCHOOL GRADUATES FROM BUREAU OF INDIAN EDUCATION (BIE) SCHOOLS

Students who attend BIE schools — both those operated directly by BIE and Tribally controlled schools — are not covered by the public school data used for these projections. As shown in Table 1, the inclusion of BIE schools in the national total would increase the number of American Indian/Alaska Native students enrolled in K-12 education by about 9%. The enrollments at BIE schools are concentrated in 23 states. For example, there were nearly two and a half times as many American Indian/Alaska Native students enrolled at BIE schools in Mississippi or in Tribal schools on Tribal lands within the state's borders compared to the state's public schools in the 2022-23 school year. Oklahoma, the state with the largest number of American Indian/Alaska Native students enrolled in BIE schools has just an additional 2% American Indian/Alaska Native students enrolled in BIE schools within the state's borders. As has been the case for enrollment of American Indian/Alaska Native students enrolled in BIE schools within the state's borders. As has been the case for enrollment of American Indian/Alaska Native students enrolled in BIE schools within the state's borders. As has been the case for enrollment of American Indian/Alaska Native students at public schools, enrollment at BIE schools has decreased since 2017-18. Total enrollment in BIE schools decreased 21% between 2017-18 and 2022-23, which is a significantly larger decline than that of American Indian/Alaska Native enrollment in public schools.

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The number of students who graduate from BIE schools annually is not available in all years, but for those years where graduate counts are available, the national total of American Indian/Alaska Native graduates increases by about 5% or between 1,500 to 1,800 students.

States with BIE Schools*	Enrollment at Public Schools	Enrollment at BIE Schools	BIE Enrollment as % of Public Enrollment
Arizona	44,283	9,177	21%
California	24,091	374	2%
Florida	6,229	358	6%
lowa	1,463	274	19%
Idaho	2,874	278	10%
Kansas	3,105	57	2%
Louisiana	3,613	97	3%
Maine	1,290	264	20%
Michigan	7,551	563	7%
Minnesota	13,611	550	4%
Mississippi	861	2,051	238%
Montana	14,303	307	2%
North Carolina	14,526	1,334	9%
North Dakota	8,706	3,570	41%
New Mexico	29,612	6,580	22%
Nevada	3,412	137	4%
Oklahoma	68,935	1,175	2%
Oregon	6,096	251	4%
South Dakota	12,997	6,346	49%
Utah	6,021	101	2%
Washington	11,220	2,027	18%
Wisconsin	7,504	982	13%
Wyoming	2,622	265	10%
U.S. Total	402,732	36,617	9%

Table 1. American Indian/Alaska Native enrollment in BIE schools, 2022-23

Sources: Bureau of Indian Education, U.S. Department of the Interior; U.S. Department of Education Common Core of Data; and WICHE calculations.

\*Many BIE schools are located on sovereign Tribal land, which is not part of the surrounding state. In those cases, enrollments reflect the state boundaries in which the Tribal land is located. In cases where the schools are not on sovereign Tribal land, "state" reflects the location of the school.

### **Multiracial Public Graduates**

Due to ongoing data limitations in the correspondence between births and school enrollment data, WICHE uses an alternate method for estimating graduates past 2034. Data on births by race and ethnicity are one input into the projection model, and one limitation is that the available categorizations only reflect the mother's origin and race. As such, this is one source of undercount in the number of births reported as Multiracial, which WICHE uses interchangably in this report with Two or More Races. WICHE has developed an alternate approach to estimate projections beyond the 2033-34 school year consistent with earlier editions, as described in the <u>Technical Appendix</u>.

The projections continue to show substantial increases in the number of Multiracial public graduates. There were about 127,000 graduates in this category in 2023, which is projected to almost double to about 214,000 by 2041 when Multiracial students would represent about 7% of the total number of public graduates.

While every category of race and ethnicity has substantial internal diversity within it, this growing category masks demographic trends for other races and ethnicities. WICHE's analysis of U.S. Census data provides additional information about the prevalence of different identities within this category. As discussed in greater detail below, this category includes high proportions of American Indian/Alaska Native students and Native Hawaiian/Other Pacific Islander students relative to the size of those populations.



Figure 14. Projected total and percent change in Multiracial public graduates through 2041

**KNOCKING AT THE COLLEGE DOOR: PROJECTIONS OF HIGH SCHOOL GRADUATES** 

## **Understanding the Nuances of the Multiracial Category**

Race and ethnicity are broader and more complex concepts than the specific definitions used in federal reporting and throughout this report, often having unique nuances within different state contexts. It is crucially important to understand student populations better, particularly as the youth population continues to diversify over the next two decades.

One of the most prominent trends in recent editions of *Knocking* has been substantial growth (both in actual graduate numbers and projections) of the Multiracial category. Recognizing the complexity of this category is essential to better serve these students and comprehend the future demographics more broadly.

A closer look at data from the U.S. Census Bureau allows for a more nuanced understanding of the category. Overall, the youth population is more likely than the adult population to identify as more than one race and/or be of Hispanic origin. Table 2 shows that 68% of the youth population is non-Hispanic, single race compared to 81% of the adult population. Additionally, over a quarter of the youth population is of Hispanic origin, compared to 17% of the adult population. And lastly, about 6% of the youth population is non-Hispanic and Multiracial, which is significantly higher than the adult population (3%). These data align with the education data on enrollments and graduates, which shows an increasing share of Hispanic and Multiracial students.

Age Group	Hispanic	Non-Hispanic	
		Multiracial	Single Race
0-17	18,720,825 / 26%	4,577,225 / 6%	49,895,695 / 68%
18 and Older	43,027,301 / 17%	7,043,874 / 3%	207,832,674 / 81%

#### Table 2. Single race and Multiracial identities by age

Source: U.S. Census Bureau, American Community Survey. WICHE calculations.

The data from the U.S. Census Bureau allow for a more nuanced view of the youth population than education data, which helps contextualize interpretations of the projections. According to census data, 6% of the youth population is classified as non-Hispanic and Multiracial, which is about 4.57 million people ages 0-17. This uses the same definition as the Multiracial category for the projections.

As shown in Figure 15, the largest share (38%) of the Multiracial youth population is among individuals who identify as Black and White. Additionally, about a quarter of the Multiracial population identify as White and Asian, and about 10% identify as White and American

Indian/Alaska Native. If federal education data such as those used for these projections represented any identification with American Indian/Alaska Native rather than single-race, non-Hispanic, there would be substantially more students identified as American Indian/Alaska Native.





Source: U.S. Census Bureau, American Community Survey. WICHE calculations.

This information also allows for a better understanding of how the race and ethnicity definitions used in education data systems disproportionately diminishes certain populations. For example, as shown in Figure 16, just 25% of all youth who identify as American Indian/Alaska Native would meet the definition of American Indian/Alaska Native from education datasets. About 38% of those who identify as American Indian/Alaska Native also identify as another race, which would be classified as Multiracial. The only other race that has a higher share of youth who identify as more than one race is those who identify as Native Hawaiian or Other Pacific Islander (NH/OPI) in combination with another race. About the same share of American Indian/Alaska Native youth who identify as more than one race is than one race is than one race are of Hispanic origin, meaning they are classified as Hispanic. Among the major race categories, American Indian/Alaska Native youth are the most likely to be Hispanic.

The U.S. Census data uses "Some Other Race" as a category that is not included in education data. As shown in Figure 16, the vast majority of individuals who identify as Some Other Race are of Hispanic origin.





Source: American Community Survey, Public Use Microdata Sample (PUMS) 2018-22, U.S. Census Bureau. WICHE calculations. Note: Percentages displayed represent all youth populations who identify as one of the race categories, regardless of the multiple races identified. For example, an individual who selects White and Black would be included in both the Black and White bars on this chart.

## HIGH SCHOOL GRADUATE PROJECTIONS BY STATE, REGIONAL, AND NATIONAL LEVELS

## Compared to 2023, 38 states are projected to see a decline in the number of graduates by 2041, as most regions in the U.S. continue to shrink.

Trends in the number of high school graduates vary across the country. Given that most colleges and universities draw from a specific geographic area, more detailed information is essential. This section of our report examines the key higher-level trends by region of the country, with additional state-level data and analysis. We then provide an analysis of trends by whether schools are located in or near cities or rural areas. While it is not possible to provide as much detail as is warranted for each state in this report, WICHE's web resources allow users to look at many more dimensions. Regional trends, as well as those for most individual states, have remained stubbornly consistent across several editions of these projections. Figure 17 shows the percent change for each state and region in the number of graduates between the Class of 2023 (the last year of reported data) and the projected number for the Class of 2041.<sup>23</sup>



Figure 17. Projected percent change in high school graduates, 2023 to 2041

Notes: Total high school graduates include public and private schools. In these projections, the U.S. includes the 50 states and the District of Columbia. Future work will explore projected trends for the U.S. Territories and Freely Associated States.

Figure 18 shows the regional trends in greater detail, with the South projected to produce slightly more graduates in 2041 compared to 2023, while the other three regions are projected to see fewer graduates compared to 2023. While the overall shape of these trendlines is like the previous edition, projections in this edition lend support to other data that have shown increased migration to the South.<sup>24</sup>

WICHE compared these projections to those produced in the 10th edition, looking at 2037 as the comparison point because it is the latest year of our previous edition. The projected number of graduates has declined modestly for the Midwest (2%) and West (3%) and slightly more sharply for the Northeast (5%) from the 10th edition to this publication. The number of graduates projected in 2037 increased slightly for the South (4%). These results are presented in Table 3.

## Table 3. Projected number of 2037 high school graduates by region, 2020 Knocking at the College Door compared to 2024 Knocking at the College Door

Region	Number of projected graduates in 2037		Percent Change	
	2020 Knocking	2024 Knocking	Percent Change	
West	832,785	803,612	-3.5%	
Midwest	692,918	682,224	-1.5%	
Northeast	571,483	540,650	-5.4%	
South	1,423,913	1,484,610	4.3%	

As described earlier in this report, these projections assume current trends (particularly progression rates, migration, and mortality) hold true. When projections differ from edition to edition, that means that the underlying trends have shifted. The deviations from the 2020 projections detailed in Table 3 could suggest that net migration from the three declining regions to the South increased in recent years, which seems plausible given other confirming data.<sup>25</sup> The overall slight decline at a national level, as well as regional shifts, also may reflect the impact of the COVID-19 pandemic on enrollments, which is discussed in greater detail later in the report.

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#### Figure 18. Reported and projected high school graduates by region

## The West: Slightly Steeper Declines Than Previously Projected

The West is projected to mirror national trends, with modest growth through 2025, followed by a prolonged period of decline through the end of the projections. Compared to 2023, the West is expected to see about 188,000 fewer high school graduates in 2041, representing a decline of about 20%.

Idaho and North Dakota are projected to lead the region with an estimated 13% growth in the number of graduates by 2041. Most of the states in the region are projected to decline, led by Hawai'i (33%) and California, where WICHE projects a 29% drop. In terms of pure numbers within the region, California exerts an outsized influence, accounting for roughly the same number of high school graduates in 2023 as the rest of the region combined. The projected decline in California between 2023 and 2041 accounts for about three-fourths of the total regional decline. Without California, the region would be projected to see a drop of about 43,000 graduates, or 10%.

State Name	2023	2025	2030	2035	2041	2023 to 2041 % Difference
Alaska	8,328	8,722 🔺	8,878 🔺	8,334 🔺	7,170 🔻	-14%
Arizona	82,942	85,639 🔺	84,186 🔺	85,262 🔺	81,428 🔻	-2%
California	477,531	469,214 🔻	435,481 🔻	402,356 🔻	339,022 🔻	-29%
Colorado	64,096	65,716 🔺	60,300 🔻	59,557 🔻	56,457 🔻	-12%
Hawai'i	14,290	14,276 🔻	12,650 🔻	11,450 🔻	9,582 🔻	-33%
Idaho	22,827	23,623 🔺	24,257 🔺	25,509 🔺	25,907 🔺	13%
Montana	9,980	10,374 🔺	10,692 🔺	11,218 🔺	10,520 🔺	5%
Nevada	33,256	35,304 🔺	33,321 🔺	34,299 🔺	30,156 🔻	-9%
New Mexico	21,539	22,472 🔺	20,634 🔻	19,426 🔻	17,104 🔻	-21%
North Dakota	7,706	8,642 🔺	9,291 🔺	9,771 🔺	8,690 🔺	13%
Oregon	41,203	42,752 🔺	39,182 🔻	38,349 🔻	33,272 🔻	-19%
South Dakota	9,705	10,344 🔺	10,677 🔺	11,196 🔺	10,357 🔺	7%
Utah	47,592	50,172 🔺	48,443 🔺	48,337 🔺	44,908 🔻	-6%
Washington	80,405	83,021 🔺	79,259 🔻	80,777 🔺	73,935 🔻	-8%
Wyoming	6,137	6,385 🔺	5,873 🔻	5,466 🔻	4,709 🔻	-23%
West	927,072	936,104 🔺	880,140 🔻	845,999 🔻	745,295 🔻	-20%

#### Table 4. High school graduates by state in the West

Note: Green indicates growth relative to 2023; red indicates declines.

Western graduate decreases are only slightly below those estimated in previous editions, with new data projecting about 804,000 graduates in 2037 compared to around 833,000 in 2037 for the last edition. From there, the trend in the West continues downward, based primarily on fewer births in the region in recent years. While there is always fluctuation from one edition of these projections to the next, this modestly lower projection may also be evidence of the impact of the pandemic on student enrollments, which is discussed in greater detail in the subsequent section of this report, as well as possible out-migration to the South.

