



STATE OF MICHIGAN
DEPARTMENT OF EDUCATION
LANSING

GRETCHEN WHITMER
GOVERNOR

SUE C. CARNELL, Ph.D.
INTERIM STATE SUPERINTENDENT

MEMORANDUM

DATE: November 14, 2025

TO: House and Senate Committees on Appropriations
House and Senate Appropriations Subcommittees on School Aid
House and Senate Fiscal Agencies

FROM: Sue C. Carnell, Ph.D. 
Interim State Superintendent

SUBJECT: FY 2024-25 Benchmark Assessment Legislative Report

The Michigan Department of Education (MDE) is submitting the *Education Policy Innovation Collaborative's Michigan's 2024-25 Benchmark Assessments Report*, which outlines results from the 2024-25 academic year pursuant to section 104h(5) of the School Aid budget for the fiscal year 2024-25.

For additional questions, please contact the following MDE staff:

Olivia Ponte
Legislative Liaison
Michigan Department of Education
PonteO1@Michigan.gov
517-241-1540

STATE BOARD OF EDUCATION

PAMELA PUGH – PRESIDENT • ELLEN COGEN LIPTON / TIFFANY D. TILLEY – CO-VICE PRESIDENTS
JUDITH PRITCHETT – SECRETARY • MARSHALL BULLOCK II – TREASURER
MITCHELL ROBINSON – NASBE DELEGATE • TOM MCMILLIN • NIKKI SNYDER

A Research
Report
Published:
November
2025



Michigan's 2024-25 Benchmark Assessments

ACKNOWLEDGEMENTS

The authors wish to acknowledge the many people who graciously gave of their time in support of this effort. We are especially grateful to our partners for their collaboration and thoughtful feedback. In particular, we would like to thank Dr. Laura Ballard, Kate Cermak, Dr. Delsa Chapman, Shulawn Doxie, David Judd, Ann-Marie Mapes, Andrew Middlestead, Elizabeth Newell, Gerry Polverento, and Carol Skillings from the Michigan Department of Education; Tom Howell and Lauren Paluta from the Center for Educational Performance and Information; Kyle Kwaiser, Nicole Wagner, and Qia Yang from the Michigan Education Data Center at the University of Michigan; and Kevin Bullard, Don Dailey, Tony Howard and Bryan Smith from the Michigan Data Hub. At Michigan State University, we thank Emily Mohr and Erin Conley for coordinating and facilitating the project, Michelle Huhn for her assistance with formatting and Bridgette Redman for her excellent copy-editing.

DISCLAIMER

The Education Policy Innovation Collaborative (EPIC) at Michigan State University is an independent, non-partisan research center that operates as the strategic research partner to the Michigan Department of Education (MDE) and the Center for Educational Performance and Information (CEPI). EPIC conducts original research using a variety of methods that include advanced statistical modeling, representative surveys, interviews, and case study approaches.

Results, information, and opinions solely represent the author(s) and are not endorsed by, nor reflect the views or positions of, grantors, MDE and CEPI, or any employee thereof. All errors are our own.

Table of Contents

Michigan's 2024-25 Benchmark Assessments: Executive Summary	i
Background and Purpose	i
Research Questions and Study Overview	ii
Key Findings.....	iii
Implications	vii
Section One: Introduction	1
Context and Purpose of This Report	1
Section Two: Data and Methods.....	3
Participation and Analysis Samples	3
Data Aggregation and Analysis	10
Summary.....	15
Section Three: Results	17
Average Achievement Trajectories	17
Variation in Student Achievement	23
Regression-Adjusted Percentile Ranks	29
Proficiency Rates	35
Student Growth	37
Section Four: Takeaways and Implications	50
Key Findings.....	51
Implications	52
References	54
Endnotes	58
Appendix.....	60



Michigan's 2024-25 Benchmark Assessments: Executive Summary

BACKGROUND AND PURPOSE

In order to monitor student progress toward learning goals in the wake of the COVID-19 pandemic, the Michigan legislature mandated benchmark assessment testing for all K-8 students in both fall and spring of each school year from 2020-21 to 2022-23 ([2020 PA 149](#), [2021 PA 48](#)). Although this requirement ended after 2022-23, districts choosing to continue administering benchmark assessments are eligible to receive state funding ([2023 PA 103](#), [2024 PA 120](#)). To interpret and contextualize assessment results from participating districts, the Education Policy Innovation Collaborative (EPIC) partnered with the Michigan Department of Education (MDE), the Center for Educational Performance and Information (CEPI), the MiDataHub, and the Michigan Education Data Center (MEDC) to prepare and deliver a series of reports to the governor and the Senate and House standing committees responsible for education law in the Michigan legislature. This report is the seventh in the series.

Our past reports showed that in early stages of the COVID-19 pandemic, Michigan students experienced stark achievement declines, gaps between the state's higher- and lower-scoring students grew wider, and new disparities emerged between students with different levels of access to in-person instruction. On average, math and reading growth accelerated in 2021-22 and 2022-23, but these gains were not enough to completely offset the disruptions to student learning in 2020-21. In 2023-24, math achievement rebounded significantly while reading achievement remained stagnant. Achievement gaps improved to some extent but largely persisted throughout the 2021-22, 2022-23, and 2023-24 school years. The purpose of this report is to extend these analyses through the 2024-25 school year to examine the state's continued progress toward academic recovery.

RESEARCH QUESTIONS AND STUDY OVERVIEW

In this report, we draw on newly available data from the 2024-25 school year to extend our previous analyses and further investigate the following questions:

1. **How do Michigan students' achievement trajectories in recent years compare to pre-pandemic trends?** To better understand the COVID-19 pandemic's effect on Michigan students and the extent of their academic recovery in subsequent years, we examine changes in students' benchmark assessment scores across the fall and spring semesters of each school year. We compare these trends to pre-pandemic national norms and, when available, historical Michigan data.
2. **How did Michigan students' growth over the course of each year compare with typical yearly growth before the COVID-19 pandemic?** We compare fall-to-spring changes in students' benchmark assessment scores to pre-pandemic national growth norms for each assessment, subject area, grade, and baseline achievement level. This approach allows us to assess whether a student's progress aligned with, exceeded, or fell below the median growth of similar students before the pandemic.
3. **How have trends in achievement and growth differed across subgroups of Michigan students?** We examine the extent of variation in student achievement and growth and compare trends across sociodemographic subgroups and instructional modalities (i.e., in-person, hybrid, or remote).

Our analyses include benchmark assessment results from approximately 764,000 of Michigan's 941,000 K-8 students in 710 of the state's 844 school districts. While these analyses help deepen our understanding of Michigan public school students' academic achievement and growth between fall 2020 and spring 2025, they are based on imperfect and incomplete data. For instance, students most affected by the COVID-19 pandemic may have been less likely to participate in benchmark assessments and more likely to switch districts over the study period, potentially resulting in their underrepresentation in our analyses. Moreover, with the repeal of [MCL 388.1698b](#) in 2023, districts are no longer required to administer benchmark assessments. Although most districts in the state continued participating in these assessments, 51 fewer school districts and 9,000 fewer students are represented in this year's report than in 2022-23 (the final year of required benchmark testing).

Michigan's benchmark assessment law allows districts to choose an assessment from one of four MDE-approved providers, and thousands of students participated in assessments from each of the four. In 2024-25, more than 500 districts participated in an NWEA MAP Growth assessment, 88 districts administered i-Ready Diagnostic assessments from Curriculum Associates, 70 districts participated in Renaissance Learning's Star 360 assessments, and four administered benchmark assessments from Data Recognition Corporation (DRC). These assessments are designed in slightly different ways, cover slightly different content, and tend to appeal to different types of districts. We analyze data from each assessment separately, enabling us to identify common themes and meaningful differences in their results. Where possible, we also use comparable metrics across assessments to summarize Michigan students' benchmark assessment performance overall.

