

MONTGOMERY COUNTY PUBLIC SCHOOLS, ROCKVILLE, MARYLAND

**Measures of Academic Progress Growth Completion Time Analysis
School Year 2022–2023**

Prepared by
Michael Samuels, Ed.D.
Executive Summary

This analysis examined the average completion time of students on the Measures of Academic Progress (MAP) Growth assessments in reading and mathematics. The analysis focused on the percentage of students who completed the tests within defined time intervals. The data used for this exploration was obtained from the MAP fall and spring administrations of the 2022–2023 school year. The examination of the data for Kindergarten–Grade 5 showed that all grades, with the exception of Kindergarten, spent more time on the test in the spring than in the fall. However, for Grades 6–8, there was no significant difference in the completion time between those two periods for either of the tests. We found significant variability in the average time for Grades 3–5 in reading than in mathematics between fall and spring. This examination of completion times provides insight into the comparability of the average testing times for fall and spring, as well as any variability in the times that students in Kindergarten–Grade 8 took to complete each assessment.

Key findings were:

1. There was a significant increase in the average completion time for students in kindergarten–Grade 5 during the spring compared to the fall. However, for Grades 6–8, there was no significant difference in completion times between the two testing periods.
2. Grade 5 students consistently spent the most time on both reading and mathematics assessments, regardless of whether it was the fall or spring administration.
3. Between the fall and spring administration, a higher percentage of students took more than 60 minutes to complete the assessments. This was less significant for K–Grade 2 mathematics (MAP-M).
4. Over 90% of K–2 students completed the reading (MAP-R) and mathematics (MAP-M) tests within 60 minutes in both administrations of the tests.
5. The percentage of students in Grades 3–5 who took more than 60 minutes to complete the mathematics test showed a slight increase between the fall and spring.
6. There was relative consistency in the percentage of students in Grades 6 and 7 who completed the tests within 90 minutes.

Introduction

MAP Growth assessments in reading and mathematics are used by the district to monitor students' achievement and growth throughout the year. These tests are typically administered in fall, winter, and spring each year. Students in K–8 are required to take these tests in the fall and spring of each school year. The winter administration is optional for some grade levels and is determined locally by each school. The MAP Growth assessment is one of the components of the Evidence of Learning Framework.

In the 2017–2018 school year, MCPS examined the time to complete the MAP-R and the MAP-M assessments. The findings from this examination resulted in recommended test-taking times for these assessments as included in the MAP Testing Manual. The findings also revealed that there was no positive impact on performance beyond the recommended time outlined in the Testing Manual. The purpose of this analysis was to examine the average completion time of all students in the district. The data was obtained from the MAP Growth assessments administered in the fall and spring of the 2022-2023 school year. Further analysis was conducted on the percentage of students that completed the test in the following time intervals: 60 minutes or less, between 61 and 90 minutes, and more than 90 minutes. The analysis was done for MAP-R administered to students in Grades 3 to 8 and MAP-M administered to students in K to 8.

The following questions were explored:

1. What was the average time to complete the MAP Growth assessments in the fall and spring for students in the district?
2. What percent of students completed the assessments in 1) 60 minutes or less, 2) between 61 and 90 minutes, and 3) more than 90 minutes?

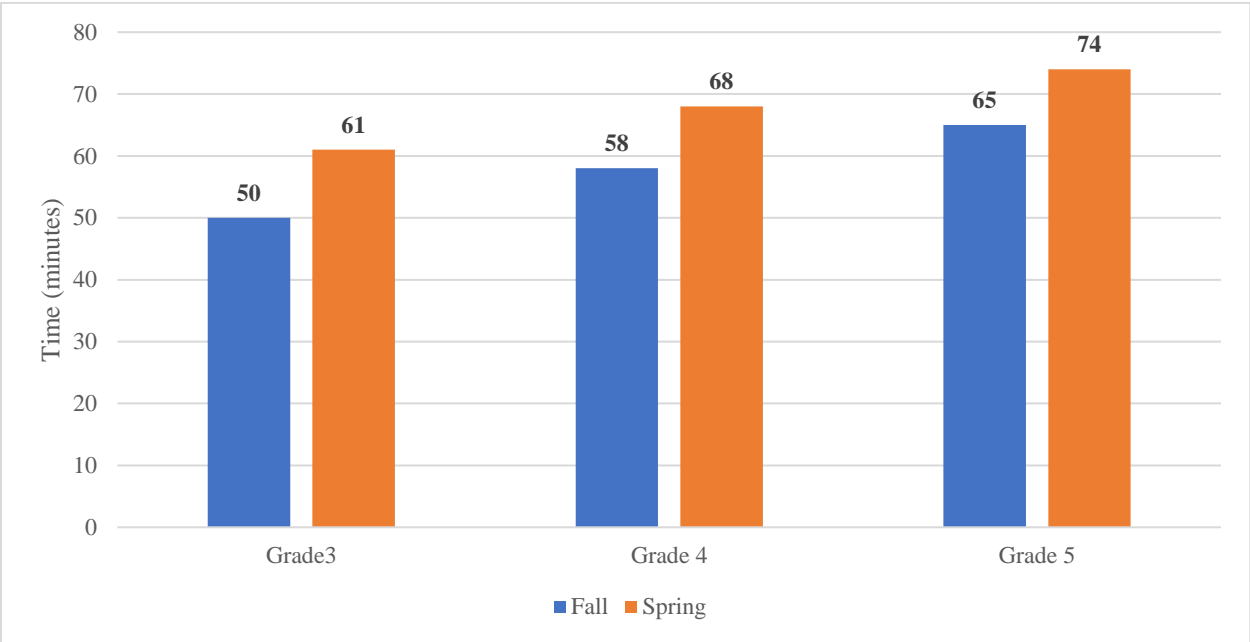
MAP-R

Figure 1 shows MAP-R's average completion times for Grades 3–5 for fall and spring. Figure 2 presents the percentage of students that completed the test for different time intervals for the fall and Figure 3 shows similar data for the spring administration of the test.

