



Effects of the COVID-19 Pandemic on Student Attendance, Grades, Grade Retention, and Suspensions in North Carolina through the 2021-22 School Year

Introduction

Evidence of the negative effects of the COVID-19 pandemic on student outcomes, particularly test scores, has been documented nationwide. Prior work from the Education Policy Initiative at Carolina (EPIC) also shows widespread negative effects on attendance, test scores, and grade retention in the 2020-21 school year.¹

The purpose of this brief is to provide updated statewide descriptive data on the impacts of the COVID-19 pandemic on student outcomes into the 2021-22 school year. In particular, we will answer the following research questions:

- (1) How has student attendance changed from pre-pandemic through the 2021-22 school year?
- (2) How have course grades changed from pre-pandemic through the 2021-22 school year?
- (3) How has grade retention changed from pre-pandemic through the 2021-22 school year?
- (4) How have suspensions changed from pre-pandemic through the 2021-22 school year?

These updated descriptive data on student outcomes will help policymakers and researchers as they continue to seek to understand the impacts of the pandemic. In particular, by extending our focus to outcomes beyond test scores, this work helps to provide a more nuanced understanding of how the impacts of the pandemic are fading or persisting in distinct ways across different outcomes.

Background

This brief draws on longitudinal student level data provided by the North Carolina Department of Public Instruction (NCDPI). These data include all students enrolled in traditional public schools and charter schools in North Carolina from the 2017-18 to 2021-22 school years.²

Using these data, we examine seven outcome measures—two measures of attendance, three measures of course grades, a measure of grade retention, and a measure of student suspensions. For attendance, we examine 1) the total number of days absent for each student during a given school year and 2) an indicator for chronic absenteeism, which is defined as being absent for 10 percent or more of the total days in membership in NC public schools. For course grades, we measure 1) letter grades at the course level, 2) average grades in quality points³ for a given school year at the student level, and 3) a student level indicator for failing at least one course in a given school year.⁴ We measure grade retention as an indicator for whether a student is recorded as enrolled in NC public schools in the same grade level in the subsequent school year.⁵ For suspensions, we create an indicator for whether a student received at least one day of out-of-school suspension in a given year as a result of a disciplinary incident.

In the remainder of the brief, we examine these measures in a variety of ways including looking at averages over time by school level—elementary (K-5), middle (6-8), and high (9-13)⁶—and examining the distribution of outcomes over time.

¹ For our prior work on this topic, see: <https://epic.unc.edu/wp-content/uploads/sites/1268/2022/12/Effect-of-the-COVID-19-Pandemic-on-Student-Absences-Grades-and-Grade-Retention.pdf>

² Although we present data for the 2019-20 school year, we acknowledge that measurement in that school year may have been affected by the COVID-19 emergency and unplanned school closures.

³ Grades are converted to quality points with an F equal to 0 points, a D equal to 1 point, a C equal to 2 points, a B equal to 3 points, and an A equal to 4 points. All grades for a particular student in a given school year are averaged to create a measure of average grades.

⁴ Course grade measures are only available for middle and high school students (grades 6-12).

⁵ Grade retention is not calculated for 12th grade students as these students are expected to graduate rather than progress to the next grade.

⁶ Early college high schools in North Carolina follow a five year high school program with some students enrolled in grade 13.

How has student attendance changed from pre-pandemic through the 2021–22 school year?

Figure 1 shows the average days absent for students at each school level from the 2017–18 to 2021–22 school years. Elementary students (left) were absent an average of 8 days each year in the two pre-pandemic years, which decreased slightly to 6 days absent on average in 2019–20, likely due to a lack of attendance requirements and tracking during the final three months of the 2019–20 school year. In 2020–21, elementary schoolers were absent an average of 12 days, which increased to an average of 13 days in the 2021–22 school year.