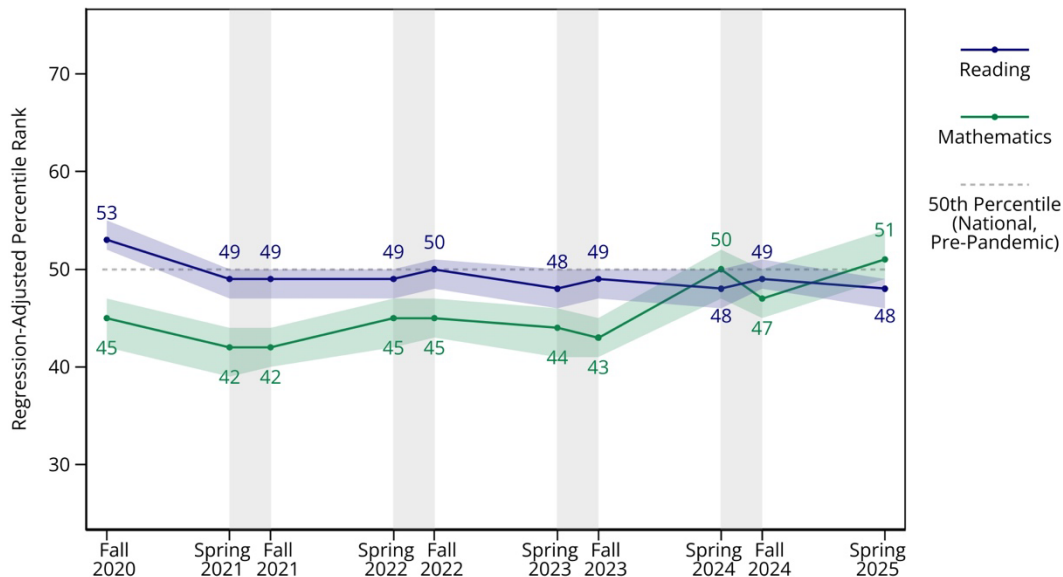
KEY FINDINGS

Our analyses show that Michigan students have made meaningful progress but have not fully recovered from pandemic-era disruptions to student learning. The key findings below summarize the state's academic recovery to date, highlighting specific areas of strong progress as well as persistent challenges requiring continued support. Due to changes in district participation over time and retroactive corrections to historical data, some data points for the 2020-21 through 2023-24 school years are slightly different from those in our prior reports. These differences are very small and do not meaningfully change any results or conclusions from past reports.

Michigan students made large math gains in each of the past two school years, but only a portion of their 2023-24 gains persisted through the summer into 2024-25.

Michigan students experienced rapid growth in math achievement in 2023-24, advancing from the 43rd to the 50th percentile (relative to pre-pandemic national norms) between the fall and spring testing periods. However, the green line in Figure I shows that when they returned to school the following fall, their relative achievement fell to just the 47th percentile. Accelerated math growth between the fall and spring of the 2024-25 school year enabled students to regain lost progress and reach their highest percentile ranking yet (51st) in the spring of 2025. This suggests that Michigan students' math achievement at the end of the 2024-25 school year was slightly above the median for students across the country before the pandemic, and significantly above the average for Michigan students in fall 2020.

Figure I. Regression-Adjusted Percentile Ranks by Semester (MAP Growth & i-Ready, 3rd-8th Grade)



Notes: Estimates are based on district-grade averages across students with MAP Growth or i-Ready scores in every possible testing period. As a result, estimates for the fall 2020 through spring 2025 testing periods may differ from those in our previous reports. We standardized scores relative to pre-pandemic national norms for each assessment and converted all estimates into percentile ranks. Models control for student demographics.

Although math growth surpassed national norms in each of the past two years, achievement declines in between the two years exceeded typical levels of “summer slide.” This could mean that Michigan’s within-year gains overstate students’ longer-term progress. For instance, despite the state’s average math performance increasing by 4 percentile points between the fall and spring of 2024-25, students ended the year only 1 percentile point above their spring 2024 rank. Michigan’s cumulative math growth across school years is more consistent than its rapid within-year growth with the modest levels of recovery on benchmark and summative assessments nationally (Curriculum Associates, 2025; Dewey et al., 2025; Lewis & Kuhfeld, 2025).

On average, reading achievement has not yet rebounded from the declines in early stages of the pandemic. The blue line in Figure I shows that Michigan students began the 2020-21 school year above national norms in reading, with average scores at the 53rd percentile. By the end of that year, reading achievement fell to the 49th percentile (just below the national median), and has remained within 1 percentile point of this ranking ever since. This stagnation in reading, and its contrast from trends in math performance, is consistent with national results from the MAP Growth and i-Ready assessments (Curriculum Associates, 2025; Lewis & Kuhfeld, 2025).

Average reading scores remain stagnant, but gaps between the state’s highest- and lowest-performing readers are improving.

The distribution of achievement widened during the pandemic, meaning that students’ academic levels varied to a greater extent than would have been expected in earlier years. Although average reading scores remain relatively unchanged, we find evidence of improvements among Michigan’s lowest-scoring readers, especially in middle school grades. By comparing dark-shaded and light-shaded “boxes and whiskers” in Figure II, we see that benchmark assessment scores for the top 10% and bottom 10% of Michigan students in the spring of 2021 were further apart from each other than the top and bottom 10% of students nationally on the same assessments (in this case, NWEA’s MAP Growth) before the COVID-19 pandemic. Scores for the top and bottom 25% of students in spring 2021 were also further apart than the pre-pandemic national norm.

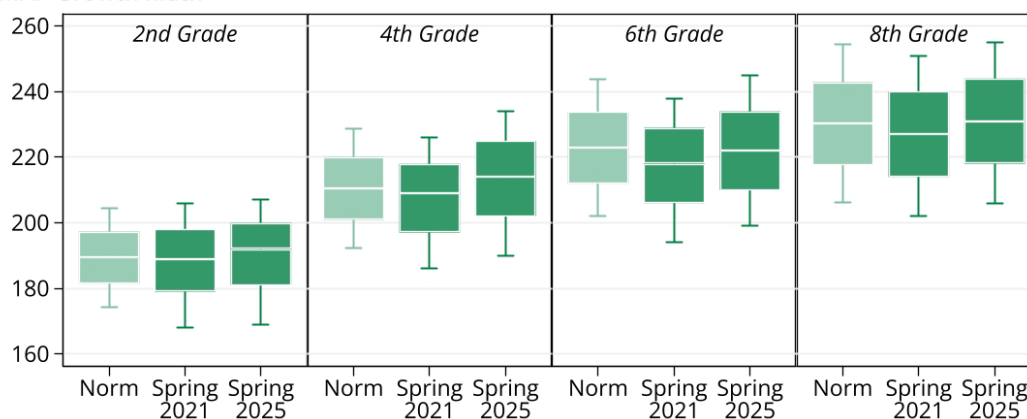
Between spring 2021 and spring 2025, the 10th and 25th percentiles of middle school reading scores increased, while the 50th, 75th, and 90th percentiles remained about the same. As a result of these gains at the lower end of the distribution, gaps between high- and low-performing readers have narrowed. While these gaps are improving, they have not yet fully recovered to pre-pandemic norms. The distribution of math achievement also remains wider than before the pandemic, despite notable increases in average math performance. As Figure II shows, the entire distribution of math scores shifted upward between spring 2021 and spring 2025, indicating improvement among students across all levels. However, gaps between the state’s highest- and lowest-performing students in math were about as large at the end of 2024-25 as they were four years earlier.

Demographic gaps in reading achievement, which also widened during early stages of the pandemic, have narrowed significantly in the years since. By spring 2025, gaps in reading performance between students of different racial groups and economic statuses had not only recovered to their fall 2020 levels but improved beyond them. In contrast, math gaps between

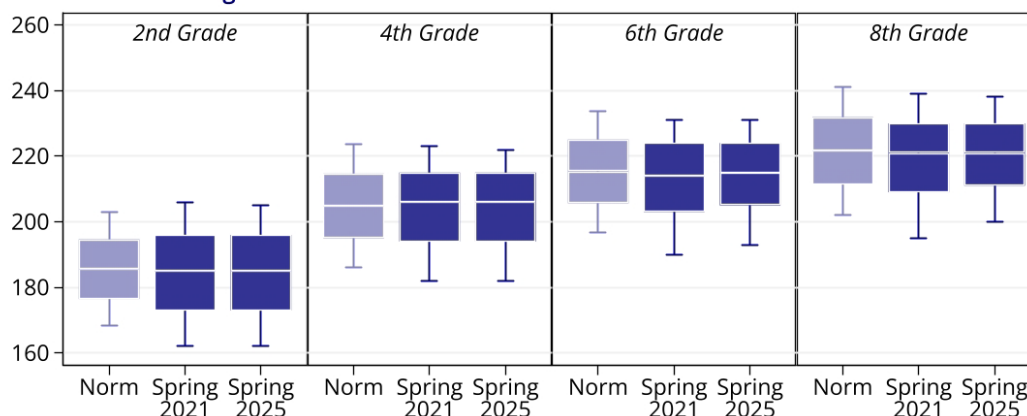
these student subgroups have narrowed to some extent since spring 2021 but remain far larger than in fall 2020.