Completion Time Analysis**Grades 3 to 5**

It was observed that students spent more time on the test in the spring when compared to the fall. The average completion time for the spring administration was higher for all grades. The difference in the average completion time between the fall and spring for each grade was more or less constant. In both fall and spring, Grade 5 showed the highest average completion time (see Figure 1).

Figure 1
Average Completion Time, in minutes, for MAP-R, Grades 3–5, Fall vs Spring



In looking at the defined time intervals, it was noted that between fall and spring, the percentage of students completing the test within 60 minutes decreased. In the spring, a significant percentage of Grade 5 students took more than 90 minutes when compared to the other grades (see Figure 3). In both the fall and spring, Grade 3 students had the highest percentage of students who completed within 60 minutes.

It was observed that there was an inverse relationship between the grade level and the percentage of students who completed the test within 60 minutes. The higher the grade level the lower the percentage of students who were able to complete the test within the 60-minute time intervals. This trend was also observed in the spring.

Figure 2
Percent of Students by Completion Time for Fall 2022 MAP-R Growth Grades 3–5

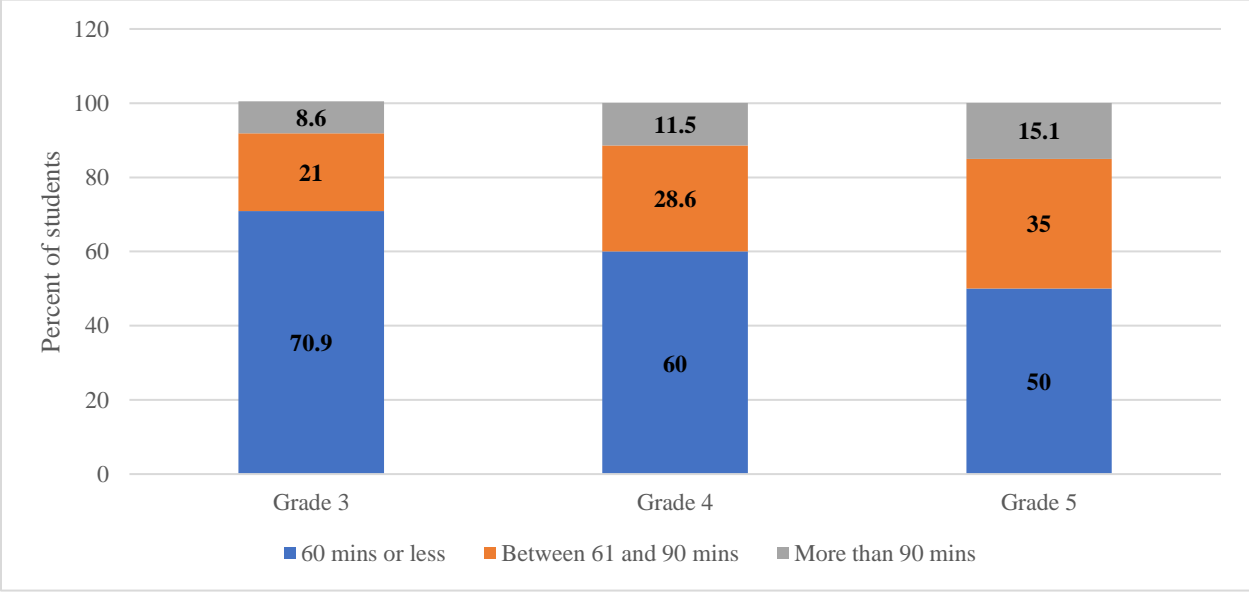
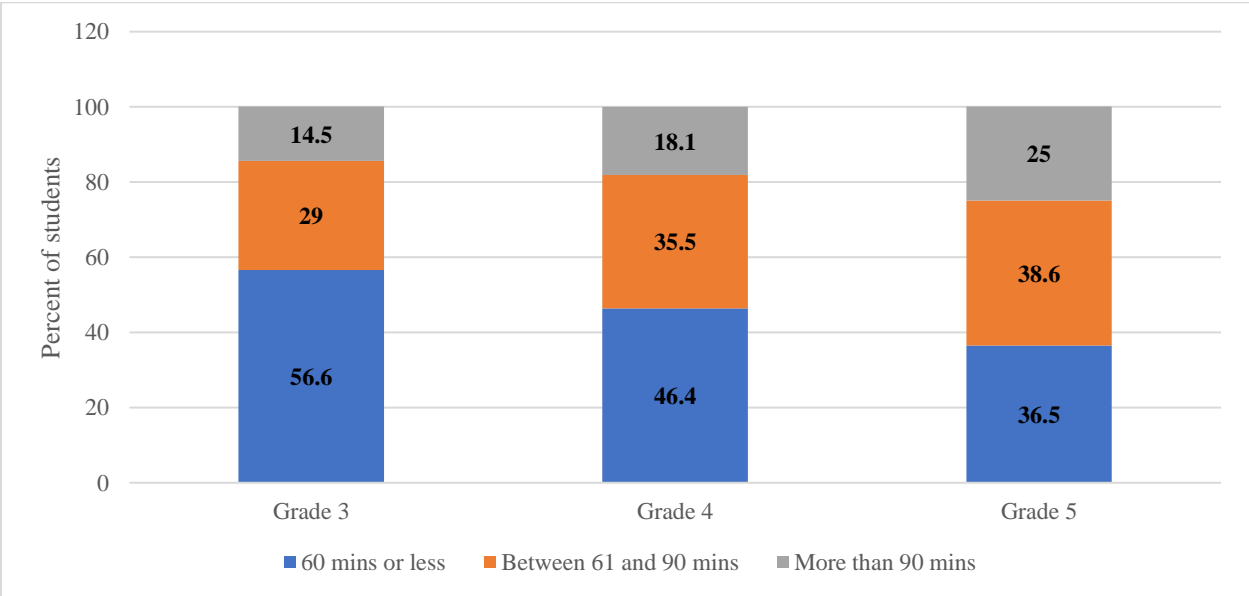