Within the West, Hispanic public graduates are projected to continue growing through the Class of 2026, followed by a period of decline.<sup>26</sup> They will, however, remain the largest racial and ethnic group of public school graduates in the region through the end of the projections in 2041, when 319,000 Hispanic public graduates are projected to account for about 47% of the total number of public graduates. This is up from about 42% of the public total in 2023 when there were about 366,000 public Hispanic graduates. White graduates are projected to decline both in number and as a proportion of the total, accounting for 23% of the public total, or 201,000 graduates in 2041, down from just over 316,000 (46% of the public total) in 2023.

Growth is projected for Multiracial graduates. These graduates are projected to see the largest percentage increase by racial and ethnic category in the region. The 71,000 projected public graduates in the Class of 2041 who identify as Multiracial is nearly double the 2023 figure of 36,000. As a percentage of the regional total, Multiracial students are projected to grow from 4% in 2023 to more than 10% in 2041.

American Indian/Alaska Native public graduates are projected to decline by about 43% to a total of just under 8,000 graduates, though many more American Indian/Alaska Native graduates also identify as another race or ethnicity and are classified as Hispanic or Multiracial students.

Black public graduates are also projected to decline by about 41%, reaching a total slightly under 23,000 in 2041, down from more than 38,000 in 2023. This represents a drop from more than 4% of the regional total in 2023 to slightly more than 3% in 2041. The number of Asian public graduates is projected to decline from about 80,000 in 2023, which represents more than 9% of the public total, to 68,000 in 2034 (the farthest WICHE can project this category), or slightly under 9% of the public total. Meanwhile, the number of Native Hawaiian / Other Pacific Islander graduates is projected to decline from about 9,000 to slightly more than 7,000 over the same time frame, staying roughly level at 1% of the public total.



Figure 19. Projected high school graduates in the West, 2023 to 2041



Figure 20. Projected change in public high school graduates by race and ethnicity in the West

Note: Projections are made for the combined category of Asian and Native Hawaiian or Other Pacific Islander through SY 2040-41 and for the distinct categories of Asian and Native Hawaiian or Other Pacific Islander through SY 2033-34. For the category of Multiracial, SY 2034-35 to 2040-41 are "estimated projections" due to birth data limitations. See the <u>Technical Appendix</u> for full details.

The number of private school graduates is projected to grow in the West through the Class of 2032, reaching more than 79,000 graduates. This is a later peak year than the overall regional peak. Following this peak, the number of private school graduates is projected to decline, reaching just under 65,000 graduates in 2041. This represents an increase of about 2% compared to 2023 when the region is estimated to have had about 63,000 private school graduates.

## The South: Growth, Then Relatively Level

The South, home to the largest student numbers in the country, is projected to see slight growth in the number of graduates through the coming year. We project this to be followed by relatively steady numbers until an uptick around the Class of 2034 and then a modest decline. The total number of projected graduates in 2041 is just under 1.5 million, representing an increase of between 2% to 3% compared to 2023.

Just under half of the states in the South are projected to see an increase in the number of graduates, led by the District of Columbia, with a nation-leading projected growth of 31%. Tennessee (15%), South Carolina (14%), Florida (12%), and Delaware (8%) are also projected to exhibit robust growth. West Virginia, with a 26% decline, and Mississippi, with a 16% decline, are projected to have the biggest drops by 2041.

State Name	2023	2025	2030	2035	2041	2023 to 2041 % Difference
Alabama	52,954	55,021 🔺	52,926 🔻	55,235 🔺	54,262 🔺	2%
Arkansas	33,861	36,169 🔺	34,255 🔺	34,497 🔺	32,330 🔻	-5%
Delaware	11,178	11,939 🔺	12,106 🔺	12,597 🔺	12,087 🔺	8%
District of Columbia	5,747	6,652 🔺	8,699 🔺	9,072 🔺	7,529 🔺	31%
Florida	221,601	234,996 🔺	234,121 🔺	251,771 🔺	247,409 🔺	12%
Georgia	128,074	134,031 🔺	127,882 🔻	131,414 🔺	126,851 🔻	-1%
Kentucky	50,350	51,027 🔺	44,440 🔻	48,080 🔻	45,762 🔻	-9%
Louisiana	49,128	53,263 🔺	50,745 🔺	52,289 🔺	47,061 🔻	-4%
Maryland	70,362	74,018 🔺	68,766 🔻	68,981 🔻	62,752 🔻	-11%
Mississippi	32,152	33,606 🔺	29,644 🔻	29,445 🔻	27,003 🔻	-16%
North Carolina	115,527	121,741 🔺	118,193 🔺	123,253 🔺	122,719 🔺	6%
Oklahoma	46,211	50,332 🔺	49,595 🔺	48,457 🔺	46,250 🔺	0%
South Carolina	53,941	57,865 🔺	57,870 🔺	60,992 🔺	61,735 🔺	14%
Tennessee	70,783	75,761 🔺	74,906 🔺	79,662 🔺	81,459 🔺	15%
Texas	393,596	408,251 🔺	399,411 🔺	410,286 🔺	414,861 🔺	5%
Virginia	100,051	104,008 🔺	100,188 🔺	102,267 🔺	93,984 🔻	-6%
West Virginia	18,003	18,113 🔺	16,084 🔻	15,092 🔻	13,388 🔻	-26%
South	1,443,229	1,522,182 🔺	1,469,633 🔺	1,519,031 🔺	1,479,933 🔺	3%

## Table 5. High school graduates by state in the South

Note: Green indicates growth relative to 2023; red indicates declines.



Figure 21. Projected high school graduates in the South, 2023 to 2041



Figure 22. Projected change in public high school graduates by race and ethnicity in the South

The South is projected to see an increase over projections from previous editions, driven primarily by growth in the middle of the next decade. WICHE projects about 60,000 more graduates in 2037 than in the previous edition. This growth compared to what was previously projected may indicate increased in-migration to the region from other areas of the country. Purely from an arithmetic perspective, other possibilities could also be true, including increases in graduation rates in the South and declines in the other three regions. However, data do not support these alternative explanations, and other sources suggest migration is a key influence on the differences.<sup>27</sup> This in-migration appears to have offset the COVID-19related declines in K-12 enrollments. This topic is explored in greater detail in Section 4.

White graduates are currently the largest demographic group of public graduates in the South, but that is projected to change with the Class of 2038 when the number of Hispanic public graduates is projected to surpass the number of White public graduates. Hispanic public graduates in the South are projected to grow from 365,000 in 2023 to more than 524,000 in 2041, increasing from 28% to 39% of the regional public total. The number of White public graduates was about 560,000 in 2023 and is projected to decline to around 453,000 in 2041, declining from 42% to 34% of the public graduates. The South has the largest number and percentage of Black public graduates in the country. The projections estimate that 2041 will see more than 243,000 Black public graduates, representing about 18% of the public graduate total in the region, down from over 286,000 graduates in 2023, which represented about 22% of the public total.

Multiracial public graduates are expected to increase from almost 48,000 in 2023 to more than 83,000 in 2041, increasing from 4% to 6% of the Southern public graduate total. The number of American Indian/Alaska Native public graduates in the region is projected to drop from slightly under 10,000 (0.7% of the total) to fewer than 7,000 (0.5% of the total) over the same timeframe. Asian public graduates will increase from slightly over 55,000 graduates in 2023 to more than 76,000 in 2034, representing an increase from 4% to 5% of the total, while Native Hawaiian and Other Pacific Islander public graduates are projected to grow from just under 2,000 to more than 2,500, increasing from about 0.1% to 0.2% of the public total, over the same time frame.

Private schools in the region are projected to see growth through 2032, followed by slightly declining graduating classes, leaving the projected total at about 132,000 graduates in 2041. This amounts to a 6% increase compared to the 124,000 private graduates in 2023.

### The Midwest: Modest but Steady Declines

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All 10 states that WICHE includes in the Midwest definition are projected to see a decline in the number of graduates between 2023 and 2041, with the total regional decline estimated to be 16%. Illinois (32%) and Michigan (20%) are expected to see the sharpest drops. As two of the highest population states in the region, these greatly influence the regional total, though, all eight other states are projected to see declines as well. Iowa and Nebraska are projected to see the smallest drops in the region, with projections estimating 5% fewer graduates in 2041 compared to 2023.

State Name	2023	2025	2030	2035	2041	2023 to 2041 % Difference
Illinois	145,564	144,561 🔻	124,210 🔻	119,005 🔻	99,067 🔻	-32%
Indiana	76,805	78,138 🔺	72,817 🔻	72,575 🔻	69,494 🔻	-10%
lowa	37,780	39,747 🔺	38,192 🔺	38,769 🔺	36,299 🔻	-4%
Kansas	36,985	38,361 🔺	36,660 🔻	34,967 🔻	32,554 🔻	-12%
Michigan	106,883	104,326 🔻	95,746 🔻	96,183 🔻	85,131 🔻	-20%
Minnesota	65,884	67,216 🔺	64,403 🔻	65,154 🔻	58,295 🔻	-12%
Missouri	67,229	68,656 🔺	64,138 🔻	64,283 🔻	58,880 🔻	-12%
Nebraska	24,324	23,862 🔻	24,909 🔺	25,009 🔺	23,263 🔻	-4%
Ohio	132,363	143,303 🔺	134,175 🔺	134,895 🔺	124,461 🔻	-6%
Wisconsin	67,132	68,507 🔺	63,368 🔻	62,090 🔻	56,910 🔻	-15%
Midwest	760,548	773,993 🔺	715,120 🔻	708,667 🔻	638,923 🔻	-16%

Table 6. High school graduates by state in the Midwest

Note: Green indicates growth relative to 2023; red indicates declines.

The number of White public graduates in the Midwest is projected to see a relatively continuous decline in number and proportion to the total, reaching about 342,000 in 2041, when they will represent 58% of the public graduates, down from 66%. The number of Hispanic graduates is projected to see modest increases over the course of the projections, reaching about 119,000 in 2041, up from about 94,000 in 2023. Hispanic students are projected to represent 20% of the public graduating class, up from 13% in 2023. The number of Black graduates is expected to decline consistently over the course of the projections, dropping from just under 85,000 in 2023 to about 64,000 in 2041. Due to the overall decline in total numbers across the region, the proportion of the public graduating class in 2041 that identifies as Black is projected to decline only by about one percentage point (from 12% to 11%) compared to 2023.





Although small in number and proportion of the public graduating classes, Native Hawaiian and Other Pacific Islander graduates are projected to increase the most as a percentage of their total, almost doubling over the course of the projections. The projected increase is from just under 900 graduates in 2023 to more than 1,700 in 2034, representing an increase from about 0.1% of the total to about 0.3%. The number of Asian public graduates is projected to increase from more than 27,000 to more than 29,000 over the same time period, growing from 4% of the public total to 5%. Multiracial graduates are expected to increase, but not to the same extent as other regions, growing from more than 28,000 graduates to more than 35,000, representing an increase of about 26% from 2023 to 2041, which represents an increase from 4% of the public total to 6%. American Indian/Alaska Native graduates are projected to fall sharply, from about 4,000 in 2023, representing 0.6% of the total, to about 2,000 in 2041, which accounts for about 0.4% of the total.





Private schools in the region are projected to see a declining trendline over the course of these projections, compared to the projected trends of relative stability or positive numbers in the West and South, dropping to about 50,000 graduates in 2041. This represents a decline of about 11,000 graduates from 2023, or more than 18%.

### The Northeast: The Slow, Steady Decrease Continues

Similar to the Midwest, the Northeast is projected to see a steadily shrinking pool of high school graduates. All nine of the states in this region are projected to decline when comparing 2041 to 2023, though New Jersey's estimated drop is only 1%. In total, the region is projected to see a decline of 17% in the total number of graduates over that period. New York is projected to see 27% fewer graduates in 2041, with a significant drop of 17% for Pennsylvania and 15% for both Rhode Island and Vermont.

State Name	2023	2025	2030	2035	2041	2023 to 2041 % Difference
Connecticut	44,185	45,634 🔺	42,528 🔻	43,091 🔻	42,405 🔻	-4%
Maine	14,198	14,056 🔻	12,938 🔻	13,446 🔻	12,718 🔻	-10%
Massachusetts	75,494	76,935 🔺	72,708 🔻	73,434 🔻	69,464 🔻	-8%
New Hampshire	15,492	16,484 🔺	14,146 🔻	14,242 🔻	13,964 🔻	-10%
New Jersey	109,314	111,084 🔺	108,465 🔻	108,372 🔻	107,973 🔻	-1%
New York	205,042	206,184 🔺	183,242 🔻	171,389 🔻	150,533 🔻	-27%
Pennsylvania	141,089	137,304 🔻	129,575 🔻	127,318 🔻	116,928 🔻	-17%
Rhode Island	11,213	11,551 🔺	10,366 🔻	10,341 🔻	9,492 🔻	-15%
Vermont	5,765	5,807 🔺	5,518 🔻	5,504 🔻	4,921 🔻	-15%
Northeast	621,474	622,857 🔺	575,812 🔻	560,662 🔻	518,267 🔻	-17%

Table 7. High school graduates by state in the Northeast

Note: Green indicates growth relative to 2023; red indicates declines.