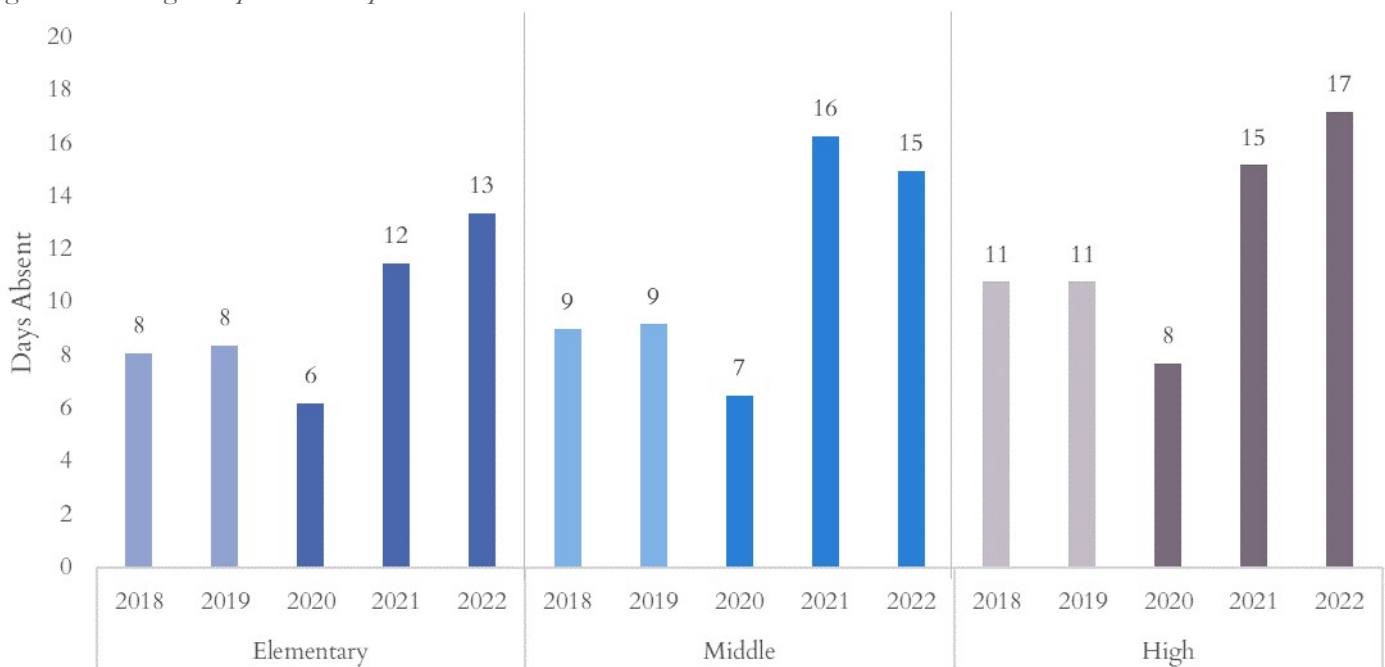
Middle schoolers (center) followed a similar pattern, with an average of 9 days absent in the two pre-pandemic years followed by a small reduction in absences (an average of 7 days absent) in 2019–20 and then an increase in absences for the two pandemic years. For middle schoolers, however, the increase in average days absent was much larger—an

increase of 7 days, on average, from pre-pandemic in 2020–21 compared to an increase of 4 days for elementary students in the same year. Also, unlike elementary schoolers, absences among middle schoolers did not increase from 2020–21 to 2021–22.

High schoolers (right) had the highest level of average days absent—11 days—pre-pandemic, but followed a similar pattern of decreasing then increasing. In 2020–21, high schoolers were absent an average of 15 days. Like elementary schoolers, high schoolers saw further increases in average days absent in 2021–22—to 17 days absent on average.

The continued high average days absent compared to pre-pandemic norms and, in particular, the continued increases among elementary and high schoolers are cause for concern for policymakers and practitioners. At a time when many students are behind in their learning due to the effects of the pandemic, losing further time in school is likely to be detrimental to efforts towards recovery.

Figure 1: Average Days Absent by School Level Pre- and Post-Pandemic



Note: This figure displays the average number of days absent for students at each school level for each school year from 2017–18 to 2021–22.

Figure 2 (next page) provides further detail on how the number of days absent has changed at different points in the full distribution of students. In particular, Figure 2 shows the number of days absent for students at the 25th, 50th, 75th, and 90th percentiles for each school year from 2017–18 to 2021–22. These data points show that the number of days absent at all points in the distribution fell in the 2019–20 school year, when attendance was measured for fewer days. In the 2020–21 and 2021–22 school years, the patterns for students at the top of the absences distribu-