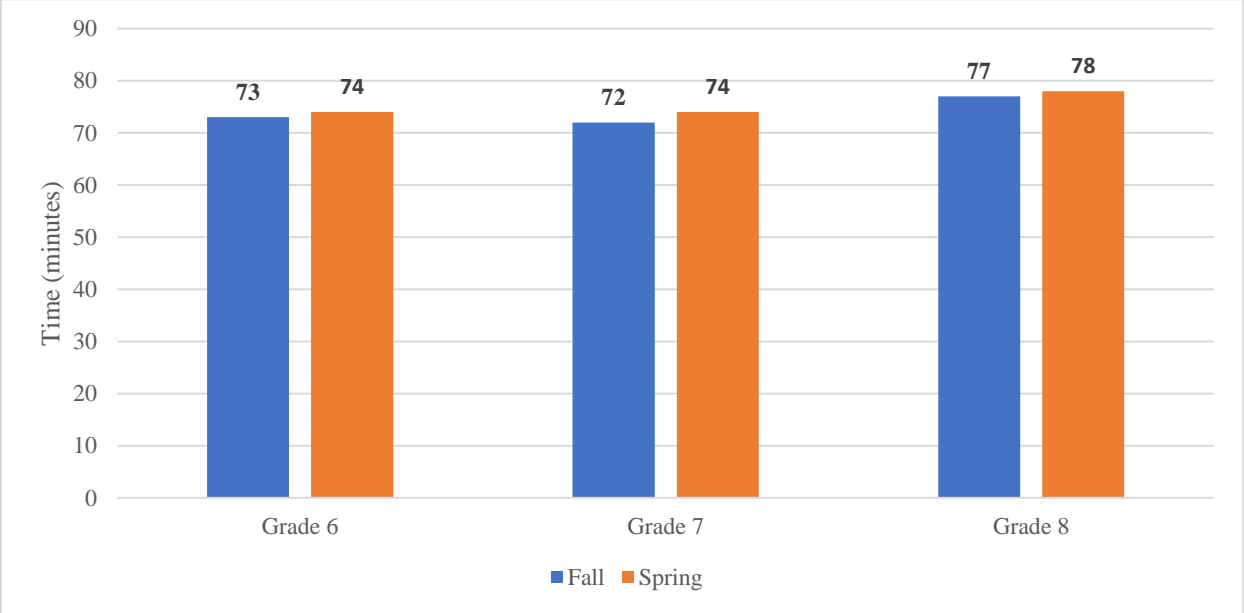
Figure 3
Percent of Students by Completion Time for Spring 2023 MAP Growth Reading, Grades 3-5



Grades 6–8

The average completion time for all grades did not show significant differences between fall and spring. The average times for the spring were higher by two minutes at the most. Grade 8 students had the highest average time for both fall and spring (see Figure 4).

Figure 4
Average Completion Time, in minutes, for MAP-R, Grades 6–8, Fall vs Spring



Less than 40% of all students in Grades 6 to 8 completed the test within 60 minutes in both fall and spring. Taken together, the completion times were relatively similar in all three grades for both administrations (see Figures 5 and 6). Of note, was that a greater percentage of Grade 8 students took more than 90 minutes in fall and spring when compared to Grades 6 and 7.

Figure 5
Percent of Students by Completion Time for Fall 2022 MAP-R Growth Grades 6–8

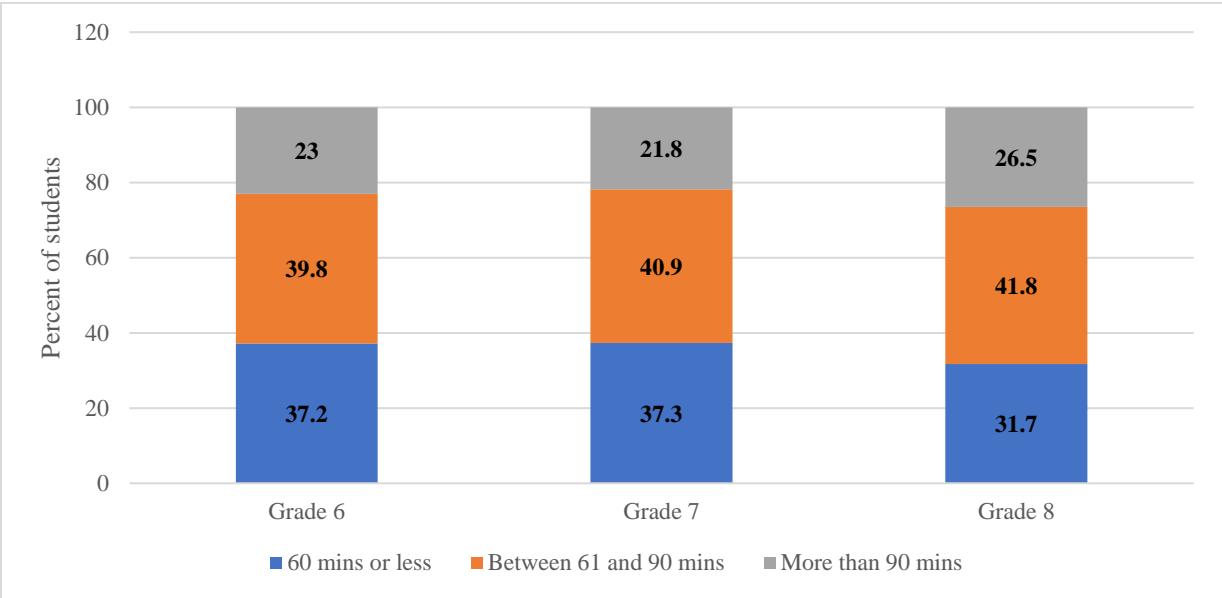
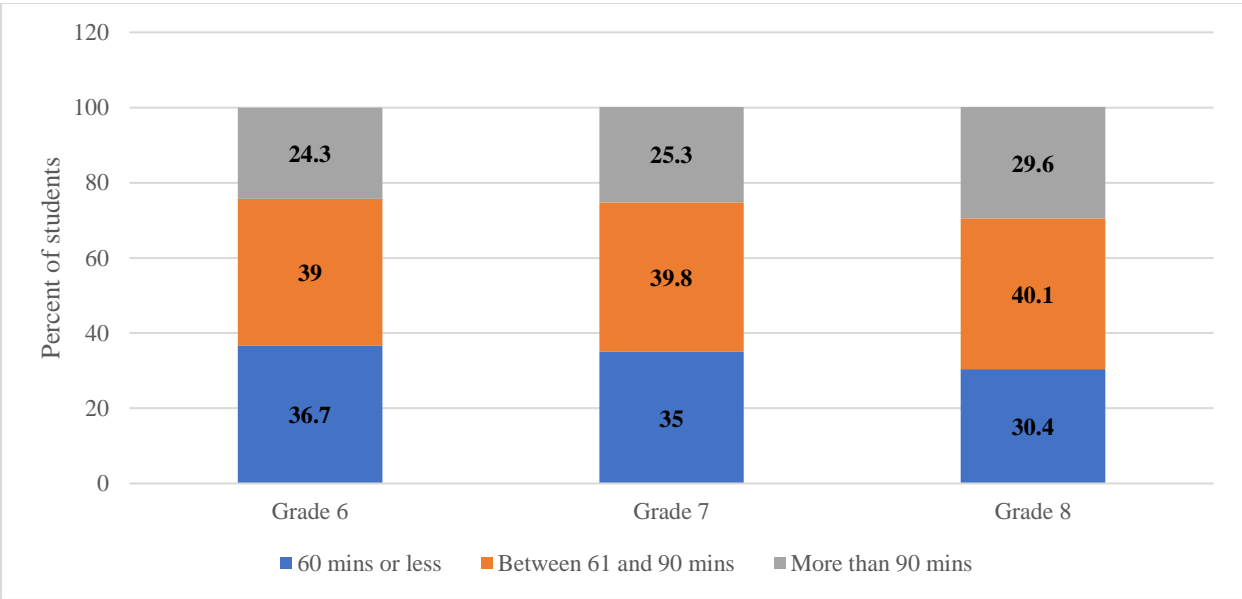