White public high school graduates continue to represent the largest proportion of public graduates in the region but are projected to see consistent and substantial declines over the course of the projections, dropping from about 284,000 in 2023 to about 201,000 in 2041, which would represent a decline from 52% of the total to 44%. These declines are partially offset by a projected increase in the number of Hispanic public graduates, which is projected to grow to more than 148,000 in 2041 from 118,000 in 2023. Hispanic graduates are projected to make up about 33% of the public graduating class in 2041, up from 22% in 2023. Additionally, the number of Multiracial public graduates is projected to increase by more than 67% to just under 25,000 by 2041, representing 5% of the total public graduating class, up from fewer than 15,000 in 2023 or 3% of the public graduates.



Figure 25. Projected high school graduates in the Northeast, 2023 to 2041





The number of Black public graduates is projected to decline by about 36%, dropping from more than 70,000 in 2023 to fewer than 45,000 in 2041, which marks a decline from 13% of the public total to about 10%. Asian public graduates are projected to stay relatively even at about 42,000 in 2023 and 2034, moving from slightly under 8% of the public total to slightly over 8%, while Native Hawaiian and Other Pacific Islander graduates decline from about 900 to about 700, moving from about 0.2% of the total to about 2,100, or about 0.4% of the public total, to around 1,500, or about 0.3% of the total between 2023 and 2041. This very stark apparent decrease is perhaps more a mathematical prediction than one reflecting population realities, driven by the data nuances discussed in previous sections.

Historically, the Northeastern region has tended to have the highest proportion of private school graduates in the country, though the data project substantial decreases in this sector, dropping from nearly 78,000 in 2023 to about 62,000 in 2041. This decline of 21% is similar in scope to the total change in the number of graduates projected for the region, presumably reflecting population dynamics as much as school choice.

## **Projections by Urban and Rural Location**

WICHE adapted its projection model to examine how graduate numbers in urban and rural areas are likely to shift. Because graduate numbers are not reported uniformly according to this definition, WICHE instead examined 12th grade fall enrollments, which is a close proxy for future graduate numbers. Using the U.S. Department of Education's definitions of "locale," WICHE has analyzed enrollment trends and projections by the categories of city, suburban, town, and rural areas. The first two designations are sub-categories of the U.S. Census Bureau's "urban" definition, while the last two fall into the "rural" category, and "towns" can fall into either urban or rural categories.<sup>28</sup> WICHE has only made projections based on school enrollments data, so the trends are projected through 2033-34. Future work may also analyze birth trends to develop longer-range projections.

While WICHE will examine these enrollment patterns in deeper detail in future work, the high-level findings are presented in Table 8. The standout data points indicate that there are projected to be nearly 44,000 more public 12th graders in rural high schools in 2033-34 compared to 2022-23, while the number of 12th graders from public schools located in cities is projected to decline by more than 97,000 students. Schools located in suburban areas are projected to see more than 30,000 more 12th graders, while the number of 12th graders from town locales will increase by about 6,000.

	City	Suburb	Town	Rural	Total 12th graders
National change, 2022-23 to 2033-34	-97,413	32,450	6,009	43,688	-15,266
Percent of national enrollment, 2022-23	31%	43%	11%	15%	100%
Percent of national enrollment, 2033-34	29%	45%	11%	16%	100%

#### Table 8. Changes in 12th grade enrollment, 2022-23 through 2033-34, by locale type

Source: U.S. Department of Education Common Core of Data. WICHE calculations

These changes would slightly affect the overall distribution of 12th grade students from these locations, with the percentage of students from schools in city locations dropping from 31% to 29% between the 2022-23 and 2033-34 school years, while 12th grade students from suburban schools are projected to increase from 43% to 45% of the total and those from schools in rural areas projected to increase from 15% to 16% of the total.

Future WICHE research will examine the distribution at a more granular level, including differences by state and region and changes by race and ethnicity.

## COVID-19'S IMPACT ON THE EDUCATION PIPELINE

# Enrollment data show a steeper drop in earlier grades of both K-12 public and private school systems than previously projected before the pandemic.

This section focuses on what the available evidence suggests about the impact of the pandemic on the number of K-12 students progressing through the nation's education systems. Although declines in total K-12 enrollments were previously projected, the actual decline evident in recent years is slightly deeper than previously projected. Overall, the best answer, which would come with a number of caveats, is that the pandemic appears to relate to a slightly lower projected number of future graduates. The total number of graduates is about 1% fewer in 2037 than WICHE previously projected. While this is within the usual fluctuation in projections, recent editions have tended to underproject future graduates and WICHE finds evidence of a substantial number of students no longer enrolled, suggesting a modest impact overall.

The simplest way to contextualize the data is to compare the last edition of projections, which was completed solely with pre-pandemic data, with this new edition. In the near term, the number of graduates projected in this edition is close to previous projections. However, there are fewer students enrolled in earlier grades than previously projected, which leads to fewer future graduates. There are several possible explanations for this stemming from the COVID-19 pandemic. The data in our model, along with other research and evidence, suggest that the most likely explanation is somewhat of an "all of the above" answer.

Although WICHE intends for *Knocking* to be accessible to readers without a deep dive into the projections' methodology, understanding the impacts of the pandemic requires some insight into how projections rely on information from previous years to project future classes. To accomplish that, detailed information about the methodology is included in the <u>Technical</u> <u>Appendix</u>. The first section also referenced a high-level overview of an adjustment WICHE made to its model due to apparent one-time impacts on student progression evident in the data.

These numbers can only tell one part of the story of the pandemic's effect on these future graduates. There are also concerns on the part of higher education and workforce development policymakers about the impact of the pandemic on educational dimensions such as college readiness, academic preparation, and learning loss, all of which impact the educational experience and student outcomes.

## The Impact of COVID-19 on the Total Number of High School Graduates

WICHE's *Knocking* projections released in 2020 relied entirely on pre-pandemic data ending with the Class of 2019. Comparing those projections through the next few years with actual data on the classes that have graduated since 2020 could show differences attributable to the pandemic.

Figure 27 does just that, with WICHE's newest projections for total graduates falling within about 2% of the 2020 projections for the first five years of projections (through the Class of 2028). Projections like these always have some fluctuation from actual numbers and this difference is within the range of the expected fluctuations associated with these types of projections. The total number of graduates beyond 2025 is expected to be lower than previously projected, driven primarily by fewer-than-expected enrollments in public schools. As is discussed in greater detail below, this lower number of future graduates results primarily from drops in enrollment numbers across elementary and high school.

Greater detail and analysis of the differences between actual numbers of graduates and past projections are provided in the <u>Technical Appendix</u>. Through 2037, the changes in K-12 enrollment cumulatively lead to about 750,000 fewer high school graduates compared to the previous projections.



*Figure 27. U.S. high school graduates, 2020 Knocking projections compared to 2024 Knocking projections* 

**KNOCKING AT THE COLLEGE DOOR: PROJECTIONS OF HIGH SCHOOL GRADUATES** 

This decline is due to reduced enrollments in public and private schools. The greatest differences in enrollments are found in elementary school (grades one through five). Between the 2020-21 and 2022-23 school years, the public school student population declined by about 2% (almost 780,000 students across grades one to 12) compared to what was projected from pre-pandemic school-age populations (note: data are not yet available for the last two school years, 2023-24 and 2024-25). This decline in enrollments leads to a slightly lower number of projected graduates in future years. Figures 28 shows students enrolled in public and private schools in grades one to 12 in 2020-21 to 2022-23, compared to what was projected for the same year in 2020.

Figure 29 looks at the difference between the 2020 projections for enrollments compared to the actual enrollments for the most recent year of reported enrollments, 2022-23. In 2022-23, there were about 600,000 fewer students enrolled in grades one to 12 than was projected in 2020. When looking at these differences across grades, the largest differences between the 2020 projections and reported enrollment counts were in elementary grades (grades one to five). In 2022-23 there were nearly 300,000 fewer students enrolled in grades one to five than projected in 2020, which will have longer-term impacts on the projections of high school graduates.



*Figure 28. Total enrollment in grades 1-12, 2020* Knocking *projections compared to 2024 actuals* 

*Figure 29. 2022-23 enrollments by grade level, 2020* Knocking *projections compared to 2024 actuals* 



Source: Common Core of Data State Public School Enrollments and estimates produced by Private School Universe Survey data, compared to 2020 *Knocking at the College Door* projections.

There are various possible explanations for this finding, including more students disengaging from elementary and secondary schooling, more families opting for homeschooling (for which detailed data are typically not available state-by-state), and reductions in the number of students immigrating to the United States.

## The Impact of COVID-19 on Students by Race and Ethnicity

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Substantial research suggests that the pandemic had different impacts on racial and ethnic categories.<sup>29</sup> Examining enrollments and graduates by race and ethnicity (which is only available for public school students) suggests the largest projected differences in future years when comparing the 2020 projections with this edition are for Asian and Native Hawaiian or Other Pacific Islander students, which project to 15% fewer public school graduates in 2037 compared with the previous edition. Public graduates identifying as Black (8%), American Indian/Alaska Native (7%), and White (6%) are all projected to decline in 2037 compared to the previous projections. The new projections suggest that only Hispanic (12%) and Multiracial public graduates (29%) will eclipse the 2020 projections. This information is presented in Figure 30.



*Figure 30. U.S. high school graduates 2020 projections compared to 2024 projections by race and ethnicity* 

## **Potential Explanations**

There are a number of potential explanations for this decrease in enrollment and the related decline in projected graduates compared to previous projections.<sup>30</sup> Research suggests a combination of factors account for these lower rates of enrollment and graduation.<sup>31</sup>

It does not appear that the shift in public school enrollments represents students and their families choosing private school options instead. The downward shift in enrollments and projected graduates crosses sectors, so while it is conceivable that a number of students moved from public schools to private schools, the data do not show a net increase over previous projections. If there was a shift from public to private, it was offset by an even greater shift from private schools to someplace else.

The latest available nationwide estimates of private school enrollments only go through the 2021-22 school year. These data indicate a mixed picture about the extent to which private schools absorbed public school enrollments. In summary, while there has been recent overall positive enrollment news for the private school sector, it would not appear to account for the vast majority of the reduced public school enrollments. The combination of potential causes includes the following:

#### **DATA LIMITATIONS**

Like any data analysis relying on complex information, there are concerns with the timeliness and completeness of the underlying data on school enrollments and graduations. These concerns have been amplified by the pandemic disruptions. The overwhelming majority of U.S. students continue to be enrolled in the public school sector (87%, according to recent data.<sup>32</sup> But lags in the availability of the data mean that the past two school years' enrollment headcounts (Fall 2023 and fall 2024) are not represented in the public school projections. Additionally, although some states collect data on homeschooled students, the practice is not universal. More recent analyses of homeschooling numbers suggest continued increases, though the data are from a limited number of states.<sup>33</sup> If families who had opted to homeschool or enroll in private schools during the pandemic have re-enrolled their students in public schools over the past two years, their return would not yet be captured by the available data and there could conceivably be more public high school graduates in future years than are projected.

There are similar persistent issues with the federal survey data used for the estimates of private school enrollments and graduates.<sup>34</sup> This data source is also lagged, and thus, the private school projections will not represent private school enrollment trends for the period from 2022-23 through 2024-25. In addition to issues with the recency of the data, WICHE has compared estimates from this national survey to state data on private school enrollments. Not enough states collect or report comprehensive private school enrollment and graduate

counts for a full assessment of the accuracy of the federal survey or to replace its use in the projections. However, WICHE's analysis suggests that the federal survey data are a reasonable estimate of U.S. and state-level private school enrollments (see the <u>Technical Appendix</u> for full details).

#### **INCREASE IN HOMESCHOOLING**

One suggestion is that a greater percentage of students and their families on average opted out of both public and private schools during the pandemic in favor of homeschooling than they had previously.<sup>35</sup> There are numerous data points, studies, and articles that suggest a substantial increase in homeschooling following the onset of the COVID-19 pandemic that has persisted to some degree, but these increases do not account for the full drop in public and private school enrollments. One study looking at enrollment patterns in states that collect homeschooling data found that when combined, the increases in homeschooling, the previously projected changes in enrollment due to fewer births, and shifts to private schools still leave about one-third of the enrollment decline unexplained.<sup>36</sup> This work estimates that increases in homeschooling in those states that provide robust data amount to roughly one-fourth of the overall decrease in public enrollments.<sup>37</sup> Federal data also suggest an increase in homeschooling between surveys focused on 2018-19 and 2022-23, with the population of homeschooled students growing from about 1.5 million to 1.8 million between those two time periods.<sup>38</sup>

WICHE is continuing to analyze homeschooling trends where data are available and intends to provide additional updates as information warrants. While the apparent shift to homeschooling does not account for the total drops in enrollment, the extent to which this trend persists in coming years may have important implications for education policymakers.

#### DISENGAGEMENT AND STOPPING OUT

The other possible cause of some portion of the drop in enrollment is that students are no longer enrolled. Whether termed "stop-outs" or "dropouts" (as reported by the U.S. Department of Education, these are students who are no longer engaged in schooling. As noted above, the available evidence does not show that declines in expected public school enrollments are offset by similar increases in private school enrollments or homeschooling.<sup>39</sup> Though the national high school dropout rate barely changed between the Classes of 2021 and 2022, several states have reported recent increases in high school dropout rates.<sup>40</sup> These increases do not appear large enough to account for the decreases in enrollment evident in the data.

