

**KNOCKING**  
AT THE COLLEGE DOOR

**WICHE**  
Western Interstate Commission for Higher Education



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# WICHE INSIGHTS

Navigating Learning Loss and  
Changing Demographics in Education

Postsecondary education leaders are eager for reliable data to strategically plan for the next year through the next decade, and [WICHE's projections](#) of high school graduates are among the most relied upon sources. In December 2020, WICHE released the 10th edition of *Knocking at the College Door*, expecting that the projected trends of declining and diversifying high school classes were likely to remain relatively stable despite the COVID-19 pandemic because they reflect fundamental population changes that had been developing for years.

WICHE continues to monitor available data as it anticipates the next edition of high school graduate projections to be published later this year. Youth population demographics, such as the number of children and their racial, ethnic, and family backgrounds, remain the primary quantitative predictors of high school graduate numbers. Therefore, K-12 student counts continue to be the primary related data points.

As WICHE has [reported](#) several times since the pandemic began, the disruption to student populations was illustrated with the shift of students previously enrolled in public education to other learning environments.<sup>1</sup> Now, four years later, evidence is amassing that other previously stable factors, such as average annual learning patterns and where families enroll their students, have become less predictable for education, as well as workforce pipeline planning.

With this brief, WICHE reviews how the evident K-12 learning impacts might affect projections of high school graduates. Even if enrollments appear to stabilize after pandemic lows, declines in elementary and secondary school learning and proficiency may present additional future challenges for postsecondary education.

**Learning disruption since the pandemic may have affected enough children and teens that a quantitative impact on high school graduation is plausible.** If so, it would be on top of the previously projected declines in the number of high school graduates — and the postsecondary enrollment declines it will bring to some sectors. In addition, youth who do persist and enter college may need academic accommodations for pandemic learning impacts.

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## Months to years of learning drops compared to pre-pandemic levels

Emerging reports continue to describe the depth of COVID-19's academic impacts among K-12 populations. Study and data points vary, but standardized tests that allow comparison between pre-pandemic school years and those since school year 2019-20 indicate that, on average, students are less proficient, or less likely to perform at grade level, in each of the school years since 2019-20. In some cases, standardized tests point to an accumulation of lost proficiency, as less proficiency in a previous grade may impact learning acquisition in the next grade level.

Many common data points measure proficiency of elementary and middle school students, including the key milestone Grades 3 and 8; other data points, such as the ACT and SAT high school assessments, measure proficiency at the high school level and college readiness. See Table 1.

**Table 1. Common K-12 Learning Assessments**

ASSESSMENT	DETAILS
<a href="#">National Assessment of Educational Progress</a> (NAEP)	Reading, writing, mathematics, science, and civics administered to students in public, private, and charter schools at Grades 4 and 8 annually; and for other subjects and other student ages intermittently. Results reported for public school students for the nation, states, and participating districts; for private school students at the national level only.
<a href="#">MAP Suite of Assessments</a> (NWEA)	Assessments from NWEA for schools and educators to measure achievement and growth in K-12 math, reading, language usage, and science.
<a href="#">Program for International Student Assessment</a> (Organization for Economic Cooperation and Development)	An international study administered since 2000 in over 70 countries and economies to assess how well students, at the end of compulsory education, can apply their knowledge to real-life situations and can therefore fully participate in society. Every three years, a randomly selected group of 15-year-olds take tests in key subjects (reading, mathematics, and science) with focus given to one subject in each year of assessment.
Other assessment tools: <a href="#">i-Ready</a> (Curriculum Associates) and <a href="#">Star</a> (Renaissance)	i-Ready assessments taken by more than 11 million students across the country, focus on “grade-level” skills. In each school year, the sample for the Star assessments includes about 3 million records for Star Early Literacy, 18 million records for Star Reading, and 15 million records for Star Math.
Preliminary SAT/National Merit Scholarship Qualifying Test (PSAT/NMSQT) and <a href="#">SAT Suite of Assessments</a> (College Board)	Tests available for eighth to 12th graders, measuring skills and knowledge in Reading, Writing and Language, and Math in ways that make sense for different grade level, leading to the SAT college entrance exam for 11th and 12th graders.
<a href="#">ACT</a>	College admissions test, measuring academic readiness for college in English, mathematics, reading, and science.
<a href="#">School Pulse Panel</a> (U.S. Department of Education)	A study collecting information on the impact of the COVID-19 pandemic from a national sample of elementary, middle, high, and combined-grade public schools. Some survey questions are asked repeatedly to observe trends over time, such as in learning mode, school quarantine, and learning recovery, while others examine unique topics in a single month.

The available data allow comparison among the following school years: 2018-19 (pre-pandemic), 2019-20 (partially pre-pandemic and partially impacted by the pandemic), 2020-21 (extensively remote and hybrid learning), 2021-22 (partial return to in-person learning), and 2022-23 (primarily in-person learning resumes).