Figure II. Distribution of Spring Scale Scores by School Year and Grade Level, MAP Growth

MAP Growth Math



MAP Growth Reading



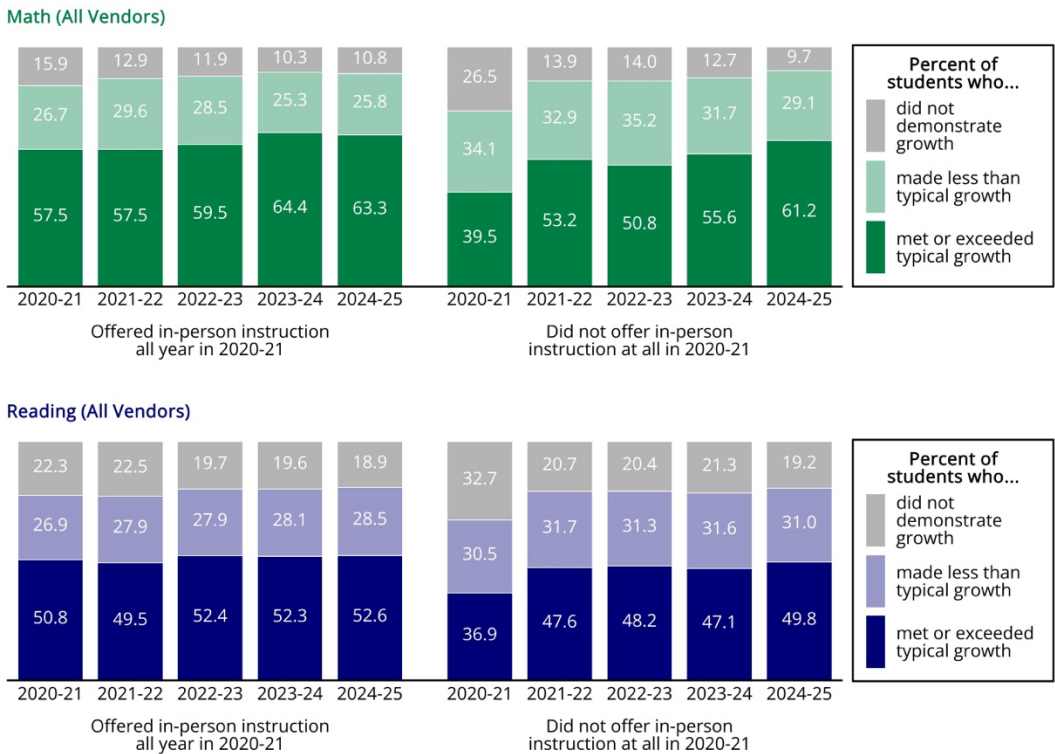
Notes: Each vertical line shows the 10th and 90th percentiles of students' spring scores, while each rectangle shows the 25th, 50th, and 75th percentiles. "Norm" represents the pre-pandemic national norm.

Districts that were remote in 2020-21 are "catching up" to the rest of the state in terms of student growth but remain behind in achievement.

In the early stages of the pandemic, drastic gaps in average achievement emerged between school districts offering fully in-person instruction and those that were fully remote. Between the fall and spring of the 2020-21 school year, the gap in reading scores between these districts doubled, and the gap in math scores nearly tripled. Figure III shows how yearly growth outcomes in these districts compare with each other and over time. We define "typical" yearly growth as the median increase in scale scores for students who took the same tests before the COVID-19 pandemic and had similar baseline scores. This means that in a typical year, we would expect about 50% of students to reach or exceed these targets with very few showing no growth at all.

While students in districts that offered in-person instruction all year met targets for “typical” growth at similar rates to the pre-pandemic norming samples for their assessments, this was not the case for those in districts that were remote for at least part of the year. Students whose districts did not offer in-person instruction in 2020-21 were the least likely to meet their growth targets and the least likely to demonstrate any growth at all. For the students whose districts offered in-person instruction for just part of the year (not shown in the figure), growth outcomes trailed behind pre-pandemic norms, but to a lesser degree than in fully remote districts.

Figure III. Fall-to-Spring Growth Outcomes by Access to In-Person Instruction in 2020-21



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for “typical growth” represent the median growth for students before the pandemic who took the same benchmark assessments and had similar initial scores in the fall. Modality categories are based on the number of months a district reported offering in-person instruction during the 2020-21 school year.

While growth outcomes improved in subsequent years across all district modalities, they were consistently lowest for the districts that were fully remote in 2020-21. Growth eventually stagnated for the districts that offered at least some in-person instruction in 2020-21 but continued to improve for those that were fully remote that year. As a result of these continued increases, students in remote districts grew at similar—and in some cases even higher—rates in 2024-25 than their peers who had access to at least some in-person instruction. This accelerated growth helped to narrow achievement gaps between fully remote and fully in-person districts but was not enough to completely offset their differential declines in 2020-21. As of spring 2025, there is still a 14 percentile-point gap in average math scores between these

districts—twice the size of their 7 percentile-point gap in fall 2020, but significantly smaller than their 20 percentile-point gap in spring 2021. The reading gap has nearly diminished to its initial size, at 9 percentile points in spring 2025 compared to 8 percentile points in fall 2020.

IMPLICATIONS

This report shows that, more than five years since COVID-19's unprecedented disruptions to learning and schooling began, student achievement trends in Michigan show signs of progress as well as enduring challenges. While students are making strong progress in math during the year, their short-term gains have not fully translated into longer-term growth. Although gaps in reading achievement are improving in upper grade levels, elementary-level reading achievement remains a major area of concern. Heightened variation in achievement across students poses new challenges for schools and educators, whose instruction and interventions must now address a broader range of learning needs than in the past.

We must place all these results in the context of the imperfect data available to analyze student learning growth during the COVID-19 pandemic. Participation rates were lower than those typical of end-of-year summative assessments, resulting in analytic samples not entirely reflective of Michigan's larger student population. Nonetheless, these findings provide important information for policymakers, educators, and stakeholders as they continue to grapple with the pandemic's academic effects on Michigan's students. As we move further away from the immediate period of pandemic recovery, these data can continue to provide insight about Michigan's students and school systems to support evidence-based decision-making and continuous improvement.

Section One:

Introduction

Research overwhelmingly shows that the COVID-19 pandemic severely affected student achievement in Michigan and nationwide, with disparate effects across student subgroups (Cohodes et al., 2022; Fahle et al., 2024; National Assessment of Educational Progress, 2022; Strunk et al., 2023). These effects persist five years after the pandemic's onset, and while some studies find evidence of at least partial recovery, the extent of this recovery has varied widely across states, subject areas, and assessments (Barnum & Belsha, 2023; Curriculum Associates, 2025; Halloran et al., 2023; Lewis & Kuhfeld, 2024).

In early stages of the pandemic, Michigan Governor Gretchen Whitmer signed three "Return to Learn" bills into law (2020 PA 147, 2020 PA 148, 2020 PA 149) to establish educational goals and monitor student progress made under such unprecedented circumstances. The law required districts to select and administer a benchmark assessment—either one of four state-approved assessments or an alternative that meets specific state-determined criteria—to all K-8 students at the beginning and end of each school year and then report these results for use in a statewide aggregate research report. In 2021, the legislature extended these testing and reporting requirements for another three school years (2021 PA 48). Beginning with the 2023-24 school year, the state no longer requires districts to administer benchmark assessments but continues to fund the assessments for districts that voluntarily participate and share data for continued statewide analyses (2023 PA 103, 2024 PA 120).

CONTEXT AND PURPOSE OF THIS REPORT

This is the seventh in a series of benchmark assessment research reports that the [Education Policy Innovation Collaborative \(EPIC\)](#) at Michigan State University has prepared to help monitor Michigan students' academic progress during and after the COVID-19 pandemic. EPIC collaborates closely with the Michigan Department of Education (MDE), the Center for Educational Performance and Information (CEPI), the MiDataHub, and the Michigan Education Data Center (MEDC) at the University of Michigan to prepare these reports and deliver them to the state governor and the House and Senate standing committees responsible for education legislation. Each report in the series builds on the previous one by incorporating newly available data.

The first six reports in this series, released between August 2021 and November 2024, examined student progress toward learning goals at various times throughout the first four full school years since the onset of the COVID-19 pandemic. These reports showed that, on average,

Michigan students experienced less growth in math and reading achievement in 2020-21 than would have been expected in a “typical” year. Pandemic-related effects were not uniform, and longstanding achievement gaps between demographic groups and gaps between higher- and lower-performing students widened. Students experienced significantly more growth in achievement over the 2021-22 and 2022-23 school years, but generally not enough to fully offset the learning disruptions experienced during the early stages of the pandemic. Achievement gaps narrowed to some extent during this period but remained wider in spring 2023 than they were in fall 2020. In 2023-24, Michigan students experienced an accelerated rate of growth in math, reaching or exceeding pre-pandemic norms on many benchmark assessments. Average reading scores remained relatively stagnant, with gaps between Michigan’s higher- and lower-performing readers narrowing in middle school grades but not at the elementary level.