Figure 6
Percent of Students by Completion Time for Spring 2023 MAP-R Growth Grades 6–8



MAP-M

MAP-M was administered to students in K–8. The collected data was separated into three groups: K–2, Grades 3–5, and Grades 6–8. This helps to understand trends among the different grade ranges.

Figure 7 displays completion times for students in K–2. This helps to identify how long these younger students took to complete the assessment. Figures 8 and 9 show the percentage of students in K–2 who completed the test within specific time intervals. This data is presented separately for the fall and spring assessment periods.

Figure 10 presents the average completion time for students in Grades 3 to 5. In Figures 11 and 12, the percentage of students in Grades 3 to 5 who completed the test within certain timeframes in the fall and spring are displayed.

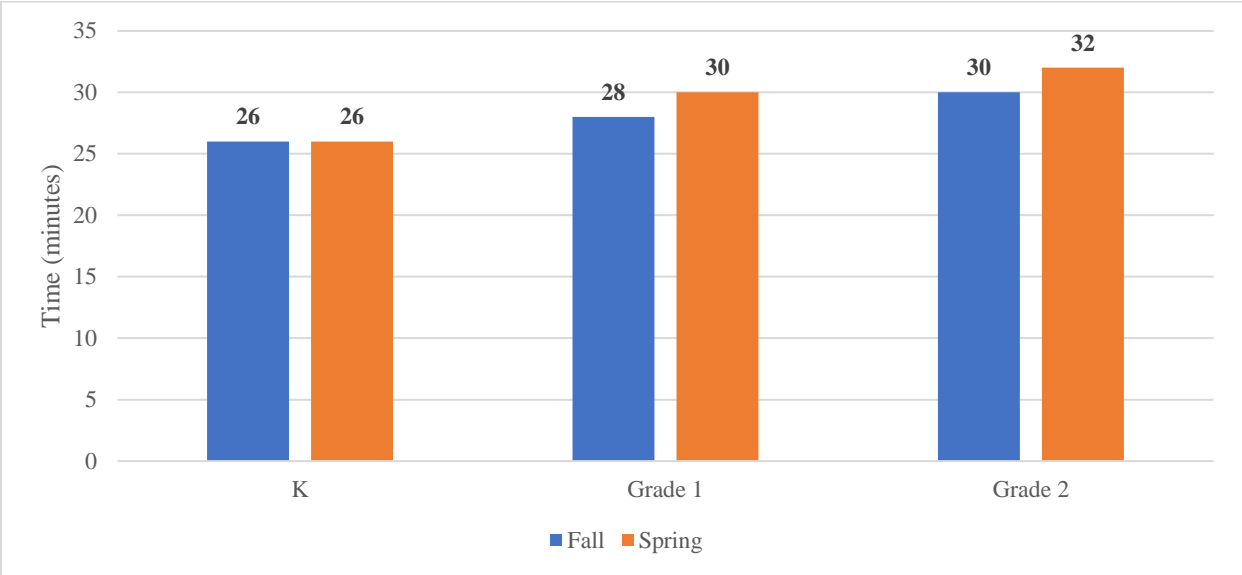
Figure 13 shows the average completion time for students in Grades 6–8. This helps understand the assessment time for older students. Figures 14 and 15 present the percentage of students in Grades 6, 7, and 8 who finished the test within different time limits.

The data presented in these figures and the analyses could be used to assess whether there are trends in completion times, potential differences between grade levels, and how students are performing within specified timeframes.

Completion Time Analysis**K–2**

Figure 7 shows the average completion time for fall and spring for students in K–2. A review of the data showed that between fall and spring, there was a negligible difference in average completion time. It was also observed that between the grade levels, there were insignificant differences between the times for each administration of the test (see Figure 7).