By many reports, chronic absenteeism — defined as missing 10% or more of school days — more than doubled since before the pandemic, and while rates have come down since pandemic peaks, absenteeism that exceeds pre-pandemic levels persisted through spring 2024.<sup>41</sup> Depending on state methodologies for calculating enrollments, this can also impact reported enrollments.<sup>42</sup> Attention paid to persistently high rates of chronic absenteeism has substantially increased in the past year, including national media coverage, a federal summit and many local initiatives to reduce absenteeism.<sup>43</sup> Whether school districts and states can engage and re-engage all learners remains to be seen, but this focus on absenteeism and its consequences may partly define the total impact of COVID-19 on the future educational pipeline.

#### **DECREASED NET MIGRATION**

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WICHE's projection model implicitly captures the impact of migration (both from state to state and immigration from other countries) on enrollments. As students move (either with their families to a new state or to the United States from another country) and enroll in school, the addition of a new student is captured by the model. The model assumes that the rates of migration over the past five years will continue. At the national level, one can consider net migration patterns, which is the amount of "out-migration," or people moving away from the United States, subtracted from the "in-migration," or people moving to the United States.



#### Figure 31. Net migration to the United States

Source: U.S. Census Bureau; Internal Simulation of 2010-2020 estimates; and Vintage 2022 Estimates (2021-2022). Data shown for 2022 are projections. Year represents the annual estimates period reporting ending on June 30.

Data from the U.S. Census Bureau show that net migration to the United States declined substantially during 2020 and 2021 but is now rebounding, as can be seen in Figure 31. The U.S. Census data are not disaggregated by age, making it difficult to estimate how the decline might impact school-age populations. However, it seems reasonable to assume that lower overall in-migration to the U.S. in recent years compared to the years that influenced previous projections would provide a partial explanation for the downward shift seen in actual enrollments in recent years compared to the 2020 projections. Migration among states would also impact state totals but not impact the national trends under discussion here.

## IMPLICATIONS AND DISCUSSION

## Strategies to meet the education and workforce challenges ahead

Despite a strong record of driving innovation, economic development, and social mobility, higher education as an enterprise faces challenges that seem to intensify by the day. But the headwinds are by no means new. Concerns about funding, affordability, enrollment, and meeting workforce needs are evergreen issues facing policymakers and practitioners alike. Shifts in the cultural paradigm, like a national conversation around the value of postsecondary education and a growing trend among employers of removing degree requirements for both private and public sector jobs, are newer trends in this challenging landscape. Additionally, while higher education endured the COVID-19 pandemic, the long-term impacts on student numbers and, perhaps more importantly, students' learning may be felt for years. However, WICHE strongly believes that higher education is not powerless and is fully capable of rising to the challenge in the face of these demographic pressures.

The trends described in this edition of *Knocking at the College Door* have been projected since at least the 2012 report. While the news may not come as a surprise, the fact that the moment we have all been expecting is now upon us can be jarring. And the trends that we expected have been compounded by an unexpected pandemic, changing the context in which we now exist. At the center of this report is the declining number of births from 2008 to 2011, leading to the overall decline in graduates beginning in 2025. Coupled with these pre-existing trends is the uncertainty caused by the pandemic. This report begins to clarify how the pandemic may impact the number of graduates in coming years.

A key question among higher education policymakers and leadership is how worried they should be about these numbers. Projections can be subject to change as events unfold and underlying patterns shift. Additionally, some might point to the increased number of adult students enrolling in higher education as a reason to suggest that the declining population of high school graduates should not raise concern. However, students under the age of 25 still make up about two-thirds of all incoming college students, meaning that the pipeline from high school to college is still the source of a majority of undergraduate students.<sup>44</sup>

The projected decline in high school graduates certainly adds new challenges to enrollment declines currently faced across postsecondary systems. Further research and analysis into enrollment declines will help inform policies to re-engage students.

What readers of this report should understand is that regardless of the reasons behind the decline in enrollments, the data show that projected high school graduates will decline slightly more than previously estimated. Even with a measured adjustment to the model, all available evidence suggests the pandemic is likely to result in slightly fewer high school graduates than previously projected over the long term, with the effects potentially reverberating through the education pipeline. The expected downturn — which has long

been projected in this report and elsewhere — is likely to be a little bit steeper and more impactful than originally forecasted. It is important to remember, however, that states, school districts, postsecondary systems, and the federal government still have time to act, given that this decline will be consistent in future years.

In short, the answer is that, yes, leaders and decision-makers in postsecondary education, as well as the industries and economies that rely on the skills and abilities developed through higher education programs, should be concerned. However, many education policymakers and practitioners are already implementing policies and practices to be more efficient and effective with the students who are graduating from high school. These efforts should be implemented in addition to programs to re-engage adult learners. Any approach to managing the expected decline in the number of graduates must involve improving the immediate college-going rate of high school graduates and improving the progression and retention of students who do enter college.

It is tempting to view the section that follows as an example of concern about postsecondary enrollments purely for the sake of the economic health of postsecondary education as an enterprise. On the contrary, the following analyses begin with an assumption that economies across the country need at least as many, if not more, workers with postsecondary education and training than institutions are currently producing. Shortages across health, education, and technology are widely reported.<sup>45</sup> Recent estimates from the Georgetown Center for Education and the Workforce estimate that in 2031, 72% of jobs will require postsecondary education

will need to meet this demand through innovation and new types of credentials, as well as improved efficiency in producing graduates in core fields, such as health, education, and STEM.

Certainly, increased degree and credential production is only one idea to address the problem of workforce shortages. However, even with improved workforce retention and reduced attrition, increasing the number of graduates in key fields is part of the solution. However, many education policymakers and practitioners are already implementing policies and practices to be more efficient and effective with the students who are graduating from high school. These efforts should be implemented in addition to programs to re-engage adult learners.

This section of the report summarizes some, though surely not all, possible evidence-based approaches for providing valuable education and credentials to students, which will also help to meet current and future workforce needs. It begins by situating higher education in its current, post-pandemic context with a look at the evidence on learning loss, including a discussion of how that loss may impact current and future student populations.

## **Tackling K-12 Learning Loss and Chronic Absenteeism**

In addition to the impact that COVID-19 may have had on student enrollment and attendance, evidence is mounting that it also had a substantial impact on student learning. Experts have also concluded that the pandemic had major impacts on students' social and emotional well-being and mental health.<sup>47</sup> The latest available assessment results indicate that despite signs of improvement in the 2022-23 school year, achievement for many K-12 students remained behind pre-pandemic levels through spring 2024, even with federally funded recovery efforts.<sup>48</sup> Four years after learning losses began to accrue, the bulk of the negative impact appears to remain, with some estimates that students are roughly one year behind academically.<sup>49</sup> Further, data show that the achievement gaps between historically marginalized students and their peers increased, although federal relief dollars helped narrow the gaps.<sup>50</sup>

COVID-19 may have exacerbated an existing trend, as there have been similar ongoing score declines at the high school level, with some indication that downward trends on some assessments predate the pandemic.<sup>51</sup> While postsecondary education must prepare for students who may not have the same levels of academic preparation, there is also the possibility that learning loss and chronic absenteeism — both of which are associated with decreases in high school graduation — could decrease future high school graduation rates, leading to fewer graduates than currently projected.<sup>52</sup> The future number of high school graduation graduates depends, in part, on reversing these pandemic effects. If policymakers and educational leaders do not address pandemic-related learning loss and absenteeism, these factors could further decrease graduation rates, and even these downward projections might present a best-case scenario.

## Improving Postsecondary Education Access, Persistence, and Completion

Despite these worrying trends, a peak then decline in the number of high school graduates need not spell doom for institutions across the country and, ultimately, the nation's workforce. While policymakers and practitioners are rightly concerned and focused on the threat of an enrollment cliff, the reality is that the nation is poised to reach the highest level ever of high school graduates in 2025.

Lest anyone conclude there will not be enough high school graduates, consider the trends in college-going decisions for recent high school graduates (Figure 32). Data show that college-going rates for recent high school graduates have declined slightly in recent years across the country, reaching 62% in 2022.<sup>53</sup> The bottom line is that higher education will have to identify ways to serve these students who are currently not choosing the postsecondary pathway.



Figure 32. Immediate college enrollment rate of high school completers by level of postsecondary institution, 2012 to 2022

Source: U.S. Department of Commerce, Census Bureau, Current Population Survey (CPS), October Supplement, 2012 through 2022. See Digest of Education Statistics 2023, table <u>302.10</u>.

This rate has declined from 70% in 2016, showing that there are still plenty of graduates overall, but (for myriad reasons) many are opting for different pathways after high school. To see how reversing this trend would buffer the projected declines, consider how the number of high school graduates immediately enrolling in postsecondary education would change if the matriculation rate marginally increased each year.

Table 9 shows the number of graduates who would immediately enroll in postsecondary education at the current immediate matriculation rate of 62%, compared to the number of graduates enrolling if the matriculation rate increases by 0.5% per year.

## Table 9. Number of potential future high school graduates enrolling in postsecondaryeducation

School year	Projected Graduates	# of Graduates Entering Posteconday: 62% Matriculation	# of Graduates Entering Posteconday: Matriculation Rate Increases Annually by .5%
2023-24	3,763,336	2,333,268	2,352,085
2024-25	3,857,783	2,391,825	2,430,403
2025-26	3,841,094	2,381,478	2,439,095
2026-27	3,764,007	2,333,684	2,408,964
2027-28	3,688,623	2,286,946	2,379,162
2028-29	3,675,987	2,279,112	2,389,392
2029-30	3,643,801	2,259,157	2,386,690
2030-31	3,641,127	2,257,499	2,403,144
2031-32	3,665,492	2,272,605	2,437,552
2032-33	3,642,164	2,258,142	2,440,250
2033-34	3,726,657	2,310,527	2,515,493
2034-35	3,633,730	2,252,913	2,470,936
2035-36	3,565,658	2,210,708	2,442,476
2026-37	3,508,531	2,175,289	2,420,886
2037-38	3,382,147	2,096,931	2,350,592
2038-39	3,440,434	2,133,069	2,408,304
2039-40	3,443,358	2,134,882	2,427,567
2040-41	3,373,947	2,091,847	2,395,502

Under this purely hypothetical and perhaps overly optimistic scenario, immediate postsecondary enrollment would actually increase slightly for 2041 graduates compared to 2024. As laid out throughout the report, the decline between now and 2041 differs substantially across states and regions, but at least at a high level and purely as an exercise in math, this is another example of how demography need not be destiny. Similarly, modest improvement in college retention and completion could also reduce or eliminate the impacts

of the declining number of high school graduates. The question then becomes, which policies and practices can boost these crucial metrics.

#### **REDUCING THE COSTS OF POSTSECONDARY EDUCATION**

Affordability is a central concern of students considering enrolling in postsecondary education, with survey results showing that cost and affordability are "very important" reasons for those who are not enrolled in postsecondary education.<sup>54</sup> For adults who never enrolled in postsecondary education or stopped out, 85% cited cost as a key factor in their decision.<sup>55</sup> While the total cost of attendance continues to increase over time, costs for tuition and fees — at least at public institutions — have remained fairly stable for the last decade after adjusting for inflation.<sup>56</sup> However, tuition and fees only account for about 39% of total costs for students at four-year public institutions and about 20% at two-year institutions.<sup>57</sup>

Policy responses to improving affordability — absent major investments of new funding from the state or federal level — often focus on improvements to provide students with more resources to help them stay enrolled. As one example, Oregon recently funded new "benefits navigators" at public institutions to help students identify and access state and federal programs for which they may be eligible, such as the Supplemental Nutritional Assistance Program (SNAP) or tax credits. This approach is being adopted elsewhere as well.<sup>58</sup> The presence of these navigators at public institutions is showing promising results in improving outcomes for low-income students.<sup>59</sup> Additionally, efforts to improve affordability can include using open educational resources (OER) to reduce textbook costs, with research suggesting the practice may help improve postsecondary retention and completion.<sup>60</sup> Large-scale and comprehensive approaches, though, require substantial investment. "Promise" programs that provide financial aid guarantees address tuition and fees costs, and show encouraging results. These programs, however, are expensive and may not cover all costs.<sup>61</sup>

WICHE has long advocated for addressing affordability through a new state-federal partnership that would ensure investments at the state and national level are complementary. Such a partnership may be difficult to develop but could provide sufficient resources and policy approaches to address concerns about affordability. Federal legislation proposed in 2021 would have provided resources to create "free" community college tuition in states that met certain funding requirements for postsecondary education. The proposal included some characteristics of a state-federal partnership, however, many components would have been unworkable in most states. And while a substantial increase in federal funding for postsecondary education should be contingent on states providing strong support of their own, a true partnership must take into account vastly different state contexts and economic cycles in which states can be forced to reduce postsecondary funding.<sup>62</sup>

#### **ENHANCING HIGH SCHOOL ADVISING**

High school counselors have immense caseloads, with a national average of 385 students for every counselor, far above the 250:1 ratio recommended by the American School Counselor Association.<sup>63</sup> Efforts to provide intensive advising can thus be expensive, but experimental evidence suggests that this can be a promising intervention to increase postsecondary enrollment, especially for underrepresented students.<sup>64</sup> Further, some assessments find that the high cost of these approaches pays off within a few years due to increases in postsecondary enrollment and degree attainment.<sup>65</sup> Details and specific approaches certainly matter in designing these interventions.