This seventh report extends our analyses through the end of the 2024-25 school year. Specifically, we examine achievement trajectories and growth over the past ten semesters—from fall 2020 to spring 2025, capturing five full school years—and assess differences in achievement and growth across subgroups of students based on their demographic characteristics, eligibility for special education or English learner services, and access to or participation in various modes of instruction (e.g., fully in-person, fully remote, or hybrid instruction) during and after the pandemic.

Section Two:

Data and Methods

Each year, millions of K-12 students across the country participate in benchmark assessments. These assessments help educators and administrators track students' progress toward grade-level standards and learning goals, and provide feedback to guide future instruction.

Between 2020-21 and 2022-23, Section 98b of the State School Aid Act required Michigan school districts to administer benchmark assessments in reading and math to all K-8 students in the fall and spring of each school year ([MCL 388.1698b](#)). The law granted districts the flexibility to select a benchmark assessment from a list of four MDE-approved providers or to choose a different assessment (either from an alternate provider or one they developed locally) that meets a set of state-determined criteria. Beginning in 2023-24, the state no longer requires districts to administer benchmark assessments but continues to fund districts that choose to do so ([2023 PA 103](#), [2024 PA 120](#)).

Districts that used benchmark assessments from state-approved providers were required to submit their data through the MiDataHub to receive state funding. These data form the basis for the analyses in this report. In this section, we describe the analytic samples and methods we use to understand student achievement in Michigan over the past five school years. For a full description of the unique characteristics of each MDE-approved benchmark assessment, please see the [first report in this series](#).

PARTICIPATION AND ANALYSIS SAMPLES

Below, we provide details about the benchmark assessment data that districts submitted to the MiDataHub and the samples of Michigan students represented in our analyses. For a full discussion of our general data exclusions, the sociodemographic and modality data that we consider alongside the benchmark assessment results, and our aggregate data file construction processes, please see our [2021-22 report](#).

District Participation

As we noted in our [2023-24 report](#), benchmark assessment participation decreased notably after these tests became optional under Michigan state law. To assess whether and how district-level participation and coverage continued to change in the second year of optional testing, we focus on the 844 school districts that would have been required to administer assessments if [MCL 388.1698b](#) had not been repealed. These districts serve students in at least one K-8 grade level and were open as of the official fall student count date for the 2024-25

school year (October 2, 2024) and remained open as of the official spring student count date (February 12, 2025).

In total, 715 of Michigan's 844 school districts provided some form of benchmark assessment data for the 2024-25 school year through the MiDataHub. We omitted five of these districts from our analyses because all the assessment results they provided were from time periods, grade levels, or subject areas outside the scope of this report. The remaining 710 districts—704 of which provided student-level data and six that provided aggregate files they prepared themselves—are represented in at least some of our analyses. These include 588 districts using NWEA's MAP Growth, 88 using Curriculum Associates' i-Ready assessments, 70 using Renaissance Learning's Star 360 assessments, and 4 using DRC's Interim Comprehensive Assessments (ICAs) or MDE's K-2 Early Literacy and Mathematics Benchmark Assessments. Forty districts administered assessments from two different providers.

Combined, these 710 districts teach 877,619 K-8 students, or 93% of all K-8 students in Michigan. This indicates an increase in participation relative to the 678 districts (accounting for 88% of the state's K-8 students) represented in our 2023-24 report. However, participation remains lower than in 2022-23—the last year of required benchmark testing—when 769 school districts (accounting for 94% of the K-8 population) provided data. The districts no longer participating tend to be smaller than the average district in the state, so although there are 51 fewer total districts represented in our 2024-25 report than in 2022-23, the participating districts account for nearly the same percentage of the state's K-8 student population.

Analysis Samples

Before aggregating the student-level benchmark assessment data that districts provided through the MiDataHub, we restricted the sample to exclude: 1) districts that do not serve any grade levels within the K-8 range, those that opened after October 2, 2024, or those that closed before February 12, 2025; 2) students who were not in grades K-8 in 2024-25; 3) results from assessments in subject areas other than math and reading/ELA; and 4) results from assessments that are not normed for the grade level of the assessed student (i.e., results from Star Early Literacy assessments for students above grade 3 and results from Star Math assessments for students in kindergarten).

While the **full analytic sample** includes data from all students with valid test scores for a given testing period, we impose additional sample restrictions for our longitudinal analyses to ensure that comparisons of aggregate measures over time reflect changes in student performance as opposed to changes in the populations of students taking the assessments. We have two types of restricted analytic samples:

1. The **school-year growth samples** include students who completed and received valid scores for the same benchmark assessment in the same subject, grade level, and district in both the fall and spring of a particular school year (i.e., the 2020-21 growth sample includes students with valid test scores in fall 2020 and spring 2021, while the 2024-25 growth sample includes students with valid test scores in fall 2024 and spring 2025).

- The **longitudinal growth sample** includes students who meet the criteria for the school-year growth sample in every possible year from 2020-21 to 2024-25 and who progressed by exactly one grade level between consecutive years (e.g., students who were in 3rd, 4th, 5th, 6th, and 7th grade in 2020-21, 2021-22, 2022-23, 2023-24, and 2024-25 respectively). We measure longitudinal growth over a 5-year period for cohorts of students who began kindergarten in 2020-21 or earlier (i.e., those who were in 4th through 8th grade in 2024-25), and over a 2- or 3-year period for cohorts who began kindergarten between 2021-22, 2022-23, and 2023-24 (i.e., those who were in 1st through 3rd grade in 2024-25).

To illustrate how these restrictions affect the size and representativeness of the samples in our growth analyses, Table 2.1 shows the total number of districts and students for whom we received spring 2025 student-level data, as well as the subsets of these districts and students whom we can include in each of the more restricted samples. The figures in the top panel represent the exclusions for the 2024-25 school year growth sample. Although not shown here, we apply equivalent restrictions to construct 2020-21, 2021-22, 2022-23, and 2023-24 school-year growth samples for comparisons of fall-to-spring growth across the five school years. Figures in the bottom panel show the additional set of exclusions we apply for the longitudinal growth sample.

Table 2.1. Spring 2025 Analytic Sample and Reasons for Exclusions From Restricted Samples for Growth Analyses				
Exclusions	Districts		Students	
	<i>N</i>	%	<i>N</i>	%
2024-25 School-Year Growth Sample and Exclusion Reasons				
Spring 2025 sample	691	100	726,427	100
Missing fall 2024 data	-6	-1	-20,756	-3
Different district in fall 2024 than in spring 2025	-1	-0	-6,568	-1
Different test in fall 2024 than in spring 2025	-0	-0	-195	-0
2024-25 school year growth sample	684	98	698,908	96
Longitudinal Growth Sample and Exclusion Reasons				
2024-25 school-year growth sample	684	99	698,908	96
New kindergarten cohorts, not tested in prior years	-1	-0	-67,174	-9
Missing fall or spring data in prior year(s)	-135	-20	-289,060	-40
Different district in prior year(s)	-1	-0	-45,462	-6
Different test in prior year(s)	-15	-2	-33,240	-5
Longitudinal growth sample	532	77	263,972	36

Notes: The counts and percentages in this table do not include data from districts that prepared their own aggregate datasets. The percentages in each column may not add to exactly 100 due to rounding.

The full sample for the spring 2025 testing period includes student-level data for 726,427 students from 691 districts.¹ For analyses that use the 2024-25 school-year growth sample, we exclude a total of 7 districts and 27,519 students (about 2% and 4% of all districts and students, respectively). The most common reason for student exclusion from the 2024-25 school-year growth sample was the absence of benchmark assessment data from the fall 2024 semester.

Some students who participated in a fall 2024 benchmark assessment were excluded because they switched districts between the fall and spring testing periods or took a different test in the fall than in the spring. The remaining 698,908 students and 684 districts in the 2024-25 school-year growth sample participated in comparable benchmark assessments, within the same district and grade levels in both fall 2024 and spring 2025.

The longitudinal growth sample is the most restrictive, including only the 263,972 students (from 532 districts) who participated in comparable benchmark assessments in both fall and spring of every possible school year in the same district, in the same grade level in both the fall and spring of each school year and progressed by exactly one grade level between consecutive school years. About 78% of districts and 38% of students in the 2024-25 school-year growth sample are also in the longitudinal growth sample. One major factor driving the high exclusion rate is that more than 100 districts that used a locally developed benchmark assessment in 2020-21 switched to an assessment from one of the four MDE-approved providers the following year, as the benchmark assessment law for 2021-22 allocated new funding for districts to implement these assessments ([2021 PA 48](#)). We include these districts in our year-specific growth analyses but exclude them from our longitudinal growth analyses, as they lack comparable benchmark assessment data for all testing periods. The one district in the “Different district in prior year(s)” column is a charter school serving only middle school grades, and hence the students enrolled there in 2024-25 would have transferred into the district after elementary school.