Figure 7
Average Completion Time, in minutes, for MAP-M, K–2, Fall vs Spring



Figures 8 and 9 present the percentage of students who completed the test within specified time intervals for fall and spring. Across the district, the percentage of students in kindergarten to Grade 2 who completed the test within 60 minutes did not show much variation between the two administration periods. Over 95% of K–2 students completed the test within 60 minutes (see Figures 8 and 9). Of all the grades, a higher percentage of Grade 3 students used more than 60 minutes in both fall and spring.

Figure 8
Percent of Students by Completion Time for Fall 2022 MAP-M Growth K–2

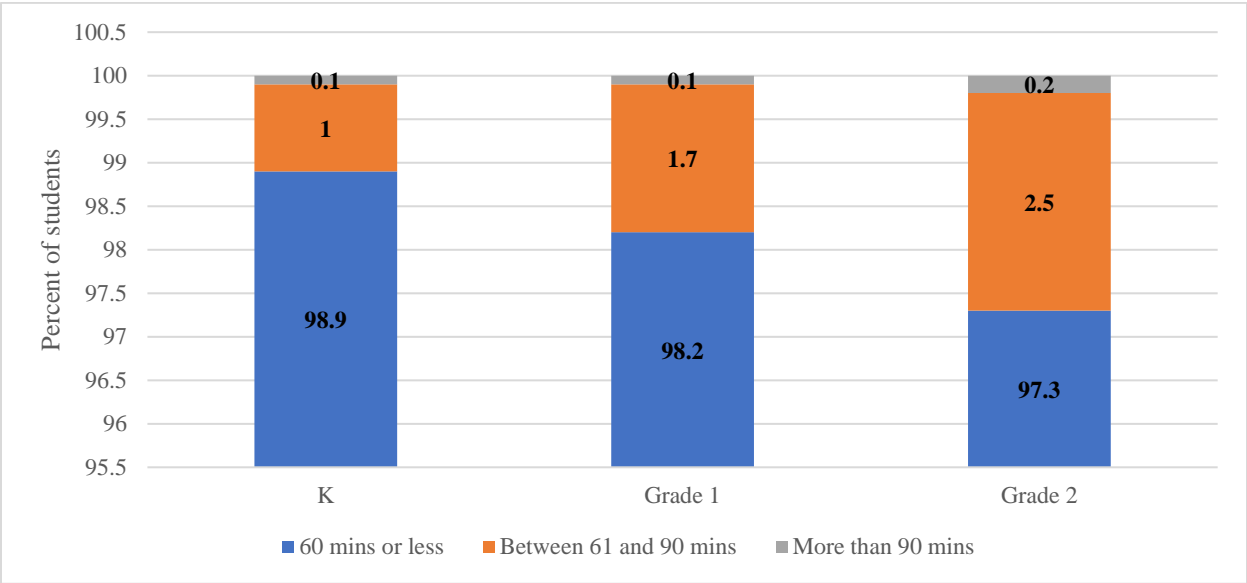
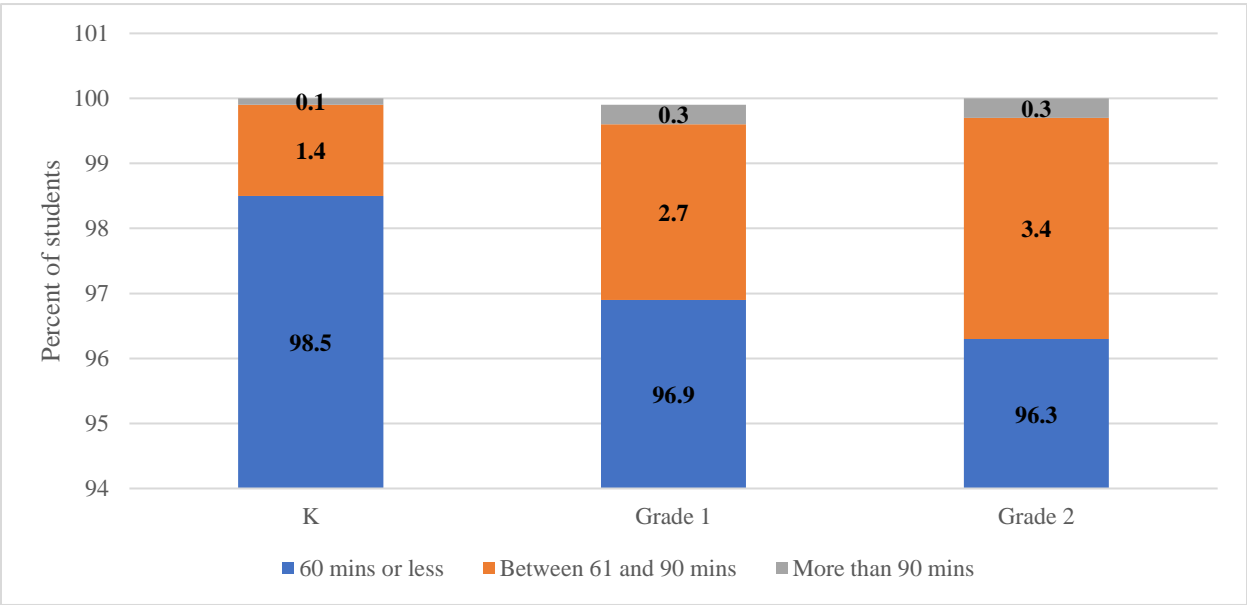