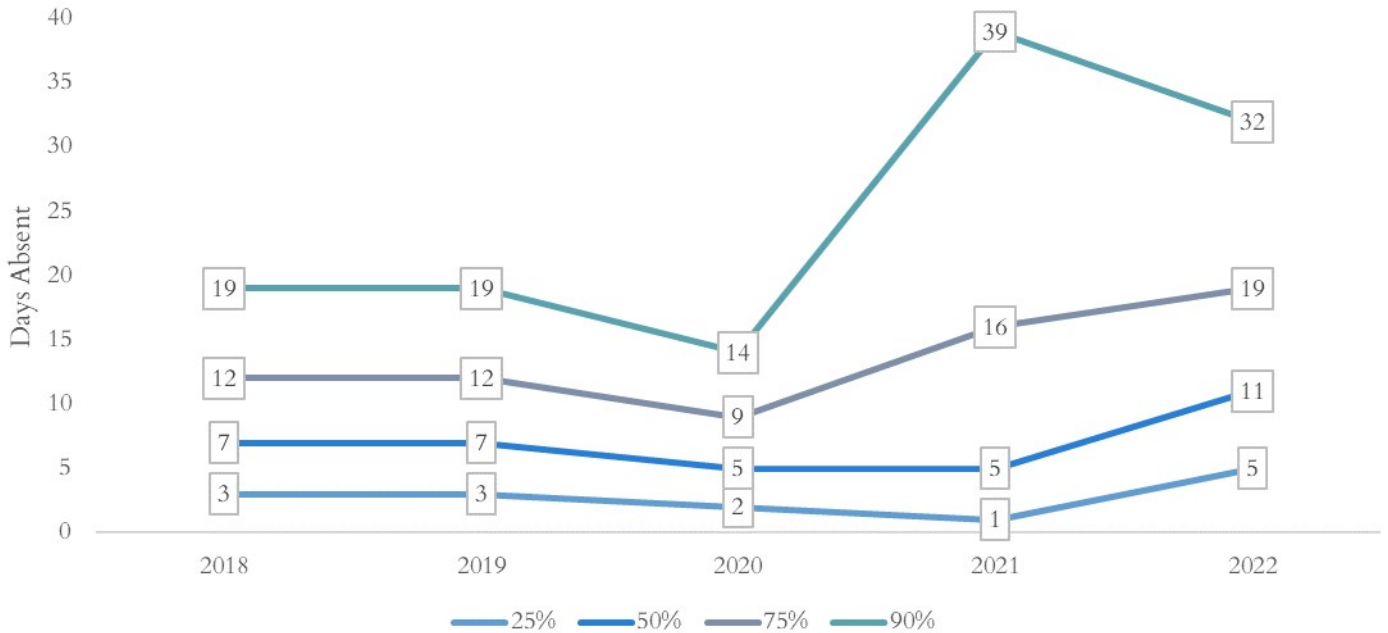
tion—i.e. those with the most absences—diverged from their peers. In 2020–21, students at the 25th and 50th percentiles had about the same number of absences as in prior years, but students at the 75th and 90th percentiles were absent many more days. In 2021–22, however, students at the 25th, 50th, and 75th percentiles all saw increases in the number of days that they were absent from school. Students with the most absences—those at the 90th percentile—actually decreased in the number of days that they were absent from school. These differences likely speak to

important differences in the mechanisms influencing days absent from school in 2020–21, when many schools were remote or hybrid, and in 2021–22, when nearly all schools were in person. For example, students in remote schooling may miss days due to internet interruptions while students in person may be absent due to illness or quarantine.