When possible, we also include data from the six districts that prepared their own aggregate files using a template and instructions that EPIC provided to ensure that districts choosing this option aggregated their data consistently with EPIC’s aggregation of student-level data from other districts. These district-provided aggregate data files include benchmark assessment data for an additional 37,490 Michigan students, bringing the combined dataset from both student-level and district-provided aggregate data to represent 763,917 (or about 81%) of all K-8 students in Michigan. This coverage rate is about 5 percentage points higher than the rate from our [2023-24 report](#), and only one percentage point below the rate in 2022-23 (when districts were still legally required to administer benchmark assessments).

Sample Characteristics and Representativeness

Prior to aggregation, we combined the student-level benchmark assessment data that districts provided through the MiDataHub with demographic characteristics from the Michigan Student Data System (MSDS) Fall General Collection. We used this information to identify student subgroups and examine the representativeness of each sample. Table 2.2 provides summary statistics for all K-8 students in Michigan, for students who participated in benchmark assessments from each of the MDE-approved providers in spring 2025, and for the combined sample of students with spring 2025 benchmark assessment data.

Overall, the demographic characteristics of students with spring 2025 benchmark assessment data are very similar to the statewide K-8 population. The sub-sample of students who took the MAP Growth assessments is generally similar to but slightly less diverse than the statewide K-8 student population; this is by far the largest assessment-specific sub-sample, accounting for

nearly 70% of the students who participated in benchmark assessments in 2024-25. The students who took the i-Ready assessment are more racially and ethnically diverse and include more English learners and students from economically disadvantaged households, compared to the full population of K-8 students.² Students who participated in the Star 360 assessments, on the other hand, are less diverse than the statewide population, less likely to be economically disadvantaged, and less likely to be eligible for English learner services. The sample of students who participated in DRC assessments (the MDE K-2 Early Literacy and Mathematics Benchmark Assessments and Smarter Balanced ICAs) is the least racially diverse and has fewer English learners and fewer students who are economically disadvantaged than any of the other benchmark assessment samples or the statewide population.

Table 2.2. Summary Statistics of K-8 Students in All Michigan Districts and by Spring 2025 Assessment

Demographics (%)	All MI	MAP Growth	i-Ready	Star 360	MDE/ ICA	All Vendors
Female	48.7	48.6	48.0	48.4	48.2	49.3
Asian	3.8	3.6	4.8	1.2	0.0	3.8
Black	18.5	15.3	26.8	4.7	0.6	17.7
Latino	9.5	9.5	9.8	7.9	5.0	9.6
White	61.6	64.1	52.4	78.7	91.1	63.3
Economically disadvantaged	52.4	49.9	53.7	42.9	45.8	51.2
Special education	15.0	14.1	12.6	14.2	19.0	14.0
English learner	8.2	6.8	12.3	2.2	0.2	7.9
<i>N</i> students	940,659	533,499	191,087	53,862	1,333	763,917
% of MI K-8 students	100.0	56.7	20.3	5.7	0.1	81.2

Notes: The "All MI" column includes the full population of K-8 students across Michigan. Each vendor-specific column includes all students who took a MAP Growth, i-Ready, Star 360, or K 2/ICA assessment in spring 2025, respectively. The total number of students in the "All Vendors" column is less than the sum of the four vendor-specific columns because some students took benchmark assessments from more than one vendor.

Table 2.3 presents grade-specific enrollment counts and the percentages of enrolled students represented in each analytic sample. The denominator for each inclusion rate is the aggregate enrollment across all districts administering a particular benchmark assessment for a particular grade level (e.g., a district might use MAP Growth for some grade levels and a locally developed assessment for others). Since grade-specific enrollment counts and inclusion rates were relatively consistent across our reading and mathematics samples, we provide figures for the percentage of students with valid test scores in at least one subject. The percentages in this table exclude students from districts that submitted their own aggregate data. These districts reported separate mathematics and reading outcomes without specifying how many students participated in benchmark testing for both subjects.

The spring 2025 sample includes about 88% to 97% of all students enrolled in a participating district in 2024-25, depending on grade level. Inclusion rates for the 2024-25 school-year growth

sample are slightly lower, ranging from 83% to 94%, as not all students who participated in benchmark assessments in spring 2025 took the same assessment in fall 2024. The longitudinal growth samples include far fewer students, especially in grade levels where we measure growth over a 5-year period. For example, students who began kindergarten in 2023-24 need comparable fall and spring benchmark assessment data from only two school years to be included in our longitudinal growth analyses; nearly two-thirds of students in this cohort meet these criteria. This decreases to about half of the students who started kindergarten in 2022-23, for whom we measure growth over three years, and just 38% of the 2021-22 kindergarten cohort with four-year growth data. Inclusion rates range from 27% to 35% for the remaining cohorts needing five years of growth data for our longitudinal analyses. Some factors contributing to low inclusion rates for our longer-term growth analyses include districts switching assessments over time or using different assessments across grade levels and students moving between districts, repeating or skipping a grade level, or missing data from one or more testing periods.

Table 2.3. Percent of Students Included in Analytic Samples								
Grade Level					Enrollment	Sample Inclusion Rate		
2020-21	2021-22	2022-23	2023-24	2024-25	2024-25	Spring 2025	2024-25 Growth	Longitudinal Growth
---	---	---	---	K	81,300	88.2	82.5	---
---	---	---	K	1 st	75,434	97.2	93.3	65.5
---	---	K	1 st	2 nd	81,132	96.7	92.8	49.4
---	K	1 st	2 nd	3 rd	86,291	96.9	93.4	37.8
K	1 st	2 nd	3 rd	4 th	84,024	97.3	94.3	26.6
1 st	2 nd	3 rd	4 th	5 th	86,388	96.3	93.4	32.1
2 nd	3 rd	4 th	5 th	6 th	87,578	97.2	94.2	34.0
3 rd	4 th	5 th	6 th	7 th	88,397	96.3	93.0	35.4
4 th	5 th	6 th	7 th	8 th	87,997	95.2	91.6	34.8

Notes: The "2024-25 Enrollment" column represents the total number of students enrolled in each grade level in 2024-25 in any district that provided student-level benchmark assessment data from the spring 2025 testing period. The remaining columns show the percentages of these students who are represented in spring 2025, the 2024-25 school year, and longitudinal growth samples, respectively.

We incorporated into our analytic dataset information about districts' instructional modality offerings in 2020-21 and individual students' learning modalities in 2024-25. As we showed in [prior reports](#), most districts offered more than one mode of instruction in 2020-21. On average, students had the option to learn in person for between one-half and two-thirds of the year, while hybrid options were available for about a third of the year and remote instruction was offered throughout the year. Students in districts that used the Star 360, Smarter Balanced ICA, and MDE K-2 assessments tended to have more access to in-person instruction in 2020-21, while i-Ready students had the least access. The overwhelming majority of students (about 99%) participated in in-person instruction in 2024-25. Table 2.4 shows that about 1% of students received fully remote instruction, while almost none received hybrid instruction or switched

between modalities (aside from short-term changes in modality due to a local COVID-19 outbreak, for instance). However, we note that these percentages are based on the 98% of students whose districts reported student-level modality data for the 2024-25 school year; we cannot determine how the remaining 2% of students received their instruction.

Table 2.4. Percent of Students Participating in Each Modality in 2024-25; Overall, by Assessment, and by Access to In-Person Instruction in 2020-21					
	In-Person	Hybrid	Remote	Multiple	No Data
Overall					
All students tested in 2024-25	98.8	0.0	1.1	0.0	2.2
By assessment					
MAP Growth	99.1	0.1	0.8	0.1	2.4
i-Ready	99.3	0.0	0.6	0.0	2.5
Star 360	94.5	0.0	5.5	0.0	0.1
Smarter Balanced ICA/MDE K-2	100.0	0.0	0.0	0.0	5.7
By access to fully in-person instruction in 2020-21					
Never offered	99.7	0.0	0.3	0.0	0.1
Less than half of year	99.7	0.1	0.2	0.1	1.6
At least half of year	99.9	0.0	0.1	0.0	3.6
Offered all year	99.7	0.1	0.2	0.1	2.7

Notes: Percentages in the first four columns are based on the 98% of students whose districts reported modality information in 2024-25. The percentages in each row may not add to exactly 100% due to rounding. The percentages in the "No Data" column are based on the full population of students with 2024-25 benchmark assessment data.