The National Assessment of Educational Progress (NAEP) [results for 13-year-olds](#) indicate ongoing learning loss, through spring 2023. In Figure 1, the long term NAEP results in mathematics and reading for school year 2022-23 are compared to those results from 2019–20.<sup>2</sup>

The average scores for 13-year-olds declined 9 points in mathematics and 4 points in reading, compared to the 2019–20 school year. Results for lower-performing students saw larger declines, particularly in mathematics (in Figure 1, each band shows the relative score levels in quintile terms).

**Figure 1. National Assessment of Educational Progress (NAEP), 2020 and 2023 Long-Term Trend Assessments, 13-Year-Olds**

PERCENTILE	SCALED SCORES IN MATHEMATICS			SCALED SCORES IN READING		
	2020	2023	2023 DECREASE	2020	2023	2023 DECREASE
90th percentile	329	322	⬇ 6	308	305	⬇ 3
75th percentile	307	301	⬇ 6	287	283	⬇ 4
50th percentile	282	274	⬇ 8	262	258	⬇ 4
25th percentile	255	244	⬇ 12	236	231	⬇ 6
10th percentile	228	213	⬇ 14	209	202	⬇ 7

Source: Adapted from data available from the U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics. National Assessment of Educational Progress (NAEP), 2020 and 2023 Long-Term Trend Assessments. <https://nces.ed.gov/nationsreportcard/data/>. Notes: Score differences for each percentile are statistically significant (p < .05) from 2023.

Compared to a decade ago, NAEP average mathematics scores in the 2022-23 school year declined 7 points in reading and 14 points in mathematics. Results from the [Program for International Student Assessment \(PISA\)](#) also indicated similar patterns of math proficiency decline with U.S. 15-year-olds in 2022.<sup>3</sup> (Other results from NAEP show declines in [eighth grade civics](#) that began before and deepened with the 2021-22 school year.)<sup>4</sup>

NAEP tests 12th graders, but not as often as students in Grades 4 and 8. The latest available data for 12th graders is for school year 2019-20. In this last pre-pandemic year, 12th graders had the same math assessment composite score as 12th graders in 2005 (after some score increases between 2005 and 2020). Similarly, 12th graders’ reading scores were the same in 2019 as in 2005, both being below scores in 1998. Most recent [SAT and PSAT results](#) do indicate [some learning loss](#) among high schoolers (many of whom were middle schoolers or just starting high school during the height of the pandemic).<sup>5</sup>

The commonly used MAP Growth assessments also show students are making learning gains at rates below pre-pandemic trends, compared with data on academic growth from three years before the pandemic (spring 2023 undid some apparent turnaround from [spring 2022 results](#)). In practical terms, researchers estimate students will need interventions and support equivalent to 4.1 months of additional schooling in reading and 4.5 months in math. Middle schoolers will need the equivalent of an extra 9.1 months of learning in math and 7.4 months in reading to catch up to pre-COVID average annual rates of learning.<sup>6</sup>

Only third graders showed positive results in the spring 2023 MAP findings. The declines from pre-pandemic average learning were across the board, but the problem is pronounced for historically underserved students such as students of color and lower-income students. [Results](#) from two other assessment products, [i-Ready](#) and Star, similarly find that students remain behind and provide additional detail about nuances in learning loss by grade level.<sup>7</sup>

And results from a [survey of schools](#) administered by the U.S. Department of Education since the beginning of the pandemic indicate that learning impacts are still observable, with about 44% of public school students starting the 2023–24 school year behind grade level in at least one subject (lower than in the two previous school years). Virtually all the schools that reported students were behind academically, reported that students were behind in English/language arts and mathematics.<sup>8</sup>

It is important to note, however, that learning [proficiency declines](#) had already preceded the pandemic; it appears that the pandemic-related disruptions then deepened and amplified these existing declines.<sup>9</sup>

## Reasons behind lingering learning loss

School districts across the country have enacted [initiatives](#) to [address](#) the pandemic impacts, supported by billions in Elementary and Secondary School Emergency Relief (ESSER) funding (with an approaching spending deadline of September 2024). To make up for lost ground, students would have to learn more in given school years than they typically do.<sup>10</sup>

Recovery efforts need to be substantial to address the scale of the lost learning, and districts have [responded](#) despite the relatively short timeframe and headwinds from many challenges.<sup>11</sup> Emerging [data](#) about the most recent school year reflect some [upticks](#) and promising [bright spots](#), but not enough to offset losses due to the pandemic.<sup>12</sup>

Research suggests the need for broader approaches. K-12 schools and districts are up against [chronic absenteeism](#) and [decreased attendance](#) amplified by ongoing bus transportation issues, teacher fatigue and shortages and related [instructional challenges](#), and a youth [mental health](#) crisis.<sup>13</sup> In September 2023, even the [White House Council on Economic Advisors](#) called attention to absenteeism and its possible contribution to learning loss.<sup>14</sup>

## Possible impacts for high school graduate trends

### SHORT TERM

Unresolved learning impacts for current 11th and 12th graders could impede their graduation and potentially decrease college preparation, [advanced course taking](#) and postsecondary aspirations.<sup>15</sup> These high schoolers drive the predicted and hoped-for high points in U.S. high school graduate numbers in the Classes of 2024 and 2025.