Figure 3 displays the percent of students at each school

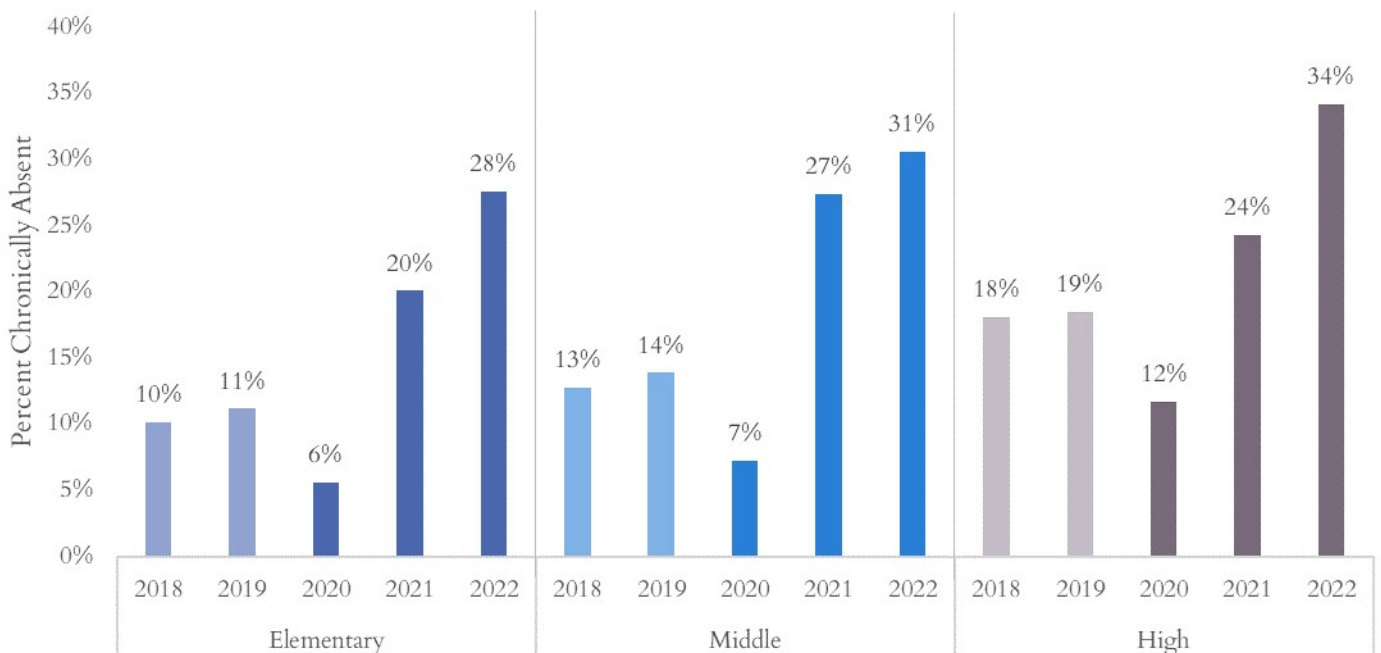
level who were chronically absent—missing at least 10 percent of days—from the 2017–18 to 2021–22 school years. Following the same pattern as days absent, chronic absences fell in 2019–20 compared to prior years and then rose in 2020–21 and 2021–22. Unlike days absent, chronic absences continued to rise in 2021–22 for all school levels. Chronic absenteeism was highest in high school, but elementary schoolers saw the largest increase in chronic absenteeism.

Figure 2: Percentiles of Days Absent Over Time



Note: This figure displays the number of days absent for students at the 25th, 50th (median), 75th, and 90th percentiles during each school year from 2017–18 to 2021–22.

Figure 3: Percentage of Students Chronically Absent by School Level Pre- and Post- Pandemic



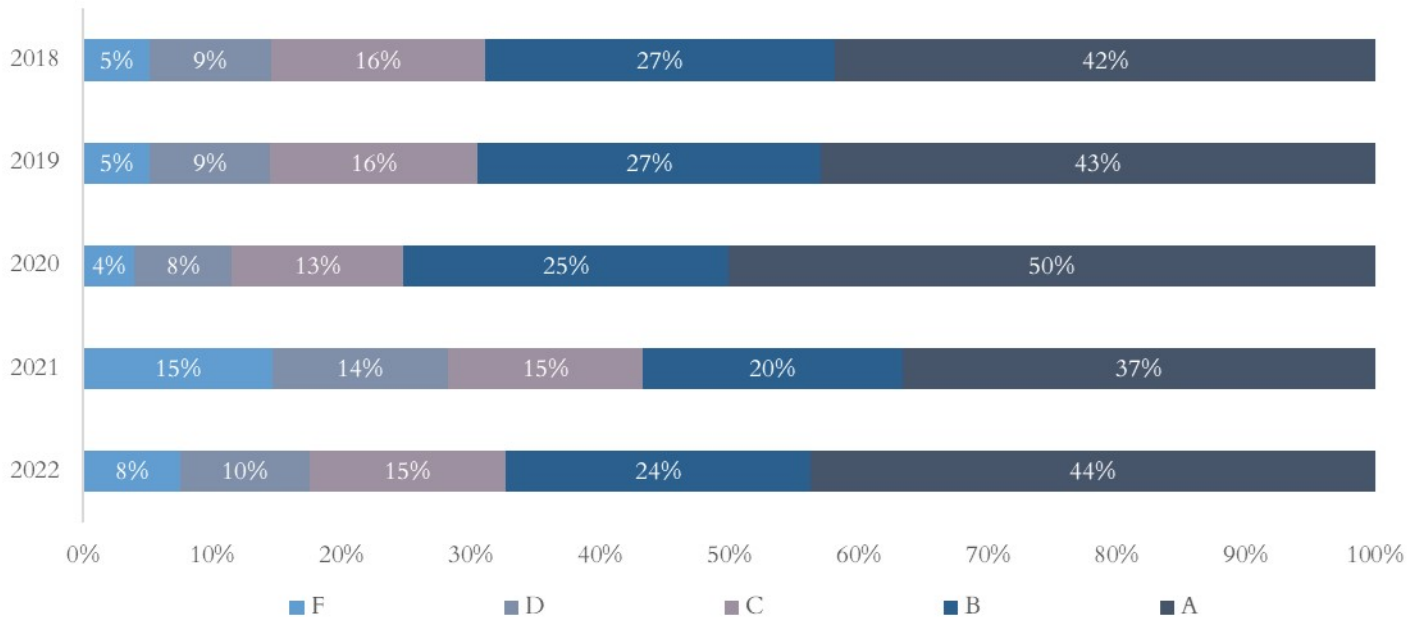
Note: This figure displays the percentage of students who were chronically absent (missing 10% or more days) at each school level for each school year from 2017–18 to 2021–22.