Given how few students received instruction in hybrid or remote formats in 2024-25, we limit our comparisons to just two subgroups: those who received in-person instruction all year and those who received any other mode of instruction (hybrid, remote, or a combination of modalities). In total, 10,335 students from 129 different districts received remote or hybrid instruction in 2024-25. Eighty-one percent of these students attended charter schools that have always operated virtually, while the remaining 19% attended traditional public and charter schools that provide face-to-face instruction. Notably, the share of students learning remotely was much higher among students who took the Star 360 assessments (about 6%) than in any other group. This is because the Star 360 sample has a disproportionately larger share of virtual charter schools. Nearly half of the virtual charter school students with 2024-25 benchmark assessment data took a Star 360 assessment, compared to only 7% of the overall sample. Among Star 360 test-takers who did not attend virtual charter schools, 99% received their instruction for the 2023-24 school year in a fully in-person format.

DATA AGGREGATION AND ANALYSIS

To construct the final aggregate data files for our analysis, we calculated several indicators of student academic performance at both the district and state levels, overall and by subgroup.³ We then combined the resulting district- and state-level aggregate datasets with data from individual districts that prepared their own aggregate data files in lieu of submitting student-level data through the MiDataHub. We completed this process separately for three types of analytic samples to create aggregate measures appropriate for examining student achievement in a single testing period, for growth across a single school year (2020-21, 2021-22, 2022-23, 2023-24, or 2024-25), and for longitudinal trends for a consistent group of students across all possible testing periods.

The remainder of this section describes each indicator of academic achievement and growth, as measured by student scores on MDE-approved benchmark assessments between fall 2020 and spring 2025, that we constructed and analyzed for this report.

Average Achievement Trajectories

The first set of analyses examines trends in average scale scores across ten testing periods: the fall and spring semesters of the 2020-21 through 2024-25 school years. The MAP Growth, i-Ready, Star 360, and Smarter Balanced ICA benchmark assessments are all scored on vertical scales, enabling comparisons of scores for the same group of students on the same assessment across multiple school years as they progress from one grade level to the next. However, because each benchmark assessment has a unique scale and scale scores are not comparable across assessments (e.g., MAP Growth scores range from 100 to 350, whereas i-Ready scores range from 0 to 800), we present cohort-specific trends in average scale scores separately for each assessment.

As comparison points to help us interpret the overall trends for Michigan students across eight testing periods, we plot these trends alongside grade-level norms that each assessment provider established before the pandemic. While we use pre-pandemic medians as comparison points for all benchmark assessments, not all providers calculate or present this information in the exact same ways. For instance, although we use the most recent norms that were available for each assessment as of the end of the 2020-21 school year (Curriculum Associates, 2021; Renaissance Star Assessments, 2021a, 2021b, 2021c; Smarter Balanced Assessment Consortium, 2021; Thum & Kuhfeld, 2020), the specific year(s) of data, sampling procedures, and methodology to produce norms differ across assessments.⁴ We provide additional details about differences in the pre-pandemic norming data and comparison points for each benchmark assessment in an [earlier report](#) in this series.

We provide separate results for the MAP Growth, i-Ready, and Star 360 assessments. We omit the DRC assessments from this analysis because the assessments for grades K-2 (the MDE Early Literacy and Mathematics benchmark assessments) differ from those for grades 3-8 (the Smarter Balanced ICAs), and they have different scales that are not directly comparable. Moreover, some districts use only the K-2 assessments from DRC, not the Smarter Balanced

ICAs, and some have used the Smarter Balanced Interim Assessment Blocks (IABs), which cover only specific subtopics rather than a broad range of math or reading/ELA content, in certain grade levels and testing periods in place of the ICAs. As a result, the number of students with Smarter Balanced ICA scores in all five school years is insufficient for us to estimate longitudinal trends for this assessment.

Variation in Student Achievement

In addition to analyzing the average performance of Michigan students on their benchmark assessments, we assess how much their test performance varied. For each benchmark assessment, subject area, grade level, and testing period, we calculate the 10th, 25th, 50th, 75th, and 90th percentiles of Michigan students' benchmark assessment scores. We compare these percentiles across testing periods to assess changes in Michigan students' performance, both at the middle of the distribution and for lower- and higher-scoring students. We also examine the gaps between the scores of Michigan's higher- and lower-performing students and the extent to which these gaps have changed over time.

As pre-pandemic comparison points, we compare the distributions of Michigan students' benchmark assessment scores to the distributions of scores from the national norming samples for each assessment. We plot the 10th, 25th, 50th, 75th, and 90th percentiles of the norming distributions alongside the Michigan-specific distributions for each grade level, subject, and assessment. These comparisons help us to understand how trends in average performance differ between Michigan students and students nationwide before the COVID-19 pandemic, how the extent of variation in Michigan students' achievement compares to that of the national norming sample, and how Michigan's achievement distribution has changed over the past five years.

We provide separate results for the MAP Growth, i-Ready, and Star 360 benchmark assessments. We exclude the DRC assessments from this analysis, as the scale for the MDE K-12 Early Literacy and Mathematics benchmark assessments has changed since the initial (fall 2020) testing period, and differences in the populations of students who took the Smarter Balanced ICAs each year complicate meaningful comparisons of changes in the distribution.

Regression-Adjusted Percentile Ranks

We use the aggregated benchmark assessment data in multiple regression models to estimate relationships between the average achievement in a district over time, controlling for other district characteristics. Multiple regression is a statistical technique that predicts an outcome variable using two or more explanatory variables. This technique allows us to estimate the unique relationships between academic achievement in consecutive semesters and show how these relationships have changed over time, holding all else equal between districts.

The achievement outcomes in each regression model represent the average score on a particular benchmark assessment for a specific district, grade level, and subject in each testing period. We standardize scores relative to the means and standard deviations of student scores from the pre-pandemic norming samples for each assessment, allowing us to interpret the standardized scores in terms of how a district's average achievement compares to the national pre-pandemic average.

For example, a standardized score of negative one indicates that the average achievement in a district was one standard deviation below the national pre-pandemic average.

We estimate the following baseline model:

$$Y_{dgs} = \beta_0 + \beta_1 S21_t + \beta_2 F21_t + \beta_3 S22_t + \beta_4 F22_t + \beta_5 S23_t + \beta_6 F23_t + \beta_7 S24_t + \beta_8 F24_t + \beta_9 S25_t + \beta_{10} DCHAR_{dgs} + \delta_g + \epsilon_t$$

where Y_{dgs} is the average standardized test score of students in district d , grade g , completing subject test s , in semester t . $S21$, $F21$, $S22$, $F22$, $S23$, $F23$, $S24$, $F24$, and $S25$ are binary indicators identifying the semester associated with the outcome of interest, Y_{dgs} , with the letters “F” and “S” referring to fall and spring semesters, respectively, and numbers indicating the last two digits of each year (e.g., “F21” refers to fall 2021 and “S25” refers to spring 2025). The coefficients on these indicators, shown here as β_1 through β_9 , describe the change in average standardized test scores attributable to each semester, relative to fall 2020.

We control for a set of district characteristics, $DCHAR_{dgs}$, including the proportions of students in each district-grade who are female, of different races/ethnicities, economically disadvantaged, eligible for special education services, and English learners. We mean-center these characteristics so that a value of zero represents the state average, allowing us to interpret the constant term (β_0) as the predicted achievement for an average district in fall 2020. δ_g is a grade fixed effect which controls for differences in standardized tests scores unique to a particular grade level, allowing for cross-grade comparisons within the same model. To ease interpretation of these values, we convert each standardized test score estimate to a percentile rank that describes where Michigan students’ average achievement falls along the pre-pandemic national norming distributions for each assessment. For example, a percentile rank of 50 indicates that Michigan students scored at the pre-pandemic national average.

We estimate additional variations of this model that include interactions between each semester-specific time indicator with subgroup indicators to estimate results separately by race/ethnicity, economically disadvantaged status, and access to in-person instruction during the 2020-21 school year. For our instructional modality analysis, we assign students to subgroups based on the number of months their district offered in-person instruction during the 2020-21 school year: zero months, one to four months, five to eight months, or all nine months.