Lower-cost approaches, such as text-message-based "nudges" to enhance postsecondary enrollment, have shown some promise at a small scale. However, when replicated at state-wide or national levels, the approach has not been as effective.<sup>66</sup> Possible reasons for this could include that in large-scale interventions, the student may not know the sender of the text message and that messages may have to be more universal to reach a greater audience.<sup>67</sup>

#### SIMPLIFYING THE COLLEGE-GOING PROCESS

The college-going process is notoriously complex, especially for those who may be firstgeneration college students and students who have different levels of access to information to help them navigate that process. Multiple approaches to simplify the process have shown promise. Many states now offer some type of direct admissions program, where high school students meeting certain criteria are proactively notified that they qualify for admission at certain institutions. While these programs are still rolling out in many states, initial evidence is encouraging, suggesting that the intervention boosts enrollments, but additional research is needed as studies have also found mixed results on the impact on low-income students.<sup>68</sup>

Other experimental research has sought to simplify the process by providing clearer information about financial aid and expected costs at the outset of the process. Providing information about the financial aid students would receive if admitted, even when not changing the amount of aid, increased enrollment rates for low-income students.<sup>69</sup>

Recent federal efforts to simplify the Free Application for Federal Student Aid (FAFSA) suffered from a disastrous rollout. However, as those issues are addressed, the new form may also help improve college-going by reducing barriers for students to access federal financial aid and making more students eligible.

#### **PROVIDING WRAPAROUND POSTSECONDARY STUDENT SUPPORTS**

Improving student outcomes once they enroll in postsecondary education is another essential component of strategies to offset declines in the number of high school graduates. Several states, higher education systems, and institutions have adopted wide-ranging student

supports to improve retention and completion. Most prominent among these is a suite of programs first launched at the City University of New York under the name Accelerated Study in Associate Programs (ASAP). This approach blends financial and academic supports, including intensive advising, financial aid to cover unmet need, grants for transportation and course materials, and block scheduling. In numerous rigorous evaluations, researchers have found extremely positive results, specifically that it doubled graduation rates among participants.<sup>70</sup> Although the program can be costly, cost-benefit analyses have found that it is a smart investment of public funds.<sup>71</sup> Replications and adaptations to other states and systems have spread, including some focused on baccalaureate degrees in a variety of states, including Montana, Washington, and Ohio.

#### ADDRESSING ACHIEVEMENT GAPS OF UNDERREPRESENTED STUDENTS

Research has long shown that certain populations of students are less likely to enter, and succeed, in postsecondary education. These gaps align with patterns in race and ethnicity, income status, parental education, gender, and rural location. States may approach these gaps in different ways, but it is essential to acknowledge that some of the same student populations that have not been afforded equal opportunities for access and success are increasing as a proportion of the total future high school graduating classes.

Federal data on immediate college-going by high school graduates show that Black and Hispanic graduates lag behind White and Asian graduates (the data did not report outcomes for other races and ethnicities).<sup>72</sup> Improving matriculation rates of all students to at least the average of White graduates would help alleviate the impacts of the changing demographics evident throughout this report. Future graduating classes will have higher proportions of underrepresented students. Working to ensure that they have equitable opportunities compared to their peers will be essential for meeting future workforce needs.

#### ATTRACTING AND RETAINING ADULT LEARNERS

Improving access and success for students under the age of 25 will also benefit adult students. Virtually all of the policy approaches in the previous sections stand to benefit adults. Adult enrollment, which has declined in recent years as a proportion of total student enrollments in postsecondary education, tends to move countercyclically with the economy. During times of higher unemployment, such as the Great Recession, more adult learners have tended to seek postsecondary credentials. The relatively low unemployment rates and higher wages in recent years have likely limited adult enrollment. Still, there are policy approaches and interventions that can help attract and retain adult learners to help offset a smaller number of high school graduates.

Research from the Council for Adult and Experiential Learners (CAEL) and WICHE has shown that adults who receive credit through prior learning assessment (PLA) are about 17% more

likely to complete credentials and take more regular courses at their institutions.<sup>73</sup> The details of implementing an effective PLA policy can be complex, but essentially boil down to making sure that all students know about these opportunities, and ensuring that they have access to open and transparent processes to demonstrate college-level learning.

### Conclusion

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Ideally, policymakers and education leaders have already internalized the data and trends from previous editions of this report, and have begun to adjust policies and programs to help address the coming decline in the number of high school graduates. While workforce shortages and pandemic-induced learning loss may add new challenges, the underlying fundamentals of demography and births have not changed. However, this report underscores the urgency with which the entirety of our education enterprise must act. Although the trendline projects a slow and steady decline, the impact of policy changes is also slow and (one hopes) steady. Acting now is essential.

Indeed, many areas of the country have experienced declines in high school graduates for years. There is already momentum behind policies and practices to improve postsecondary completion, as well as efforts to ensure that students can pursue credentials that have value in the workforce, while also helping society meet difficult workforce challenges. Institutions and policymakers nationwide can learn from these efforts to respond to the demographic changes that will impact them in the coming years.

Postsecondary enrollment has been dropping for several years, even as the number of high school graduates has been increasing.<sup>74</sup> If higher education collectively cannot ensure its relevancy, demonstrate its value to students, and improve student outcomes like retention and completion, these demographic trends will exacerbate the existing enrollment trends, leading to substantial drops in the number of students, increased workforce shortages, and fundamental financial difficulties for many tuition-dependent institutions.

Higher education can, and must, do better, and do so in new and innovative ways along with a re-emphasis on thorough evaluation, improvement, and more evaluation. One approach to this challenge may be to provide new, stackable pathways built of short-term credentials to engage students and provide them with opportunities that were not previously available. Depending on what the data suggest, states may need to pivot to a strategy that improves outcomes for specific demographic groups such as rural males or underrepresented students, to ensure that they are properly leveraging and engaging their region's future teachers, healthcare workers, and engineers. This can require difficult conversations across a variety of political environments, but ultimately, higher education can and must meet this challenge. As we continue to assert and demonstrate throughout this report, demography need not be destiny.


#### ANALYSIS OF PACIFIC HIGH SCHOOL GRADUATES

American Samoa, Guam, the Commonwealth of the Northern Mariana Islands, the Republic of the Marshall Islands, the Republic of Palau, and the Federated States of Micronesia have all joined WICHE since 2010. WICHE intends to complete a detailed analysis of high school graduate trends in the region, as well as Puerto Rico and the U.S. Virgin Islands, in upcoming work.

### ANALYSIS OF STUDENTS WITH MODERATE LIKELIHOOD OF ATTENDING POSTSECONDARY EDUCATION

Providing finer grained research on students that are not certain to attend education or training programs after finishing high school would give states and others greater insight into the types of students that are "persuadable" but may not enroll. This could help lead to improved programs to boost postsecondary access.

#### **DEEPER EXPLORATION OF CHANGES IN HIGH SCHOOL NUMBERS BY LOCALE**

While state-level information can be useful, it is also important to identify how demographic trends may impact distinct types of locations within states. While the high-level analysis in this report suggest that urban trends may differ from rural ones, further research can examine how different locales are projected to see different proportions of racial and ethnic groups make up their graduating classes.

#### **GRADUATION NUMBERS BY GENDER**

Differences in student outcomes by gender have been apparent for some time, with women more likely to complete high school and go on directly to college.<sup>75</sup> Future analyses will examine projecting trends by gender, including ways that gender and race and ethnicity may intersect.

# ENDNOTES

- 1 See for example: G. Vandenbroucke, 2023, "The return on investing in a college education," The Federal Reserve Bank of St. Louis, <u>https://www.stlouisfed.org/</u> publications/regional-economist/2023/mar/return-investing-college-education; M. Hout, 2012, "Social and economic returns to college education in the United States." Annual *Review of Sociology*, 38(1), 379-400, <u>https://www.annualreviews.org/docserver/fulltext/</u> soc/38/1/annurev.soc.012809.102503.pdf; The Federal Reserve Bank of St. Louis, 2020, "Employment losses are greatest for the least educated," https://fredblog.stlouisfed. org/2020/10/employment-losses-are-largest-for-the-least-educated; A. P. Carnevale, T. Jayasundera, & A. Gulish, 2016, America's divided recovery: College haves and have-nots, Georgetown University Center on Education and the Workforce, https://files.eric.ed.gov/ fulltext/ED574377.pdf; A. Zajacova & E. M. Lawrence, 2018, "The relationship between education and health: Reducing disparities through a contextual approach," Annual *Review of Public Health*, 39(1), 273-289, https://www.annualreviews.org/docserver/fulltext/ publhealth/39/1/annurev-publhealth-031816-044628.pdf; C. E. Ahearn, J. E. Brand, & X. Zhou, 2023, "How, and for whom, does higher education increase voting?" Research in Higher Education, 64(4), 574-597, https://link.springer.com/content/pdf/10.1007/s11162-022-09717-4.pdf.
- 2 A. P. Carnevale, N. Smith, M. Van Der Werf, & M. C. Quinn, 2024, *After everything: Projections of jobs, education, and training requirements through 2031*, Georgetown University Center on Education and the Workforce, <u>https://cew.georgetown.edu/cew-reports/projections2031/</u>.
- 3 National Student Clearinghouse Research Center, 2024, "Current term enrollment estimates: Spring 2024," National Student Clearinghouse, <u>https://nscresearchcenter.org/</u> <u>current-term-enrollment-estimates/</u>.
- 4 Carnevale, et al., 2024.
- 5 M. Kearney & P. Levine, 2023, "U.S. births are down again, after the COVID baby bust and rebound," Brookings Institution, <u>https://www.brookings.edu/articles/us-births-are-down-again-after-the-covid-baby-bust-and-rebound/</u>; R. Barlow, 2023, "We've had a COVID baby boomlet. Will it last?" *BU Today*, <u>https://www.bu.edu/articles/2023/covid-baby-boom/</u>.
- 6 National Center for Education Statistics, 2024, "Digest of education statistics 2023, table 219.46," U.S. Department of Education, <u>https://nces.ed.gov/programs/digest/d23/tables/dt23\_219.46.asp</u>.
- 7 National Center for Education Statistics, n.d., "Trends in high school dropout and completion rates in the United States, indicator 4: Adjusted cohort graduation rate," U.S. Department of Education, <u>https://nces.ed.gov/programs/dropout/ind\_04.asp</u>.
- 8 P. Bransberger, C. Falkenstern, & P. Lane, 2020, "Knocking at the college door," Western Interstate Commission for Higher Education, <u>https://www.wiche.edu/wp-content/</u> <u>uploads/2020/12/Knocking-pdf-for-website.pdf</u>. Specifically, see Appendix Table 3, which

provided a comparison of the changes in the number of total annual public high school graduates, estimated on-time graduates, and on-time graduation rates, from SY 2012-13 to 2017-18.

- 9 Bransberger, Falkenstern, & Lane, 2020.
- 10 National Center for Education Statistics, 2024, "Digest of education statistics 2023, table 219.46," U.S. Department of Education, <u>https://nces.ed.gov/programs/digest/d23/tables/dt23\_219.46.asp</u>.
- 11 See for example D. Bauman, 2024, "Colleges were already bracing for an 'enrollment cliff.' Now there might be a second one," *The Chronicle of Higher Education*, <u>https://www. chronicle.com/article/colleges-were-already-bracing-for-an-enrollment-cliff-now-theremight-be-a-second-one</u>; D. Rosowsky, 2024, "The cliffs of higher ed: Who's going over and why?," *Forbes*, <u>https://www.forbes.com/sites/davidrosowsky/2024/02/03/the-cliffs-ofhigher-ed-whos-going-over-and-why/.</u>
- 12 National Center for Education Statistics, 2024, "Digest of education statistics 2023, table 303.10," <u>https://nces.ed.gov/programs/digest/d23/tables/dt23\_303.10.asp</u>.
- 13 U.S. Bureau of Labor Statistics, 2024, "61.4 percent of recent high school graduates enrolled in college in October 2023," *The Economics Daily*, <u>https://www.bls.gov/opub/</u> <u>ted/2024/61-4-percent-of-recent-high-school-graduates-enrolled-in-college-in-</u> <u>october-2023.htm</u>.
- 14 U.S. Bureau of Labor Statistics, 2024.
- 15 National Center for Education Statistics, 2008, "Digest of education statistics, 2007, table 191," U.S. Department of Education, <u>https://nces.ed.gov/programs/digest/d07/tables/</u><u>dt07\_191.asp</u>.
- 16 Earlier editions of the Knocking report attempted to develop projections by race and ethnicity but were stymied by a lack of data.
- 17 The Private School Universe Survey provides race and ethnicity information aggregated by school level (elementary, secondary, or combined). These data would not support WICHE's modelling approach to produce projections by race and ethnicity.
- 18 Western Interstate Commission for Higher Education, 1998, *Knocking at the College Door*, <u>https://www.wiche.edu/resources/knocking-at-the-college-door-1998/</u>.
- 19 Office of Management and Budget, 2024, "Statistical policy directive 15," Federal Register, <u>https://www.federalregister.gov/documents/2024/03/29/2024-06469/revisions-to-ombs-</u> <u>statistical-policy-directive-no-15-standards-for-maintaining-collecting-and</u>.
- 20 B. E. Hamilton, J. A. Martin, & M. J. K. Osterman, 2024, "Births: Provisional data for 2023," U.S. Centers for Disease Control and Prevention, <u>https://www.cdc.gov/nchs/data/vsrr/vsrr035.pdf</u>; U.S. Centers for Disease Control and Prevention, n.d. "WONDER: Natality information," <u>https://wonder.cdc.gov/natality.html</u>; Data for births prior to 1995 were previously obtained from: U.S. Centers for Disease Control and Prevention and Prevention, n.d. "Vital statistics online data portal," <u>https://www.cdc.gov/nchs/data\_access/Vitalstatsonline.htm</u>.