How have course grades changed from pre-pandemic through the 2021-22 school year?

Figure 4 displays the distribution of letter grades across all classes in middle and high school combined from 2017-18 (pre-pandemic) through 2021-22. In 2019-20, A grades made up half of all course grades—an increase of about 7 percentage points from pre-pandemic. All other letter grades were slightly less frequent in 2019-20 compared to pre-pandemic. This shift towards more A grades likely reflects lenient grading policies that were adopted following

the closure of schools in March 2020. In 2020-21, the frequency of F and D letter grades increased relative to earlier years, while the frequency of A and B grades fell. In particular, 15 percent of all course grades in 2020-21 were failing grades. In 2021-22, the frequency of F and D grades was reduced relative to the prior year, although both remained higher than pre-pandemic. These increases in very low course grades were driven by reductions in C and B grades, while the percentage of A grades was similar to pre-pandemic levels in 2021-22.

Figure 4: Distribution of Letter Grades Pre- and Post- Pandemic



Note: This figure shows the distribution of all course letter grades for middle and high school students in each school year from 2017-18 to 2021-22.

Figure 5 (next page) displays average grades at the student level, represented as quality points on a 0-4 scale, across all courses for middle and high schoolers in the 2017-18 to 2021-22 years. For middle schoolers (left), average grades increased by about a quarter of a letter grade in 2019-20 compared to 2018-19. In 2020-21, average grades for middle schoolers fell nearly two thirds of a letter grade compared to pre-pandemic. In 2021-22, average grades for middle schoolers rebounded to about a tenth of a letter grade below pre-pandemic averages.

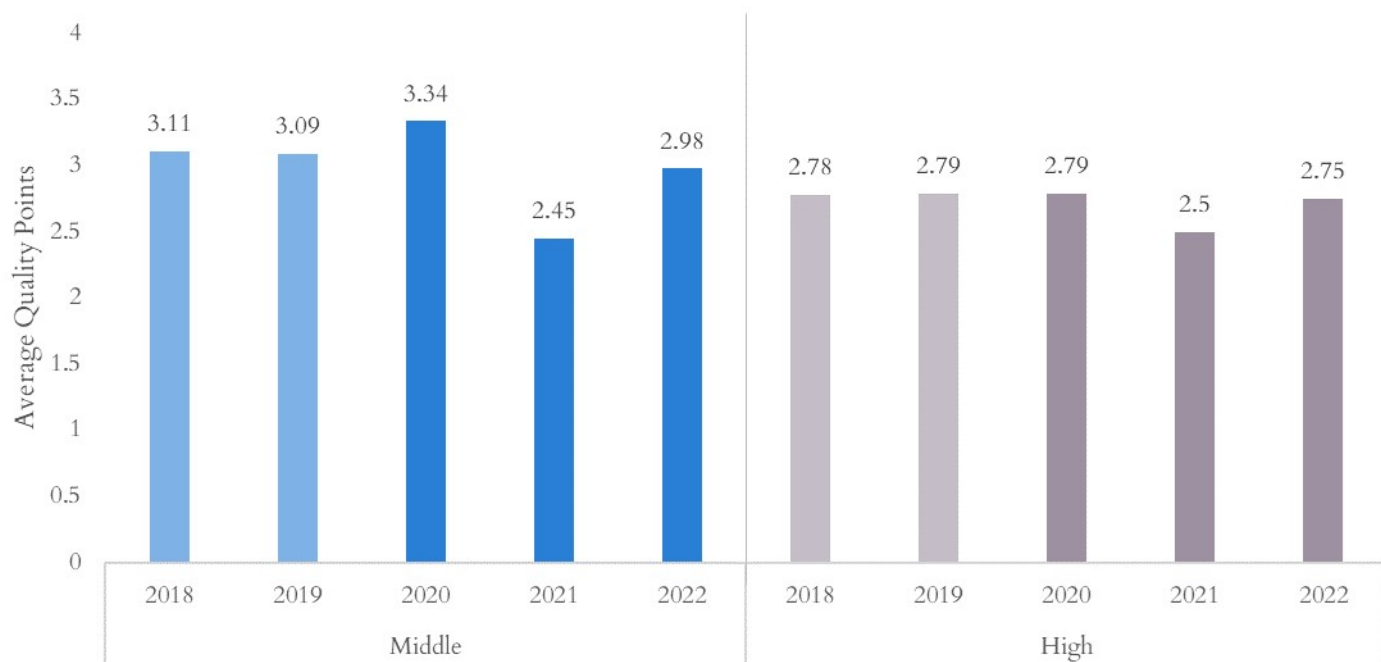
High schoolers (right) did not experience a change in average grades in 2019-20 following the school closures in the spring. Similar to middle schoolers, high schoolers in 2020-21 had lower average grades compared to pre-pandemic, but the decrease in grades was only about half as large as for middle schoolers. In 2021-22, average grades for high schoolers rose to nearly pre-pandemic levels.