To assess changes over time across a consistent group of students, we include only cohorts that remained within the K-8 grade range (and therefore participated in benchmark assessments) across all five years. Given concerns about the reliability of fall 2020 benchmark assessment scores for lower elementary students (discussed in detail in our [fall 2021 report](#)), we limit our main models to cohorts of students who were in the 3rd or 4th grade in 2020-21. However, we also fit an alternate model that includes students who were in kindergarten, 1st, or 2nd grade in 2020-21. This model includes interactions between each grade-level indicator and the semester-specific time indicators, allowing us to estimate separate trends for each individual grade level. We estimate separate variations of these models for the samples of districts that used the MAP Growth and i-Ready assessments, as well as a combined model with both groups of districts. In the combined model, we include a “vendor” fixed effect to account for differences between

these tests. We exclude the Star 360 and Smarter Balanced samples due to low student and district counts within some grade levels and subgroups of interest for these analyses.

Proficiency Rates

To provide a general understanding of how Michigan students' performance on benchmark assessments compares to state standards for grade-level proficiency, we use information from each benchmark assessment provider to map students' benchmark assessment scores to approximate M-STEP proficiency levels.

NWEA, Curriculum Associates, and Renaissance Learning each developed crosswalks between their benchmark assessment scale scores and M-STEP proficiency levels using an equipercentile linking method (Curriculum Associates, 2020b; NWEA, 2020; Renaissance Learning, 2019). This means that, for a group of students who took both the M-STEP and a particular benchmark assessment, they identified score cut-offs for their benchmark assessments so that the percentage of students in each proficiency category would perfectly match the percentages of students who scored within the same category on the M-STEP (e.g., if 20% of students in this sample scored in the "advanced" level on the M-STEP, the benchmark assessment vendors would have set their cut-off so that exactly 20% of students fall within their "advanced" category as well). This process was unnecessary for the Smarter Balanced assessments, as DRC designed both the M-STEP and Smarter Balanced Assessments and derives the scores for these assessments from the same underlying scale (MDE, 2019; Smarter Balanced Assessment Consortium, 2021) allowing direct conversion of M-STEP score cut-offs for each proficiency category to Smarter Balanced scale scores.

After using these crosswalks, we compare M-STEP proficiency equivalencies to the actual M-STEP proficiency rates for students in the same districts in 2018-19. This provides a reference point to gauge how Michigan students' achievement from 2020-21 to 2024-25 differs from the achievement of students who attended the same districts in 2018-19.

Student Growth

Although we can compare average scale scores and regression-adjusted trends across grades, it is important to note that the "typical" amount of test score growth over the course of a school year often differs by grade level, subject, and initial achievement level. To account for these differences, we compare changes in students' scale scores between the fall and spring of each school year to pre-determined norms for "typical growth" on a particular assessment, subject area, and grade level for students who scored within the same range on their fall assessment.

The growth norms for each assessment are defined in slightly different ways and have slightly different meanings. For students who completed MAP Growth assessments, we use the 50th percentile of the fall-to-spring conditional growth distribution for students with the same initial percentile rank as a growth norm (Thum & Kuhfeld, 2020). For Curriculum Associates, we use "typical growth" targets from the i-Ready assessment growth models, which indicate the median growth of students in the same grade level with the same initial placement level (nationwide before the pandemic (Curriculum Associates, 2020a). For Star 360 and Smarter Balanced ICA

assessments, we use pre-pandemic scale score distributions to identify “typical growth” as the change in scale score necessary for a student to maintain the same percentile rank in the spring as in the fall (Renaissance Star Assessments, 2021a, 2021b, 2021c; Smarter Balanced Assessment Consortium, 2020). These measures represent the scale score increase necessary for a Star 360 or Smarter Balanced ICA student who scored, for example, in the 25th percentile in fall 2020 to also score in the 25th percentile on their spring 2021 benchmark assessment.

While these growth thresholds help us gain a better understanding of academic growth among Michigan students during the COVID-19 pandemic, it is important to note that we are using summary tables from each assessment provider to assign growth norms to groups of students. The assessment providers have each developed and use their own sophisticated student-level models to derive growth measures; we are unable to perfectly replicate those measures from just the summary tables and the aggregate district-level data made available under the Return to Learn law. For example, in their growth calculations, most assessment providers account for the number of instructional days between the two testing occasions, based on the test dates and the district’s instructional calendar. For our aggregate, statewide analyses, we cannot account for the exact amount of instructional time between each student’s annual fall and spring assessments and accordingly, we assign growth norms as though the timing were the same for all students.

PURPOSE AND FRAMING OF SUBGROUP COMPARISONS

The content we include in this series of legislatively mandated reports must fulfill specific requirements outlined in state law, one of which is to disaggregate data about student achievement and growth on benchmark assessments by demographic group (2021 PA 48, 2023 PA 103, 2024 PA 120).

We believe that these types of analyses are important for understanding the disparate effects of the COVID-19 pandemic, targeting resources and interventions toward the schools and students who experienced the most severe effects, and monitoring their recovery. At the same time, we understand that comparisons between students of different races/ethnicities often frame educational inequities through a deficit lens, unfairly attributing differences to students instead of systems and reinforcing harmful stereotypes about students of color.

With these considerations in mind, we limit the race/ethnicity comparisons in this report to just regression-adjusted percentile ranks and student growth outcomes, as these parts of our analysis account for additional factors that affect students’ performance on benchmark assessments like their baseline achievement levels and the types of schools they attend. When discussing these results, we primarily focus on how changes in growth or achievement during pandemic-affected school years differed across subgroups, and only reference differences in their achievement or growth levels when examining the extent to which achievement gaps worsened in 2020-21 and improved in subsequent years.

To assess students' actual growth relative to "typical growth," we first calculate the difference between each student's spring and fall scale scores from the same school year, then compare this fall-to-spring change to the appropriate growth norm (i.e., the *typical scale score* increase based on the assessment provider, grade level, subject, and the student's initial achievement level). Before aggregating the data to the district level, we group students into three categories based on their fall-to-spring growth for each school year: (1) students who did not demonstrate any growth at all (i.e., their scale scores remained the same or decreased from fall to spring); (2) students who achieved partial growth (i.e., their scale scores increased from fall to spring, but the increase was less than the typical growth for their grade, subject, and initial achievement level); and (3) students who met or exceeded their growth targets (i.e., their scale scores increased by an amount equal to or greater than the typical growth for their grade, subject, and initial achievement level). We examine patterns in the percentages of students in each of these categories in each year and subject area, overall and by assessment vendor, grade level, demographic group, and mode of instruction.

SUMMARY

The analyses in this report are based on data representing 84% of districts (710 of the 844 total districts) and 81% of K-8 students in the state (763,917 of the 940,677 total students). However, those represented in our analyses may not be reflective of those who are not included. Moreover, some of our analyses are limited to certain subsets of the full dataset, depending on the type of data needed for the analysis and the information available about each assessment. Table 2.5 summarizes the specific samples, grade levels, and assessments that are represented in each of our analyses.

Table 2.5. Analytic Samples, Grade Levels, and Assessments Included in Each Analysis				
Analysis	Sample	Grades	Assessments	Notes
Average Achievement Trajectories	Longitudinal growth	K-8	MAP Growth, i-Ready, Star 360	Grades 1-8 only for Star Math
Variation in Student Achievement	Full sample	K-8	MAP Growth, i-Ready, Star 360	Grades 1-8 only for Star Math
Regression-Adjusted Percentile Ranks	Longitudinal growth	3-8	MAP Growth & i-Ready	Some models also include K-2
Proficiency Rates	Full sample	3-7	All	M-STEP grade levels only
Student Growth	School-year growth	K-8	All	All grades/vendors with growth norms

Notes: The average achievement trajectory and regression-adjusted percentile rank analyses include district-provided aggregate data. We do not include kindergarten scores for Star Math because the assessment is only normed for students in 1st grade and above. The exact grade levels included in our student growth analysis vary across vendors, as we can include only grade levels for which the vendor has growth norms available.

While it is important to keep in mind the data limitations when interpreting results, the report nonetheless helps deepen our understanding of how Michigan public school students progressed academically between the fall 2020 and the spring 2025 semesters. The analyses presented in Section Three continue to expand on the descriptive results presented in our previous reports, providing a more refined estimate of academic growth by incorporating another year of assessment data and comparing academic trajectories of Michigan students to pre-pandemic trajectories of students from across the country.

Section Three:

Results

In this section, we summarize outcomes for Michigan students on benchmark assessments that districts administered each semester between fall 2020 and spring 2025. We first present trends in scale scores on each individual assessment, examining shifts in average achievement as well as distributional changes. We then estimate the state's overall achievement trajectory using a series of regression models that adjust for differences across assessments, grade levels, and the demographic composition of students within each district. To better understand how these achievement trends relate to Michigan-specific grade level standards, we present benchmark assessment results in terms of M-STEP proficiency levels. Finally, we compare Michigan students' test score growth in the 2020-21 through 2024-25 school years to growth norms that each assessment provider established before the COVID-19 pandemic and examine how growth outcomes vary across student populations and instructional modalities.