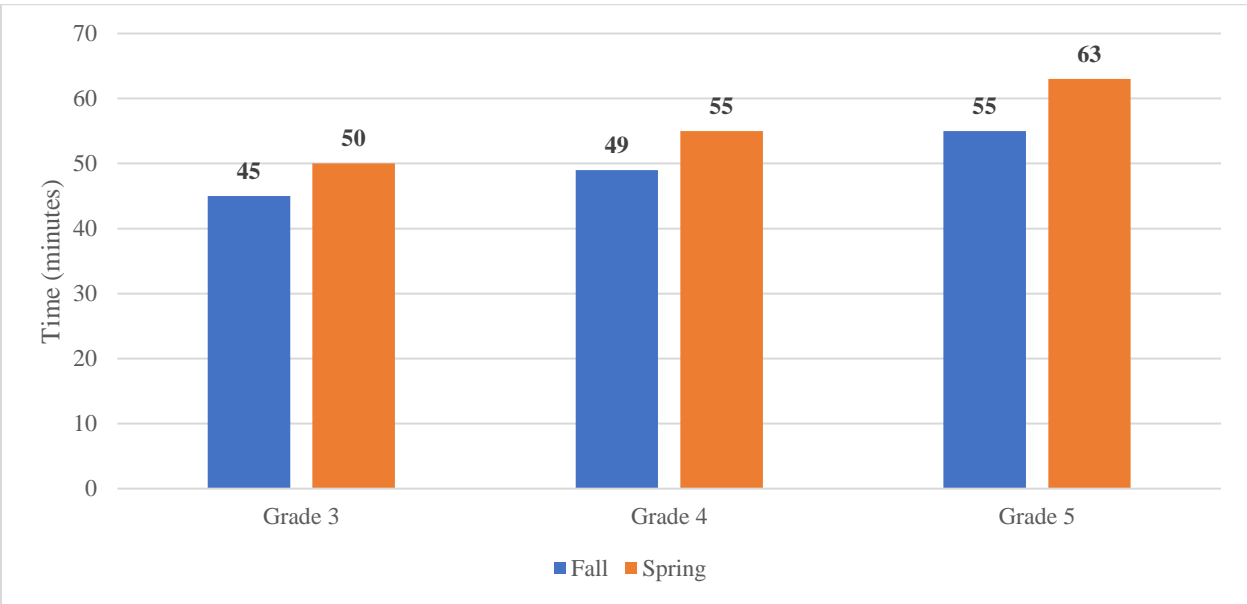
Figure 9
Percent of Students by Completion Time for Spring 2023 MAP-M Growth K–2



Grades 3 to 5

In Figure 10 the average completion times for fall and spring are shown for Grades 3–5. Each grade level showed an increase in average time in the spring when compared to the fall. The difference between these times for fall and spring for each grade level was between 5 and 8 minutes. The data revealed that Grade 5 students tended to have a higher average time in both administrations of the test. It was observed that the higher the grade level, the higher the average completion time.

Figure 10
Average Completion Time, in minutes, for MAP-M, Grades 3–5, Fall vs Spring



Between the fall and spring, the percentage of students who took 60 minutes or less to complete the test decreased (see Figures 11 and 12). In the spring, there was a 13.5% jump in the percentage of Grade 5 students who took over 60 minutes to finish the test, which was the highest when compared to Grades 3 and 4. It was noted that for the spring administration, Grade 5 students had the highest percentage (14.1%) of students who took over 90 minutes for test completion (see Figure 12). This was significantly higher than Grade 3 (5.9%) and Grade 4 (7.7%). The difference between the grades for this time interval for fall was negligible.

Figure 11
Percent of Students by Completion Time for Fall 2022 MAP-M Growth Grades 3–5

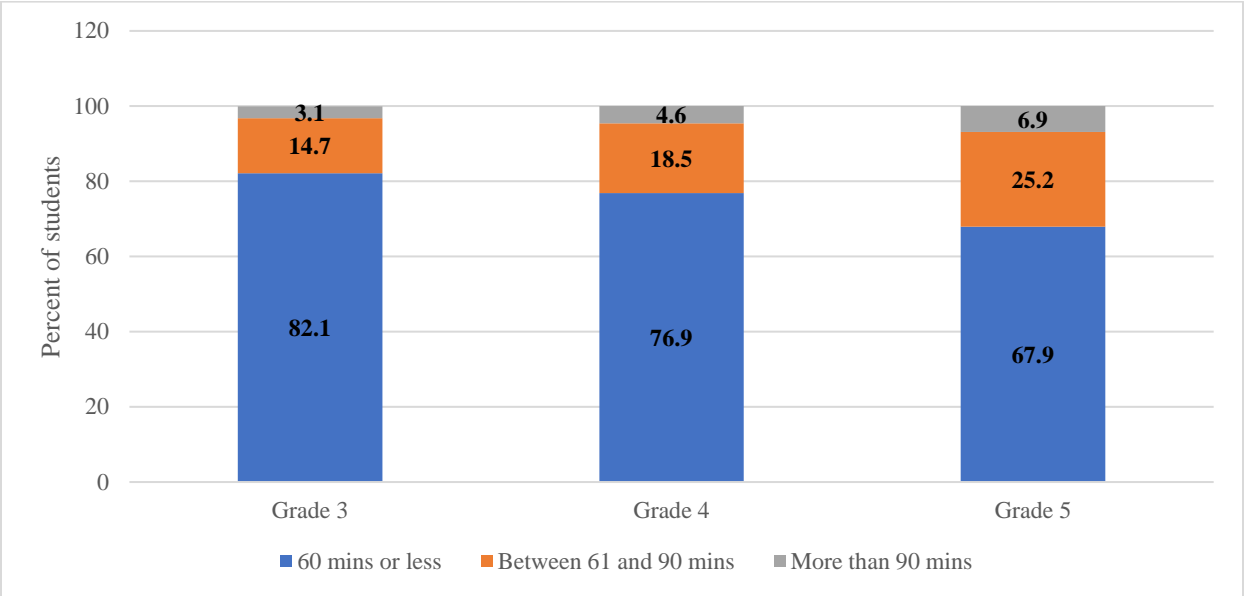
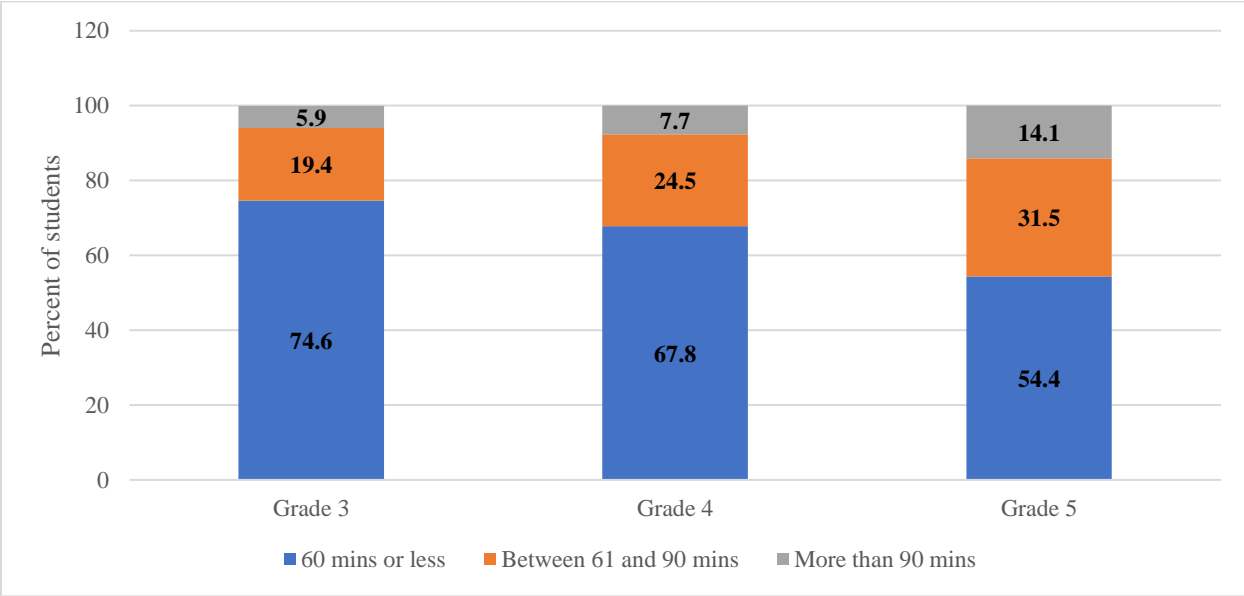