Figure 6 (next page) displays the percentage of middle and

high school students who failed at least one class in a given school year from 2017-18 to 2021-22. Among middle schoolers (left) the percentage failing one or more courses fell to 5 percentage points—a third of pre-pandemic levels—in 2019-20 before rising to 40 percentage points—nearly triple pre-pandemic levels—in 2020-21. In 2021-22, the percentage of students failing at least one course remained elevated but was slightly more than half of the rate seen in 2021-22.

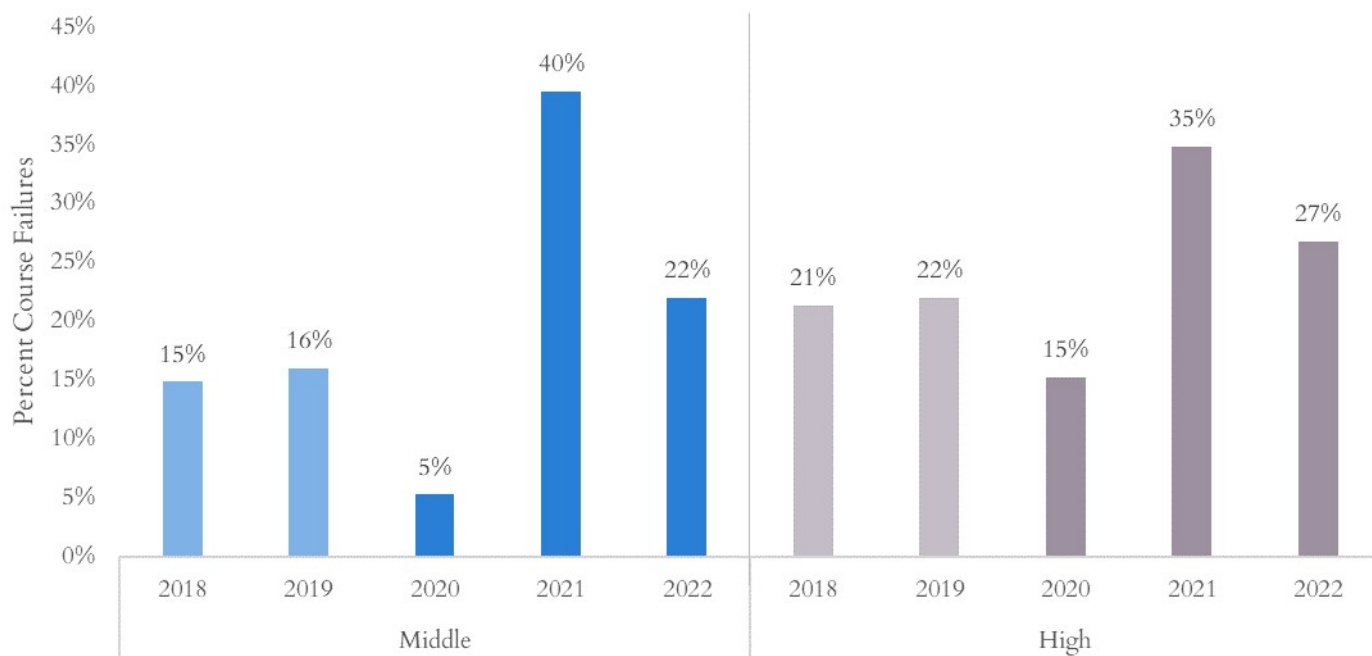
Rates of failures among high schoolers (right) followed the same overall pattern as among middle schoolers but with smaller increases and decreases. In 2019-20, rates of failing among high schoolers fell 7 percentage points in 2019-20 before increasing 20 percentage points to 35 percent in 2020-21—a 50 percent increase from pre-pandemic levels. In 2021-22, the percentage of students failing at least one course was lower than the prior year but remained 5 percentage points higher than 2018-19.