In addition to the learning impacts documented by assessment, recent and emerging graduates also likely experienced learning loss that is not as well documented. For example, states understandably [relaxed standards](#) during the pandemic, including graduation requirements.<sup>16</sup> But that means that some students who graduated high school may be less ready for [postsecondary](#) studies than pre-pandemic students were, impacts may be seen in the [workforce](#), and some have [projected](#) long-term economic impacts.<sup>17</sup>

### **MEDIUM TERM**

The sobering data about 8th graders from the last several years describe possible ongoing struggles as these students became rising 9th and 10th graders in fall 2023. This could presage difficulties staying on pace with high school learning and credit requirements, and possible instability in the size of the 2026 to 2028 high school graduating classes (and beyond) and potential postsecondary populations — beyond the downturns already predicted by demographics.

### **LONG TERM**

It is too soon to predict how learning impacts among elementary students could impact the high school graduate pipeline. Although, time unfolds quickly, as some third graders impacted by the pandemic in 2020 are now entering middle school.

What about students not attending public schools? It is difficult to pinpoint exactly what portion of youth are now homeschooling or attending [private school](#), but there have been historically steep increases in recent years and more states are expanding the options for school choice.<sup>18</sup> This dispersion across learning environments may, in fact, lead to better outcomes if students receive learning suited to their needs. But it is hard to know how the high school graduate pipeline may differ because of these shifts from public to non-public school choices, as there is typically much less data about students outside of public schools.

The overwhelming trends from the data suggest that postsecondary institutions should expect that all range of students' learning has been impacted. Overall, students from historically underserved communities may arrive to campus with the most noticeable proficiency impacts (and greatest need for support).<sup>19</sup> But even well-prepared students with ample resources may arrive to campus with needs for academic assistance beyond what is typical historically.

Consider also that the pandemic not only impacted academic progress, it amplified youth mental health challenges. Together and independently, these could have wide-ranging impacts, not the least of which are reduced proficiency. Now several years into the struggle, students could be experiencing education “burnout.”

Finally, the steeper impacts among lower-income and other traditionally underserved populations could run counter to emerging efforts to diversify workforce pipelines, such as education, health care, and technology.

## What can be done?

Immediate and ongoing action is needed, given the lingering pandemic impacts and the approaching substantial demographic shift, among other pressing factors.<sup>20</sup> The last several years brought different postsecondary education patterns among young adults who experienced high school during the pandemic — not to mention other social-economic events and pressures over these years.

According to recent estimates, undergraduate enrollment grew for the first time since the pandemic in fall 2023, but not necessarily according to typical pre-pandemic patterns.<sup>21</sup> Gains were influenced by dual enrolled high school students and shorter-term programs, while enrollment among first-year students and bachelor's programs dampened. And the news about Class of 2020 college-going highlights the sobering possibility that young adults maturing during the pandemic may altogether skip college.<sup>22</sup>

Postsecondary institutions, systems, and states are understandably focused on recent sheer enrollment impacts and those to come. What can they do to respond to the possible further impacts that learning loss might bring for postsecondary students populations?

**Be informed.** Seek out more robust detail for your local area, including state, district and school assessment results and college-going information, overall and for different student populations who are key to your demographics.<sup>23</sup> Importantly, states and institutions could intentionally communicate with families, schools and districts how they are preparing to meet and support students “where they are,” including at possibly lower levels of readiness. This might include outreach beyond high school juniors and seniors, even down to middle schoolers, and seeking to solicit input about readiness challenges. Other informative resources include:

- ▶ American Council on Education’s dotEDU [Partnering to Solve Pandemic Learning Loss](#) podcast
- ▶ FutureU podcasts [Will the Teens Be OK?](#) and [Will the Kids be OK?](#)
- ▶ FutureEd webinar [State Policy Solutions for Reducing Student Absenteeism](#) (see also the attendance [playbook](#) and [implementation guide](#)).

**Get involved.** Support K-12 schools and districts by providing tutoring to alleviate

learning impacts.<sup>24</sup> Within their own settings, postsecondary might also:

**Assess and, if needed, adjust.** Evaluate recruitment, admissions, scholarship and aid, enrollment and [program](#) pathway criteria and processes in light of the learning and proficiency impacts, and with a recognition that the student populations who are historically more disadvantaged also experienced some of the greatest pandemic learning impacts.<sup>25</sup> Also, it may be particularly beneficial considering the current math proficiency impacts, to leverage, elevate, and escalate reforms that may already be underway in college curriculum and programming.<sup>27</sup>

**Provide support** to current pandemic-impacted postsecondary students, and those to come, who may need additional academic or other supports.<sup>26</sup>

**Consider homeschooled students.** Given the K-12 enrollment shifts to homeschooling, postsecondary institutions should also be aware of how to identify, recruit and assess homeschooled learners, and meet their unique expectations or needs.

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