Figure 12
Percent of Students by Completion Time for Spring 2023 MAP-M Growth Grades 3–5

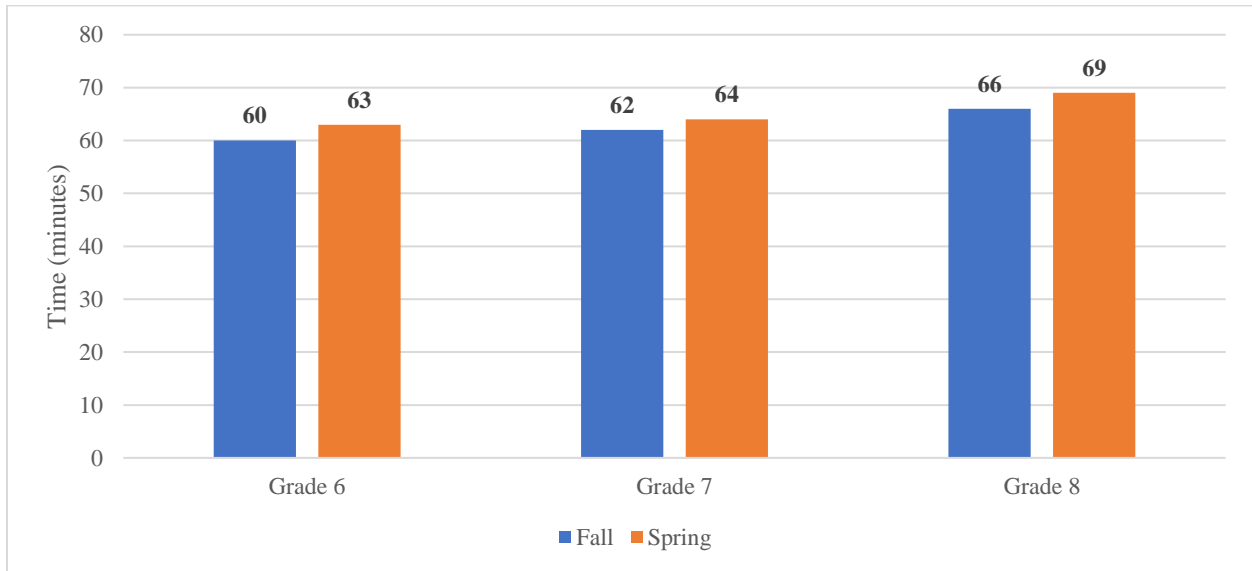


Grades 6 to 8

Figure 13 shows the average completion time for MAP-M for fall and spring. There was no significant difference in the average completion times across all grades. Students spent slightly more time in the spring compared to the fall, with Grade 8 showing the highest average time.

Figure 13

Average Completion Time, in minutes, for MAP-M Grades 6–8, Fall vs Spring



Similarities were noted in all grades for both fall and spring in terms of the percentages of students who completed within each specified time interval (see Figures 14 and 15). There were no significant differences between each administration period or between Grade 6 and Grade 7. In Grade 8, over 50% of the students took more than 90 minutes for test completion in both administrations.