Figure 5: Average Quality Points by School Level Pre- and Post-Pandemic



Note: This figure shows the average grades—measured as quality points—for middle and high school students in each school year from 2017-18 to 2021-22.

Figure 6: Percentage of Students Failing Any Course by School Level Pre- and Post- Pandemic



Note: This figure displays the percentage of students who failed one or more courses at each school level for each school year from 2017-18 to 2021-22.

How has grade retention changed from pre-pandemic through the 2021-22 school year?

Figure 7 displays the percentage of students who were retained in grade as measured by enrollment in the same grade in the subsequent year. Percentages are displayed for each school level—elementary, middle, and high school—from 2017-18 to 2021-22. At all school levels, retention in grade fell slightly in the 2019-20 school year, likely as a result of more lenient grading and promotion policies adopted after school closures in the spring of 2020.

For elementary schoolers (left), grade retention was slightly elevated in 2020-21 and returned to pre-pandemic levels in

2021-22. For middle schoolers (center), grade retention in 2020-21 and 2021-22 was consistent with pre-pandemic levels.

Compared to pre-pandemic, high schoolers (right) saw elevated levels of grade retention in 2020-21 and 2021-22. In 2020-21, grade retention doubled from pre-pandemic levels to 7.2 percent of students in grades 9-11. Grade retention remained elevated to 6.6 percent for high schoolers in 2021-22. This high level of retention in grade illustrates that high school students are not attaining the number of course credits needed to proceed to the next grade and are at risk of dropping out or not graduating on time.⁷

Figure 7: Percentage of Students Retained in Grade by School Level Pre- and Post- Pandemic



Note: This figure displays the percentage of students who were retained in the same grade at each school level for each school year from 2017-18 to 2021-22.

How have suspensions changed from pre-pandemic through the 2021-22 school year?

Figure 8 (next page) displays the percentage of students who were suspended out-of-school for at least one day in a given school year from 2017-18 to 2021-22. These data are displayed for each school level separately.