- 21 WICHE calculations from American Community Survey, 2024, "Public use microdata sample (PUMS), 2018-22" U.S. Census Bureau, <u>https://www.census.gov/programs-surveys/acs/microdata/access.html</u>.
- 22 WICHE calculations from American Community Survey, 2024.
- 23 WICHE categorizes North Dakota and South Dakota as Western states due to their membership in our organization. The online Knocking web tools allow users to analyze data by individual states and by U.S. Census region and regional subdivisions.
- 24 U.S. Census Bureau, 2024, "Percent change in county population: July 1, 2022, to July 1, 2023," <u>https://www.census.gov/library/visualizations/2024/comm/percent-change-county-population.html</u>.
- 25 Purely from an arithmetic perspective, other possibilities could also be true, including increases in graduation rates in the South and declines in the other three regions, or increased mortality in the three declining regions. However, we have not been able to find data to corroborate or support those possibilities.
- 26 Race and ethnicity information is only available for public school graduates.
- 27 U.S. Census Bureau, 2024.
- 28 D. Geverdt, 2019, *Education demographic and geographic estimates program (EDGE): Locale boundaries file documentation, 2017*, U.S. Department of Education, <u>https://nces.ed.gov/programs/edge/docs/EDGE\_NCES\_LOCALE.pdf</u>.
- 29 See for example: K. A. Gee, V. Asmundson, & T. Vang, n.d. "Educational inequities related to race and socioeconomic status deepened by the COVID-19 pandemic," University of California, Davis, <u>https://poverty.ucdavis.edu/post/educational-inequities-related-raceand-socioeconomic-status-deepened-covid-19-pandemic#:~:text=Students%20of%20 color%20and%20lower,inequities%20caused%20by%20systemic%20barriers; S. Magesh, D. John, W. Li, Y. Li, A. Mattingly-App, S. Jain, E. Chang, & W. M. Ongkeko, 2021, "Disparities in COVID-19 outcomes by race, ethnicity, and socioeconomic status: A systematic review and meta-analysis," *Journal of the American Medical Association*, 4(11), <u>https://jamanetwork. com/journals/jamanetworkopen/article-abstract/2785980</u>.</u>
- 30 T. S. Dee, 2023, "Where the kids went: Nonpublic schooling and demographic change during the pandemic exodus from public schools," Urban Institute, <u>https://www.urban.org/sites/default/files/2023-02/Where%20the%20Kids%20Went-%20Nonpublic%20</u> <u>Schooling%20and%20Demographic%20Change%20during%20the%20Pandemic%20</u> <u>Exodus%20from%20Public%20Schools\_0.pdf</u>
- 31 Dee, 2023.
- 32 E. Sempeles & J. Cui, 2024, *Parent and family involvement in education: 2023*, U.S. Department of Education, <u>https://nces.ed.gov/pubs2024/2024113.pdf</u>.
- 33 A. R. Watson, 2024, "Homeschool growth: 2023-2024," Johns Hopkins School of Education, Institute for Education Policy, <u>https://education.jhu.edu/edpolicy/policy-research-</u> <u>initiatives/homeschool-hub/homeschool-growth-2023-2024/</u>.

- 34 National Center for Education Statistics, 2024, "Private school universe survey," U.S. Department of Education, <u>https://nces.ed.gov/surveys/pss/</u>.
- 35 See for example, S. Wilson, 2023, "Many Colorado families stick with homeschooling in wake of pandemic," *Colorado Newsline*, <u>https://coloradonewsline.com/2023/10/23/</u> <u>colorado-home-schooling-wake-of-pandemic/</u>.
- 36 Dee, 2023.
- 37 Dee, 2023.
- 38 L. Hudson, T. Kaatz, D. Battle, L. J. Hall, S. Bahr, & S. Eyster, 2023, *2019 homeschooling and full-time virtual education rates*, U.S. Department of Education, <u>https://nces.ed.gov/</u> <u>pubs2023/2023101.pdf</u>; Sempeles & Cui, 2024.
- 39 Dee, 2023.
- 40 J. Shen-Berro, 2023, "Dropout rates have ticked up in some states: How big is the problem?" *Chalkbeat*, <u>https://www.chalkbeat.org/2023/3/13/23634232/dropout-rateshigh-school-student-pandemic-graduation/</u>; National Center for Education Statistics, 2024, "Digest of education statistics, 2023, table 219.80" U.S. Department of Education, <u>https:// nces.ed.gov/programs/digest/d23/tables/dt23\_219.80.asp</u>.
- 41 M. K. Diliberti, L. R. Rainey, L. Chu, & H. L. Schwartz, 2024, "Districts try with limited success to reduce chronic absenteeism," RAND, <u>https://www.rand.org/pubs/research\_reports/ RRA956-26.html</u>; M. Cardona, 2024, "Letter from Secretary Cardona regarding student attendance and engagement," U.S. Department of Education, <u>https://www.ed.gov/ laws-and-policy/education-policy/policy-guidance/march-22-2024-letter-from-secretarycardona-regarding-student-attendance-and-engagement-2.</u>
- 42 E. Syverson & C. Duncombe, 2022, "Student counts in K-12 funding models," Education Commission of the States, <u>https://www.ecs.org/wp-content/uploads/Student-Counts-in-K-12-Funding-Models.pdf</u>.
- 43 K. Belsha, 2024, "Bipartisan coalition issues call to cut chronic absenteeism in half as kids continue to miss school," *Chalkbeat*, <u>https://www.chalkbeat.org/2024/07/18/</u> <u>schools-should-cut-chronic-absenteeism-in-half-says-education-coalition</u>; Council on Economic Advisors, 2023, "Chronic absenteeism and disrupted learning require an allhands-on-deck approach," The White House, <u>https://www.whitehouse.gov/cea/written-</u> <u>materials/2023/09/13/chronic-absenteeism-and-disrupted-learning-require-an-all-handson-deck-approach/</u>.
- 44 National Student Clearinghouse Research Center, 2024, "Current term enrollment estimates: Spring 2024," National Student Clearinghouse, <u>https://nscresearchcenter.org/</u> <u>current-term-enrollment-estimates/</u>.
- 45 See for example: Health Resources and Services Administration, 2024, "Nurse workforce projections, 2021-2036," U.S. Department of Health and Human Services, <u>https://bhw.hrsa.gov/sites/default/files/bureau-health-workforce/data-research/nursing-projections-factsheet.pdf</u>; E. Garcia, M. A. Kraft, & H. L. Schwarts, 2022, "Are we at a crisis point with

the public teacher workforce? Education scholars share their perspectives," Brookings Institution, <u>https://www.brookings.edu/articles/are-we-at-a-crisis-point-with-the-public-teacher-workforce-education-scholars-share-their-perspectives/</u>; G. R. Boggs, C. M. Dukes, & E. K. Hawthorne, 2022, "Addressing the STEM workforce shortage," U.S. Chamber of Commerce Foundation, <u>https://www.uschamberfoundation.org/education/addressing-stem-workforce-shortage</u>.

- 46 Carnevale, et al., 2024.
- 47 Center on Reinventing Public Education, 2023, "How has the pandemic affected students' social-emotional well-being? A review of the evidence to date," <u>https://files.eric.ed.gov/fulltext/ED614131.pdf</u>.
- 48 L. Meckler & L. Lumpkin, 2024, "Four years after COVID, many students still losing ground," *The Washington Post*, <u>https://www.washingtonpost.com/education/2024/07/23/covid-test-scores-learning-loss-absenteeism/</u>; K. Lewis & M. Kuhfeld, 2024, "Recovery still elusive: 2023-24 student achievement highlights persistent achievement gaps and a long road ahead," Students headed to high school are academically a year behind, COVID study finds," Northwest Evaluation Association, <u>https://www.nwea.org/uploads/recovery-still-elusive-</u>2023-24-student-achievement-highlights-persistent-achievement-gaps-and-a-long-roadahead\_NWEA\_researchBrief.pdf; National Center for Education Statistics, 2024, "School pulse panel," U.S. Department of Education, <u>https://nces.ed.gov/surveys/spp/results.asp</u>.
- 49 P. Bransberger, 2024, "Navigating learning loss and changing demographics in education," Western Interstate Commission for Higher Education, <u>https://www.wiche.edu/wp-content/uploads/2024/02/WICHE-Insights-Navigating-Learning.pdf</u>.
- 50 Lewis & Kuhfeld, 2024; Curriculum Associates, 2024, *State of student learning in 2024*, <u>https://www.curriculumassociates.com/research-and-efficacy/annual-report-the-state-of-student-learning-in-2024</u>.
- 51 College Board, 2019, "SAT suite of assessments annual report," <u>https://reports.</u> <u>collegeboard.org/sat-suite-program-results/data-archive</u>; College Board, 2024, "SAT suite of assessments annual report," <u>https://reports.collegeboard.org/sat-suite-programresults</u>. Note: The SAT was fully online for the first time in 2024 and may relate to some score change; ACT Education Corp., 2024, "Record-high percentage of graduates participate in 2024 ACT school-day testing," <u>https://leadershipblog.act.org/2024/10/</u> <u>graduating-class-data</u>; ACT Education Corp., 2023, "Fewer high school seniors ready for college as ACT scores continue to decline," <u>https://leadershipblog.act.org/2023/10/actscores-decline.html</u>. See also P. Bransberger, 2024.
- 52 A. Humm Patnode, K. Gibbons, & R. R. Edmunds, 2018, *Attendance and chronic absenteeism: Literature review*, University of Minnesota, College of Education and Human Development, Center for Applied Research and Educational Improvement, <u>http://www. floridarti.usf.edu/resources/format/pdf/Chronic%20Absenteeism%20Lit%20Review%20</u> <u>2018.pdf</u>.

- 53 National Center for Education Statistics, 2024, "Digest of education statistics, 2023, table 302.10," U.S. Department of Education, <u>https://nces.ed.gov/programs/digest/d19/tables/dt19\_302.10.asp</u>.
- 54 Gallup, Inc. & Lumina Foundation, 2024, *Cost of college: The price tag of higher education and its effect on enrollment*, <u>https://www.luminafoundation.org/wp-content/</u> <u>uploads/2024/04/Cost.of\_.College.pdf</u>.
- 55 Gallup, Inc & Lumina Foundation, 2024, *The state of higher education 2024*, <u>https://www.gallup.com/analytics/644939/state-of-higher-education.aspx#ite-644921</u>.
- 56 Western Interstate Commission for Higher Education, 2024, *Tuition and fees in the West*, <u>https://www.wiche.edu/policy-research-/data-resources/tuition-fees/</u>.
- 57 J. Ma, M. Pender, & M. Oster. 2024, Trends in college pricing and student aid 2024, College Board, https://research.collegeboard.org/media/pdf/Trends-in-College-Pricing-and-<u>Student-Aid-2024-ADA.pdf</u>; S. Baum, B. Cook, F. Terrones & E. Colin, 2023, Nontuition expenses: A framework for developing policy solutions, Urban Institute, <u>https://www.urban.org/sites/default/files/2023-12/Nontuition%20Expenses.pdf</u>.
- 58 National Skills Coalition, 2021, "Bill creates funding for benefit navigators at all Oregon public community colleges and universities," <u>https://nationalskillscoalition.org/news/</u> <u>press-releases/bill-creates-funding-for-benefit-navigators-at-all-oregon-public-community-</u> <u>colleges-and-universities/</u>; Today's Students Coalition, n.d., *Putting the basic needs of today's* <u>students on the map: A landscape analysis of policies and strategies across 37 states</u>, <u>https://</u> <u>todaysstudents.org/wp-content/uploads/Basic-Needs-State-Policy-Landscape-Analysis.pdf</u>.
- 59 M. H. Plumb, 2024, "Connecting college students with public benefit programs," Trellis Strategies, <u>https://www.trellisstrategies.org/wp-content/uploads/2024/03/Toolkit</u> <u>PublicBenefitsPrograms.pdf</u>.
- 60 L. Diaz Solodukhin, M. J. Macdonald, C. Falkenstern, P. Lane, & K. Jones, in press, "No-cost/ low-cost and OER impact on time-to-credential: An event history modeling study," *Journal* of Open Educational Resources in Higher Education.
- 61 T. J. Bartik, B. Hershbein, & M. Lachowska, 2021, "The effects of the Kalamazoo Promise Scholarship on college enrollment and completion," *Journal of Human Resources*, 56(1), 269-310, <u>https://jhr.uwpress.org/content/wpjhr/56/1/269.full.pdf</u>; L. Daugherty & G. C. Gonzalez, 2016, *The impact of the New Haven Promise program on college, enrollment, choice, and persistence*, Working Paper No. WR-1147-UIER, RAND, <u>https://www.rand.org/content/ dam/rand/pubs/working\_papers/WR1100/WR1147/RAND\_WR1147.pdf</u>;
- 62 M. Streeter & J. Thompson, 2019, *Better together: How a reimagined federal-state partnership to fund public higher ed could help bring college within reach for all*, The Institute for College Access and Success, <u>https://ticas.org/wp-content/uploads/2019/10/Better-Together.pdf</u>.
- 63 American School Counselor Association, n.d., "Student-to-school-counselor ratio 2022–2023," <u>https://www.schoolcounselor.org/getmedia/a988972b-1faa-4b5f-8b9ea73b5ac44476/ratios-22-23-alpha.pdf</u>.