Figure 14
Percent of Students by Completion Time for Fall 2022 MAP-M Growth Grades 6–8

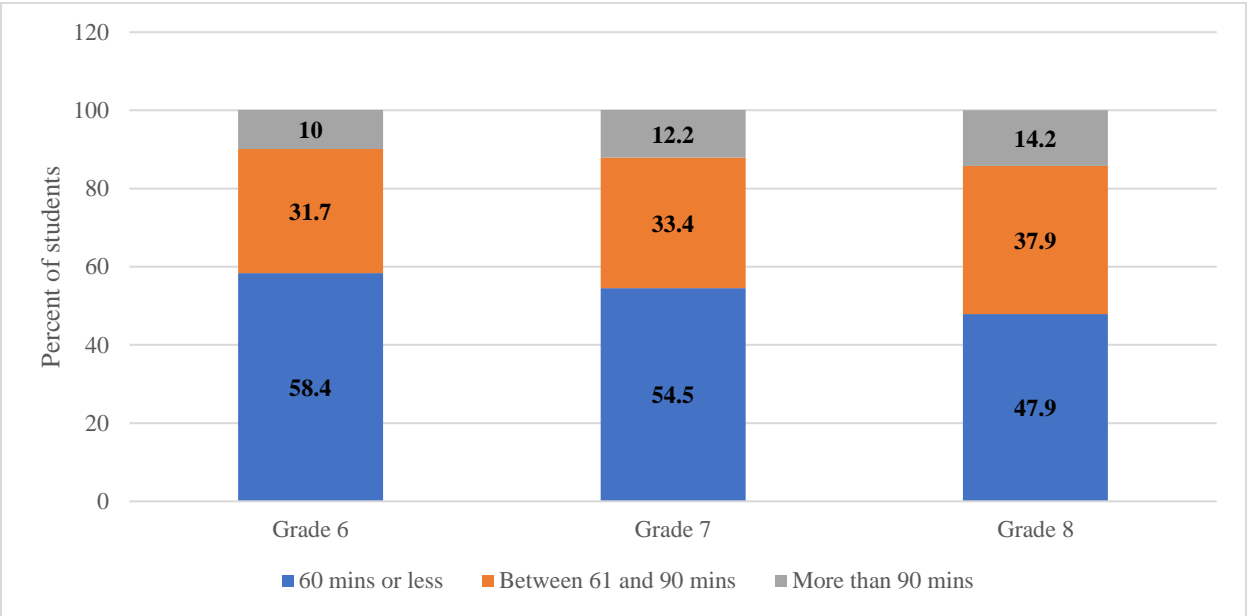
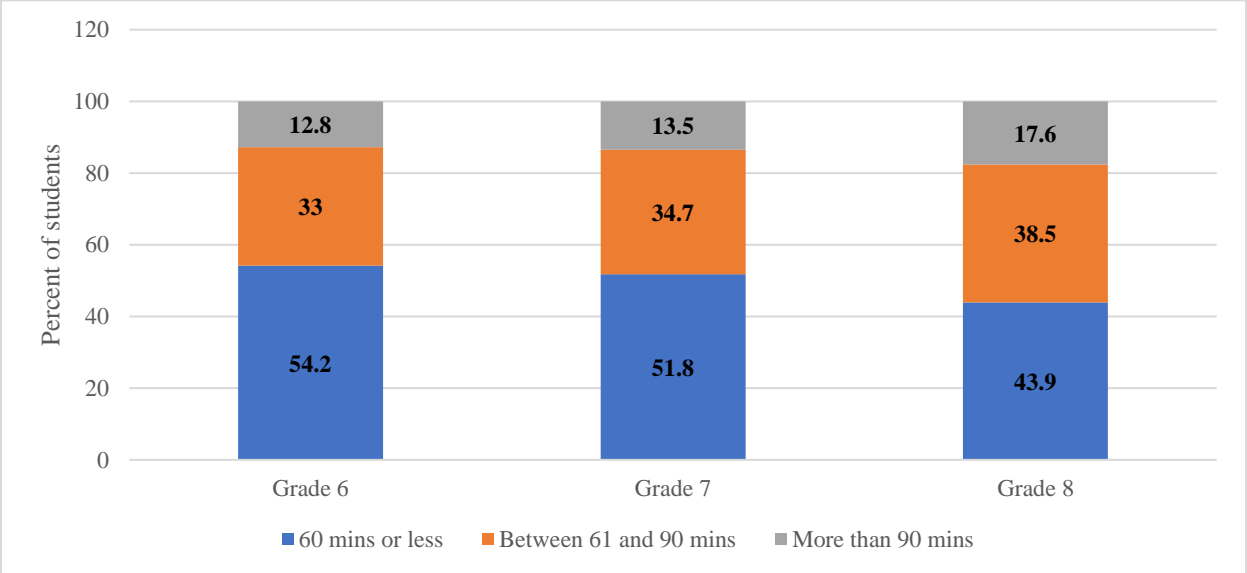


Figure 15
Percent of Students by Completion Time for Spring 2023 MAP-M Growth Grades 6–8



Conclusion

The analyses and examination of the completion times for MAP-M and MAP-R revealed that, overall students took more time to complete the tests in the spring than in the fall. Kindergarten–Grade 2, MAP-M showed only a marginal increase in average times between the fall and spring administrations of the test. A similar trend was noted in the percentage of students who completed the test within 60 minutes. These students more or less needed only 60 minutes to respond to all questions on the test. In MAP-R, the average times for Grades 6–8 were consistent from fall to spring with negligible differences between each administration period.

There is evidence to support that students in Grades 5 and 8 spend more time on the test. This was evident in both reading and mathematics for both fall and spring. The average completion time was higher for reading than for mathematics. Based on these observations, Grades 5 and 8 students are spending more time responding to questions or it is plausible to conclude that they may find the tests more rigorous at this level. These students may also consider the implications of their performance as they transition from one school level to the next in explaining the length of time spent on these tests.

The analysis of the completion time for the MAP Growth assessments raises the question as to whether the amount of time spent relates to student performance. This examination did not assess the impact of time on performance. However, it is important to note that the average time spent on the MAP does not provide a prediction of a student’s achievement quintile (low, low average, average, high average, high). MAP Growth is an adaptive assessment, and as such the type and rigor of the items will vary from student to student. The MCPS testing manual recommends that students in K–2 be given 45 minutes and Grades 3 to 8 be allotted 60 minutes. The analyses of the completion times for both assessments for the fall and spring continue to support this recommendation.

In summary, this analysis supports the idea that students become more diligent and serious about the tests as they advance through grade levels. Additionally, students might equate the time spent on the test to their eventual scores or proficiency levels. Overall, this summary provides insights into the relationship between completion times, student grade levels, and potential perceptions of test rigor and performance. It emphasizes the complexity of factors affecting completion times and the nuances of student behavior and attitudes toward testing.