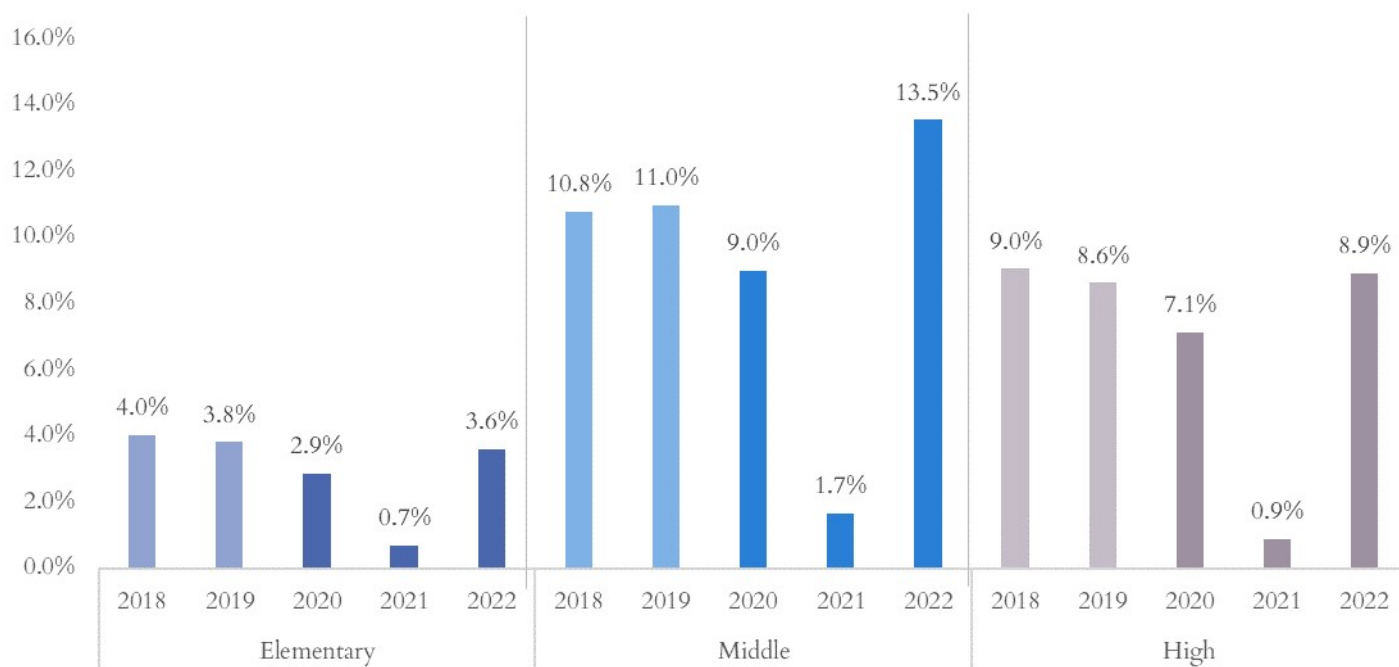
Across grade levels, the percentage of students who were suspended fell in 2019-20 compared to pre-pandemic norms. This reduction in suspensions likely represents the impact of fewer days in attendance in school in 2019-20. Further reflecting this relationship between remote schooling and reductions in suspensions, rates of suspension in the 2020-21 school year were very substantially reduced

from all prior school years. The highest suspension rate in this year—1.7 percent of middle schoolers—was less than a fifth of the pre-pandemic rate of suspensions.

In 2021-22, however, with nearly all students in person in, the percentages of students suspended correspondingly increased. For elementary and high schoolers, suspension rates were about the same as (high schoolers) or slightly reduced from (elementary schoolers) pre-pandemic level. For middle school students (center), suspension rates in 2021-22 were substantially higher, with 13.5 percent of students being suspended out-of-school at least once—an increase of approximately 2.5 percentage points from pre-pandemic.

⁷ Grade retention in high school is driven by acquisition of sufficient credits for promotion to the next grade.

Figure 8: Percentage of Students Suspended Out-of-school by School Level Pre- and Post-Pandemic



Note: This figure displays the percentage of students who were suspended out-of-school at least once at each school level for each school year from 2017-18 to 2021-22.

Discussion

This brief provides updated statewide descriptive data on student outcomes from pre-pandemic through the 2021-22 school year. We focus on four types of outcomes—attendance, course grades, grade retention, and suspensions. Several key findings emerge from our analyses.

First, across many of the outcomes we examined, middle schoolers experienced larger impacts of the pandemic. Middle schoolers had the largest increases in absences, the largest reductions in grades, and the only notable increases in suspension rates. These large impacts on middle schoolers suggest a need to focus on the specific challenges that students at this age and grade range are confronting in the wake of the pandemic.

Second, absences during the 2021-22 school year remained substantially higher than in prior years. Increases in days absent in 2020-21 were driven by large increases for a small number of students, while in 2021-22, students at most points in the distribution saw marked increases in the number of days absent. In addition, approximately a third of students were chronically absent in 2021-22.

These continued high rates of absenteeism threaten the ability of schools and districts to make up for lost opportunities to learn during the earlier years of the pandemic.

Finally, academic recovery may continue to be uneven. Average grades across all classes returned to near pre-pandemic levels, but the percentage of students failing at least one class remained higher than pre-pandemic. This suggests that some students are receiving higher grades than in pre-pandemic years while others are continuing to struggle. These struggling students also appear in the 6.6 percent of high schoolers who were retained in grade in 2021-22. Policymakers and practitioners should consider ways to pinpoint students still in need of additional supports and to target supports to meet their needs.

Overall, these analyses provide an important update to our knowledge of how students are faring across a range of outcomes during the pandemic. The results suggest that students are not fully back to normal and attention needs to remain on continuing to track their recovery and to provide supports that evolve with their needs.

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