- 64 B. Castleman, D. Deutschlander, & G. Lohner, 2020, *Pushing college advising forward: Experimental evidence on intensive advising and success*, EdWorking Paper No. 20-326, Annenberg Institute at Brown University, <u>https://edworkingpapers.com/ai20-326</u>; N. Bowman, S. Kim, L. Ingleby, D. Ford, & C. Sibaouih, 2018, "Improving college access at low-income high schools? The impact of GEAR UP Iowa on postsecondary enrollment and persistence," *Educational Evaluation and Policy Analysis*, 40(3), 399-419, <u>https://doi.org/10.3102/0162373718778133</u>; S. Dynarski, A. Nurshatayeva, L. C. Page, J. Scott-Clayton, 2023, "Addressing nonfinancial barriers to college access and success: Evidence and policy implications," in E. A. Hanushek, S. Machin & L. Woessmann (Eds.), *Handbook of the economics of education*, National Bureau of Economic Research, <u>https://www.nber.org/ system/files/working\_papers/w30054/w30054.pdf</u>.
- 65 Castleman, et al., 2020; Dynarski, et al., 2023.
- 66 B. Castleman, 2021, "Why aren't text message interventions designed to boost college success working at scale?" *Behavioral Scientist*, <u>https://behavioralscientist.org/why-arent-text-message-interventions-designed-to-boost-college-success-working-at-scale/</u>.
- 67 Castleman, 2021.
- 68 T. Odle & J. Delaney, 2022, "You are admitted! Early evidence on enrollment from Idaho's direct admissions system," *Research in Higher Education*, 63(6), 899-932, <u>https:// link.springer.com/article/10.1007/s11162-022-09675-x</u>; C. Howell, 2018, "Surprise! You are accepted to college: An analysis of Idaho's direct admissions initiative," doctoral dissertation, Boise State University, Boise State University ScholarWorks, <u>https:// scholarworks.boisestate.edu/cgi/viewcontent.cgi?article=2577&context=td</u>.
- 69 S. Dynarski, C. J. Libassi, K. Michelmore, & S. Owen, 2021, "Closing the gap: The effect of reducing complexity and uncertainty in college pricing on the choices of low-income students," *American Economic Review*, 111(6), 1721-1756, <u>https://assets.aeaweb.org/assetserver/files/13861.pdf</u>.
- 70 S. Scrivener, M. J. Weiss, A. Ratledge, T. Rudd, C. Sommo, & H. Fresques, 2015, *Doubling* graduation rates: Three-year effects of CUNY's Accelerated Study in Associate Programs (ASAP) for developmental education students, MDRC, <u>https://www.mdrc.org/sites/default/files/</u> <u>doubling\_graduation\_rates\_fr.pdf</u>.
- 71 H. M. Levin & E. Garcia, 2013, Benefit-cost analysis of Accelerated Study in Associate Programs (ASAP) of the City University of New York, Center for Benefit-Cost Studies in Education, Teachers College, Columbia University, <u>https://www.nyc.gov/assets/opportunity/pdf/ Levin\_ASAP\_Benefit\_Cost\_Report\_FINAL\_05212013.pdf</u>.
- 72 National Center for Education Statistics, 2024, "Digest of education statistics, 2023, table 302.10."
- 73 R. Klein-Collins, J. Taylor, C. Bishop, P. Bransberger, P. Lane, & S. Leibrandt, 2020, *The PLA boost: Results from a 72-institution targeted study of prior learning assessment and adult student outcomes*, Council for Adult and Experiential Learning and the Western Interstate

Commission for Higher Education, <u>https://www.wiche.edu/wp-content/uploads/2020/10/</u> PLA-Boost-Report-CAEL-WICHE-Revised-Dec-2020.pdf.

- 74 National Center for Education Statistics, 2024, "Digest of education statistics, 2023, table 303.70," U.S. Department of Education, <u>https://nces.ed.gov/programs/digest/d23/tables/</u><u>dt23\_303.70.asp</u>.
- 75 National Center for Education Statistics, 2024, "Digest of education statistics, 2023, table 302.10," U.S. Department of Education, <u>https://nces.ed.gov/programs/digest/d19/</u> <u>tables/dt19\_302.10.asp</u>; R. Reeves & S. Kalkat, 2023, "Racial disparities in the high school graduation gender gap," Brookings Institution, <u>https://www.brookings.edu/articles/racialdisparities-in-the-high-school-graduation-gender-gap/</u>.

## CITED REFERENCES

82

- ACT Education Corp. (2023). *Fewer high school seniors ready for college as ACT scores continue to decline*. <u>https://leadershipblog.act.org/2023/10/act-scores-decline.html</u>.
- ACT Education Corp. (2024). *Record-high percentage of graduates participate in 2024 ACT schoolday testing.* <u>https://leadershipblog.act.org/2024/10/graduating-class-data.html</u>.
- Ahearn, C. E., Brand, J. E. & Zhou, X. (2023). How, and for whom, does higher education increase voting? *Research in Higher Education, 64*(4), 574-597. <u>https://link.springer.com/</u> <u>content/pdf/10.1007/s11162-022-09717-4.pdf</u>.
- American Community Survey. (2024). *Public use microdata sample (PUMS) 2018-22*. U.S. Census Bureau. <u>https://www.census.gov/programs-surveys/acs/microdata/access.html</u>.
- American School Counselor Association. (n.d.). *Student-to-school-counselor ratio* 2022–2023. <u>https://www.schoolcounselor.org/getmedia/a988972b-1faa-4b5f-8b9e-a73b5ac44476/</u> <u>ratios-22-23-alpha.pdf</u>.
- Barlow, R. (2023). We've had a COVID baby boomlet. Will it last? *BU Today*, <u>https://www.bu.edu/articles/2023/covid-baby-boom/</u>.
- Bartik, T. J., Hershbein, B. & Lachowska, M. (2021). The effects of the Kalamazoo Promise Scholarship on college enrollment and completion. *Journal of Human Resources, 56*(1), 269-310. <u>https://jhr.uwpress.org/content/wpjhr/56/1/269.full.pdf</u>.
- Baum, S., Cook, B., Terrones, F., & Colin, E. (2023). *Nontuition expenses: A framework for developing policy solutions*. Urban Institute. <u>https://www.urban.org/sites/default/files/2023-12/Nontuition%20Expenses.pdf</u>.
- Bauman, D. (2024). Colleges were already bracing for an 'enrollment cliff.' Now there might be a second one. *The Chronicle of Higher Education*. <u>https://www.chronicle.com/article/</u> <u>colleges-were-already-bracing-for-an-enrollment-cliff-now-there-might-be-a-second-one</u>.
- Belsha, K. (2024). Bipartisan coalition issues call to cut chronic absenteeism in half as kids continue to miss school. *Chalkbeat*. <u>https://www.chalkbeat.org/2024/07/18/schools-should-cut-chronic-absenteeism-in-half-says-education-coalition</u>.
- Boggs, G. R., Dukes, C. M., & Hawthorne, E. K. (2022). *Addressing the STEM workforce shortage*. U.S. Chamber of Commerce Foundation. <u>https://www.uschamberfoundation.org/</u> <u>education/addressing-stem-workforce-shortage</u>.
- Bowman, N., Kim, S., Ingleby, L., Ford, D., & Sibaouih, C. (2018). Improving college access at low-income high schools? The impact of GEAR UP Iowa on postsecondary enrollment and persistence. *Educational Evaluation and Policy Analysis, 40*(3), 399-419, <u>http://dx.doi.org/10.3102/0162373718778133</u>.
- Bransberger, P. (2024). *Navigating learning loss and changing demographics in education*. Western Interstate Commission for Higher Education. <u>https://www.wiche.edu/wp-content/uploads/2024/02/WICHE-Insights-Navigating-Learning.pdf</u>.

- Bransberger, P., Falkenstern, C. & Lane, P. (2020). *Knocking at the College Door*. Western Interstate Commission for Higher Education. <u>https://www.wiche.edu/wp-content/uploads/2020/12/Knocking-pdf-for-website.pdf</u>.
- Bureau of Indian Education. (n.d.). *BIE schools directory*. U.S. Department of the Interior. <u>https://www.bie.edu/schools/directory</u>.
- Cardona, M. (2024). *Letter from Secretary Cardona regarding student attendance and engagement*. U.S. Department of Education. <u>https://www.ed.gov/laws-and-policy/</u> <u>education-policy/policy-guidance/march-22-2024-letter-from-secretary-cardona-</u> <u>regarding-student-attendance-and-engagement-2</u>.
- Carnevale, A. P., Jayasundera, T. & Gulish, A. (2016). *America's divided recovery: College haves and have-nots*. Georgetown University Center on Education and the Workforce. <u>https://</u> <u>files.eric.ed.gov/fulltext/ED574377.pdf</u>.
- Carnevale, A. P., Smith, N., Van Der Werf, M., & Quinn, M. C. (2024). *After everything: Projections of jobs, education, and training requirements through 2031*, Georgetown University Center on Education and the Workforce. <u>https://cew.georgetown.edu/cew-reports/projections2031/</u>.
- Castleman, B. (2021). Why aren't text message interventions designed to boost college success working at scale? *Behavioral Scientist*. <u>https://behavioralscientist.org/why-arent-text-message-interventions-designed-to-boost-college-success-working-at-scale/</u>.
- Castleman, B., Deutschlander, D., & Lohner, G. (2020). *Pushing college advising forward: Experimental evidence on intensive advising and success* (EdWorking Paper No. 20-326). Annenberg Institute at Brown University. <u>https://edworkingpapers.com/ai20-326</u>.
- Center on Reinventing Public Education. (2023). *How has the pandemic affected students' social-emotional well-being? A review of the evidence to date*. <u>https://files.eric.ed.gov/fulltext/</u> ED614131.pdf.
- Centers for Disease Control and Prevention. (n.d.). *Vital statistics online data portal*. U.S. Department of Health and Human Services. <u>https://www.cdc.gov/nchs/data\_access/</u><u>Vitalstatsonline.htm</u>.
- Centers for Disease Control and Prevention. (n.d.). *WONDER: Natality information*. U.S. Department of Health and Human Services. <u>https://wonder.cdc.gov/natality.html</u>.
- College Board. (2019). *SAT suite of assessments annual report*. <u>https://reports.collegeboard.org/</u><u>sat-suite-program-results/data-archive</u>.
- College Board. (2024). SAT suite of assessments annual report. <u>https://reports.collegeboard.org/</u><u>sat-suite-program-results</u>.
- Council on Economic Advisors. (2023). *Chronic absenteeism and disrupted learning require an all-hands-on-deck approach*. The White House. <u>https://www.whitehouse.gov/cea/written-</u> <u>materials/2023/09/13/chronic-absenteeism-and-disrupted-learning-require-an-all-hands-</u> <u>on-deck-approach/</u>.

- Curriculum Associates. (2024). *State of student learning in 2024*. <u>https://www.</u> <u>curriculumassociates.com/research-and-efficacy/annual-report-the-state-of-student-learning-in-2024</u>.
- Daugherty, L., & Gonzalez, G. C. (2016). The impact of the New Haven Promise program on college, enrollment, choice, and persistence (Working Paper No. WR-1147-UIER). RAND. https://www.rand.org/content/dam/rand/pubs/working\_papers/WR1100/WR1147/RAND\_ WR1147.pdf.
- Dee, T.S. (2023). Where the kids went: Nonpublic schooling and demographic change during the pandemic exodus from public schools. Urban Institute. <u>https://www.urban.org/sites/default/files/2023-02/Where%20the%20Kids%20Went-%20Nonpublic%20Schooling%20and%20Demographic%20Change%20during%20the%20Pandemic%20Exodus%20from%20Public%20Schools\_0.pdf.</u>
- Diaz Solodukhin, L., Macdonald, M. J., Falkenstern, C., Lane, P., & Jones, K. (in press). No-cost/ low-cost and OER impact on time-to-credential: An event history modeling study. *Journal* of Open Educational Resources in Higher Education.
- Diliberti, M. K., Rainey, L. R., Chu, L. & Schwartz, H. L. (2024). *Districts try with limited success to reduce chronic absenteeism*. RAND. <u>https://www.rand.org/pubs/research\_reports/RRA956-26.html</u>.
- Dynarski, S., Libassi, C. J., Michelmore, K., & Owen, S. (2021). Closing the gap: The effect of reducing complexity and uncertainty in college pricing on the choices of low-income students. *American Economic Review, 111*(6), 1721-1756. <u>https://assets.aeaweb.org/assetserver/files/13861.pdf</u>.
- Dynarski, S., Nurshatayeva, A., Page, L. C., & Scott-Clayton, J. (2023). Addressing nonfinancial barriers to college access and success: Evidence and policy implications. In Hanushek, E. A., Machin, S., & Woessmann, L. (Eds), *Handbook of the Economics of Education*. National Bureau of Economic Research. <u>https://www.nber.org/system/files/working\_papers/</u> <u>w30054/w30054.pdf</u>.
- The Federal Reserve Bank of St. Louis. (2020). *Employment losses are greatest for the least educated*. <u>https://fredblog.stlouisfed.org/2020/10/employment-losses-are-largest-for-the-least-educated</u>.
- Gallup, Inc. and Lumina Foundation. (2024). *Cost of college: The price tag of higher education and its effect on enrollment*. <u>https://www.luminafoundation.org/wp-content/</u> <u>uploads/2024/04/Cost.of\_.College.pdf</u>.
- Gallup, Inc. and Lumina Foundation. (2024). *The state of higher education 2024*. <u>https://www.gallup.com/analytics/644939/state-of-higher-education.aspx#ite-644921</u>.
- Garcia, E., Kraft, M. A., & Schwarts, H. L. (2022). *Are we at a crisis point with the public teacher workforce? Education scholars share their perspectives*. Brookings Institution. <u>https://</u> <u>www.brookings.edu/articles/are-we-at-a-crisis-point-with-the-public-teacher-workforce-</u> <u>education-scholars-share-their-perspectives/</u>.

84

- Gee, K. A., Asmundson, V., & Vang, T. (n.d.). Educational inequities related to race and socioeconomic status deepened by the COVID-19 pandemic. University of California, Davis. <u>https://poverty.ucdavis.edu/post/educational-inequities-related-race-and-socioeconomicstatus-deepened-covid-19-pandemic</u>.
- Geverdt, D. (2019). *Education demographic and geographic estimates program (EDGE): Locale boundaries file documentation, 2017*. U.S. Department of Education. <u>https://nces.ed.gov/programs/edge/docs/EDGE\_NCES\_LOCALE.pdf</u>.
- Hamilton, B. E., Martin, J. A., & Osterman, M. J. K. (2024). *Births: Provisional data for 2023*. U.S. Centers for Disease Control and Prevention. <u>https://www.cdc.gov/nchs/data/vsrr/vsrr035</u>. <u>pdf</u>.
- Health Resources and Services Administration. (2024). *Nurse workforce projections, 2021-2036*. U.S. Department of Health and Human Services. <u>https://bhw.hrsa.gov/sites/default/files/</u> <u>bureau-health-workforce/data-research/nursing-projections-factsheet.pdf</u>.
- Hout, M. (2012). Social and economic returns to college education in the United States. *Annual review of sociology, 38*(1), 379-400. <u>https://www.annualreviews.org/docserver/fulltext/soc/38/1/annurev.soc.012809.102503.pdf</u>.
- Howell, C. (2018). *Surprise! You are accepted to college: An analysis of Idaho's direct admissions initiative* [Doctoral dissertation, Boise State University]. Boise State University ScholarWorks. <u>https://scholarworks.boisestate.edu/cgi/viewcontent.cgi?article=2577&context=td</u>.
- Hudson, L., Kaatz, T., Battle, D., Hall, L. J., Bahr, S., & Eyster, S. (2023). *2019 homeschooling and full-time virtual education rates*. U.S. Department of Education. <u>https://nces.ed.gov/pubs2023/2023101.pdf</u>.
- Humm Patnode, A., Gibbons, K., & Edmunds, R. R. (2018) Attendance and Chronic Absenteeism: Literature Review. University of Minnesota, College of Education and Human Development, Center for Applied Research and Educational Improvement. <u>http://www.floridarti.usf.edu/ resources/format/pdf/Chronic%20Absenteeism%20Lit%20Review%202018.pdf</u>.
- Kearney, M. & Levine, P. (2023). U.S. births are down again, after the COVID baby bust and rebound. Brookings Institution. <u>https://www.brookings.edu/articles/us-births-are-down-again-after-the-covid-baby-bust-and-rebound/</u>.
- Klein-Collins, R., Taylor, J., Bishop, C., Bransberger, P., Lane, P. & Leibrandt, S. (2020). *The PLA boost: Results from a 72-institution targeted study of prior learning assessment and adult student outcomes*. Council for Adult and Experiential Learning and the Western Interstate Commission for Higher Education, <u>https://www.wiche.edu/wp-content/uploads/2020/10/</u> <u>PLA-Boost-Report-CAEL-WICHE-Revised-Dec-2020.pdf</u>.
- Levin, H. M. & Garcia, E. (2013). *Benefit-cost analysis of Accelerated Study in Associate Programs* (ASAP) of the City University of New York. Center for Benefit-Cost Studies in Education, Teachers College, Columbia University. <u>https://www.nyc.gov/assets/opportunity/pdf/</u> Levin\_ASAP\_Benefit\_Cost\_Report\_FINAL\_05212013.pdf.

- Lewis, K. & Kuhfeld, M. (2024). Recovery still elusive: 2023-24 student achievement highlights persistent achievement gaps and a long road ahead. Northwest Evaluation Association. <u>https://www.nwea.org/uploads/recovery-still-elusive-2023-24-student-achievement-highlights-persistent-achievement-gaps-and-a-long-road-ahead\_NWEA\_researchBrief.pdf</u>.
- Ma, J, Pender, M., & Oster, M. (2024). *Trends in college pricing and student aid 2024*, College Board. <u>https://research.collegeboard.org/media/pdf/Trends-in-College-Pricing-and-</u> <u>Student-Aid-2024-ADA.pdf</u>
- Magesh, S., John, D., Li, W., Li, Y., Mattingly-App, A., Jain, S., Chang, E. & Ongkeko, W. M. (2021). Disparities in COVID-19 outcomes by race, ethnicity, and socioeconomic status: a systematic review and meta-analysis. *Journal of the American Medical Association, 4*(11). https://jamanetwork.com/journals/jamanetworkopen/article-abstract/2785980.
- Meckler, L. & Lumpkin, L. (2024). Four years after COVID, many students still losing ground. *The Washington Post*. <u>https://www.washingtonpost.com/education/2024/07/23/covid-test-scores-learning-loss-absenteeism/</u>.
- National Center for Education Statistics. (2008). *Digest of Education Statistics, 2007,* Table 191. U.S. Department of Education. <u>https://nces.ed.gov/programs/digest/d07/tables/dt07\_191.</u> <u>asp</u>.
- National Center for Education Statistics. (2024). *Digest of education statistics, 2023, table 219.46*. U.S. Department of Education. <u>https://nces.ed.gov/programs/digest/d23/tables/dt23\_219.46.asp</u>.
- National Center for Education Statistics. (2024). *Digest of education statistics, 2023, table 219.80*. U.S. Department of Education. <u>https://nces.ed.gov/programs/digest/d23/tables/dt23\_219.80.asp</u>.
- National Center for Education Statistics. (2024). *Digest of education statistics, 2023, table 302.10*. U.S. Department of Education. <u>https://nces.ed.gov/programs/digest/d19/tables/dt19\_302.10.asp</u>.
- National Center for Education Statistics. (2024). *Digest of education statistics, 2023, table 303.10.* <u>https://nces.ed.gov/programs/digest/d23/tables/dt23\_303.10.asp</u>.
- National Center for Education Statistics. (2024). *Digest of education statistics, 2023, table 303.70*. U.S. Department of Education. <u>https://nces.ed.gov/programs/digest/d23/tables/dt23\_303.70.asp</u>.
- National Center for Education Statistics. (2024). *Private school universe survey*. U.S. Department of Education, <u>https://nces.ed.gov/surveys/pss/</u>.

86

- National Center for Education Statistics. (2024). *School pulse panel*. U.S. Department of Education. <u>https://nces.ed.gov/surveys/spp/results.asp</u>.
- National Center for Education Statistics. (n.d.). *Integrated Postsecondary Education Data System (IPEDS), fall enrollment survey*. U.S. Department of Education. <u>https://nces.ed.gov/ipeds/use-the-data#SurveyData</u>.

- National Center for Education Statistics. (n.d.). *Trends in high school dropout and completion rates in the United States, indicator 4: Adjusted cohort graduation rate*. U.S. Department of Education. <u>https://nces.ed.gov/programs/dropout/ind\_04.asp</u>.
- National Skills Coalition. (2021). *Bill creates funding for benefit navigators at all Oregon public community colleges and universities*. <u>https://nationalskillscoalition.org/news/press-releases/bill-creates-funding-for-benefit-navigators-at-all-oregon-public-community-colleges-and-universities/</u>.
- National Student Clearinghouse Research Center. (2024). *Current term enrollment estimates: Spring 2024*. National Student Clearinghouse. <u>https://nscresearchcenter.org/current-term-enrollment-estimates/</u>.
- Odle, T. & Delaney, J. (2022). You are admitted! Early evidence on enrollment from Idaho's direct admissions system. *Research in Higher Education, 63*(6), 899-932. <u>http://dx.doi.org/10.1007/s11162-022-09675-x</u>.
- Office of Management and Budget. (2024). *Statistical Policy Directive 15*. Federal Register. <u>https://www.federalregister.gov/documents/2024/03/29/2024-06469/revisions-to-ombs-</u> <u>statistical-policy-directive-no-15-standards-for-maintaining-collecting-and</u>.
- Plumb, M. H. (2024). *Connecting college students with public benefit programs*. Trellis Strategies. <u>https://www.trellisstrategies.org/wp-content/uploads/2024/03/Toolkit\_PublicBenefitsPrograms.pdf</u>.
- Reeves, R. & Kalkat, S. (2023). *Racial disparities in the high school graduation gender gap*. Brookings Institution. <u>https://www.brookings.edu/articles/racial-disparities-in-the-high-school-graduation-gender-gap/</u>.
- Rosowsky, D. (2024). The cliffs of higher ed: Who's going over and why? *Forbes*. <u>https://www.forbes.com/sites/davidrosowsky/2024/02/03/the-cliffs-of-higher-ed-whos-going-over-and-why/</u>.
- Scrivener, S., Weiss, M. J., Ratledge, A., Rudd, T., Sommo, C., & Fresques, H. (2015). *Doubling* graduation rates: Three-year effects of CUNY's Accelerated Study in Associate Programs (ASAP) for developmental education students. MDRC. <u>https://www.mdrc.org/sites/default/files/</u> <u>doubling\_graduation\_rates\_fr.pdf</u>.
- Sempeles, E. & Cui, J. (2024). *Parent and family involvement in education: 2023*. U.S. Department of Education. <u>https://nces.ed.gov/pubs2024/2024113.pdf</u>.
- Shen-Berro, J. (2023). Dropout rates have ticked up in some states: How big is the problem? *Chalkbeat*. <u>https://www.chalkbeat.org/2023/3/13/23634232/dropout-rates-high-school-student-pandemic-graduation</u>/.
- Streeter, M. & Thompson, J. (2019). *Better together: How a reimagined federal-state partnership to fund public higher ed could help bring college within reach for all*. The Institute for College Access and Success. <u>https://ticas.org/wp-content/uploads/2019/10/Better-Together.pdf</u>.

- Syverson E. & Duncombe, C. (2022). *Student counts in K-12 funding models*. Education Commission of the States. <u>https://www.ecs.org/wp-content/uploads/Student-Counts-in-K-12-Funding-Models.pdf</u>.
- Today's Students Coalition. (n.d.). *Putting the basic needs of today's students on the map: A landscape analysis of policies and strategies across 37 states*. <u>https://todaysstudents.org/wp-content/uploads/Basic-Needs-State-Policy-Landscape-Analysis.pdf</u>.
- U.S. Bureau of Labor Statistics. (2024). 61.4 percent of recent high school graduates enrolled in college in October 2023. *The Economics Daily*. <u>https://www.bls.gov/opub/ted/2024/61-4-percent-of-recent-high-school-graduates-enrolled-in-college-in-october-2023.htm</u>.
- U.S. Census Bureau. (2024). *Percent change in county population: July 1, 2022, to July 1, 2023.* <u>https://www.census.gov/library/visualizations/2024/comm/percent-change-county-population.html</u>.
- Vandenbroucke, G. (2023). *The return on investing in a college education*. Federal Reserve Bank of St. Louis. <u>https://www.stlouisfed.org/publications/regional-economist/2023/mar/return-investing-college-education</u>.
- Watson, A. R. (2024). Homeschool growth: 2023-2024. Johns Hopkins School of Education, Institute for Education Policy. <u>https://education.jhu.edu/edpolicy/policy-research-initiatives/homeschool-hub/homeschool-growth-2023-2024</u>/.
- Western Interstate Commission for Higher Education. (1998). *Knocking at the College Door*. <u>https://www.wiche.edu/resources/knocking-at-the-college-door-1998/</u>.
- Western Interstate Commission for Higher Education. (2012). *Knocking at the College Door: methodology Review*. <u>https://www.wiche.edu/wp-content/uploads/2018/10/methodology</u>. <u>pdf</u>.
- Western Interstate Commission for Higher Education. (2024). *Tuition and fees in the West*. <u>https://www.wiche.edu/policy-research-/data-resources/tuition-fees/</u>.
- Wilson, S. (2023). Many Colorado families stick with homeschooling in wake of pandemic," *Colorado Newsline*, <u>https://coloradonewsline.com/2023/10/23/colorado-home-schooling-wake-of-pandemic/</u>.
- Zajacova, A. & Lawrence, E. M. (2018). The relationship between education and health: reducing disparities through a contextual approach. *Annual Review of Public Health, 39*(1), 273-289. <u>https://www.annualreviews.org/docserver/fulltext/publhealth/39/1/annurevpublhealth-031816-044628.pdf</u>.