Not all districts use the same benchmark assessment. While the MDE-approved assessments all measure similar constructs (e.g., math or reading achievement), there are slight differences in their design, intended purposes, and content coverage. Moreover, each assessment has its own unique scale, and scores are not comparable across assessments. For these reasons, we conduct certain analyses separately by vendor. Where possible, we include combined analyses that rely on standardized metrics that have similar meanings across assessments. These combined analyses provide insight into what the results from the separate assessments collectively tell us about student learning and recovery for the state as a whole.

Due to changes in district participation over time and retroactive corrections to historical data, some data points for the 2020-21 through 2023-24 school years are slightly different from those in our prior reports. These differences are very small and do not meaningfully change any results or conclusions from past reports.

AVERAGE ACHIEVEMENT TRAJECTORIES

Average scores on vertically-scaled assessments typically increase over time and across grade levels, with slight decreases during the summer months—often referred to as the “summer slide” (e.g., see McEachin & Atteberry, 2017; Quinn et al., 2016). As students grow older and advance to higher grade levels, year-to-year increases in average scores typically become smaller and gaps between higher- and lower-achieving students widen (von Hippel, 2020). However, students' learning experiences during and following the COVID-19

pandemic have been far from “typical.” To understand how Michigan student achievement trajectories from fall 2020 to spring 2025 differ from past norms, we examine trends in average scale scores for students who participated in both fall and spring benchmark assessments all five years.

In previous reports, we showed that average scores for students in most grade levels were generally close to or slightly below pre-pandemic norms in the fall of 2020 and fell further below norms by spring 2021.⁵ Over the next two years, average scores increased at about the same rate as the pre-pandemic norms, meaning that Michigan students did not fall any further below the norms but also did not experience the accelerated rate of learning needed for their scores to “catch up” to pre-pandemic levels. In 2023-24, Michigan students made substantial progress on many math benchmark assessments, often reaching or surpassing pre-pandemic norms, but generally remained below the norm on most reading assessments. Figures 3.1 to 3.3 extend the trend analyses from our past reports to include new data from the fall 2024 and spring 2025 testing periods.

Although Michigan students made particularly large math gains on the MAP Growth assessments in 2023-24, data from the subsequent year suggests that some of this growth was temporary and did not persist through the summer. As Figure 3.1 shows, decreases in average scores between the end of 2023-24 and the beginning of 2024-25 exceeded typical “summer slide.” After reaching or surpassing pre-pandemic national norms in all grade levels in spring 2024, several grade cohorts fell below the norms when students returned to school in the fall. Despite some loss of progress over the summer, average math scores increased at an accelerated rate during the 2024-25 school year, with all grades except 5th and 6th once again reaching or exceeding pre-pandemic national norms by spring 2025.

HOW TO INTERPRET FIGURES 3.1-3.3

In these figures, **green and blue points** represent average math and reading scale scores, respectively, in each testing period. Average scores for the same cohort of students are connected by **solid lines**, showing the cohort’s achievement trajectory over time. Each point is labeled to show what grade level students were in during a particular testing period. **Dashed lines** represent pre-pandemic norms for a given assessment, subject area, and grade level. The **shaded area between pairs of solid and dashed lines** shows the difference between the average score for Michigan students and the pre-pandemic norm.

The **y-axis scales** in each figure extend approximately from the kindergarten fall norm for each assessment to the 8th grade spring norm. Although the exact numbers on the scale differ slightly between subjects and differ greatly across vendors, the total distance from the bottom to the top of each y-axis always represents the range of grade-level norms from the beginning of kindergarten to the end of 8th grade.

Rising 1st through 3rd graders also experienced notable decreases in reading achievement on the MAP Growth assessments over the summer, followed by average or slightly accelerated growth between fall 2024 and spring 2025. Students in 4th through 8th grade generally maintained their reading achievement levels over the summer but fell further below national norms over the course of the 2024-25 school year. In spring 2025, only kindergarten and 1st grade students scored at or above national reading norms on the MAP Growth assessments.

Results from the i-Ready assessments in 2024-25 mirror those from the previous year. As shown in Figure 3.2, middle school students began and ended the year performing above pre-pandemic norms in math, while students in kindergarten through 5th grade started near or below their norms and fell slightly further behind by spring 2025.⁶ In reading, elementary students scored close to pre-pandemic norms in both fall 2024 and spring 2025. Middle school students began the year above reading norms but made less-than-typical gains between the fall and spring semesters, with 6th and 7th graders moving closer to their norms and 8th graders falling below the norm in spring 2025.

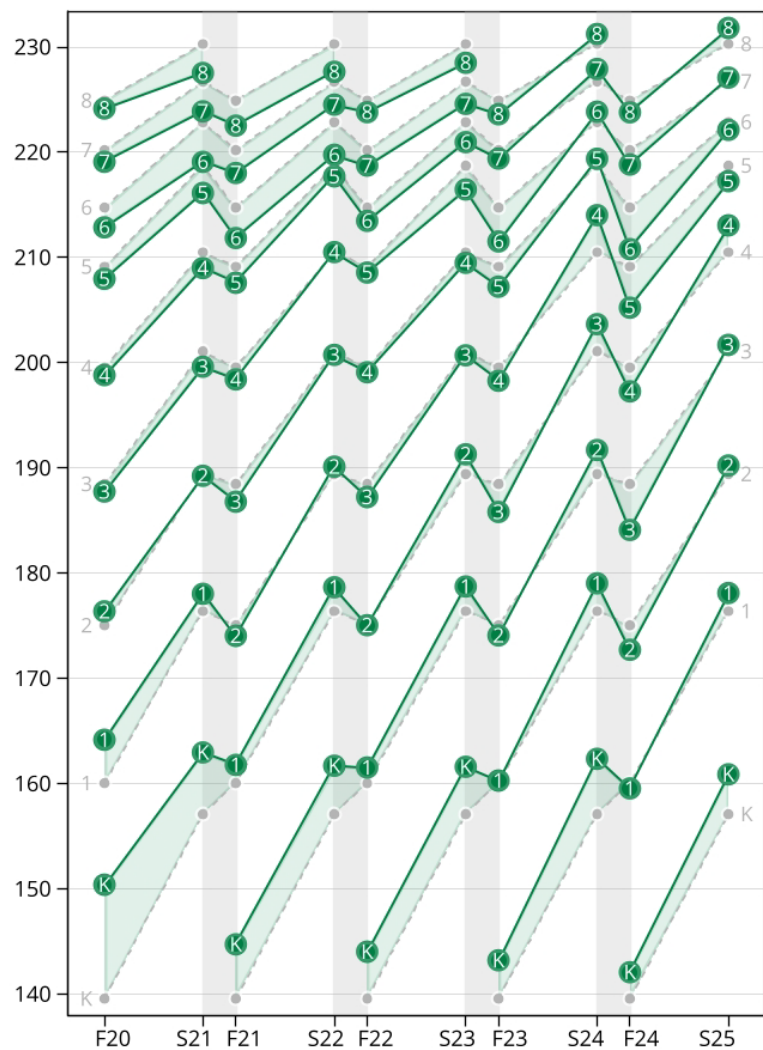
Consistent with the MAP Growth results, data from the Star 360 assessments show notable math declines between the spring 2024 and fall 2024, followed by accelerated growth during the 2024-25 school year. Figure 3.3 shows that, by spring 2025, average Star math scores for 1st through 5th grade students were above national norms, though to a lesser degree than they were the previous year. Results from the Star reading and early literacy assessments differ across grade levels but generally reflect the patterns observed in 2023-24. Students in kindergarten through 2nd grade began the 2024-25 school year very close to national norms, while average scores for students in 3rd through 8th grade were below national norms. By spring 2025, 2nd through 4th graders had surpassed their respective norms, while 5th graders grew closer to the norm and 6th through 8th grade students fell further below their norms.

Some of the differences we observe in achievement trends across vendors or grade levels may be driven by differences in the populations of students and districts that participated in each benchmark assessment. For instance, the i-Ready sample consists primarily of students from urban districts that operated remotely in 2020-21, whereas the Star 360 sample primarily consists of smaller districts in suburbs, towns, and rural areas that were more likely to stay in-person during 2020-21 (see Section Two of this report). In some instances, differences in performance across grade levels on the same assessment may also reflect differences in the populations of participating students. For example, some districts may administer the Star 360 assessments to all elementary students but use it only as a progress monitoring tool for middle school students receiving certain interventions, which could result in very different achievement trends across grade levels.

Figure 3.1. Trends in Average Scale Scores, MAP Growth

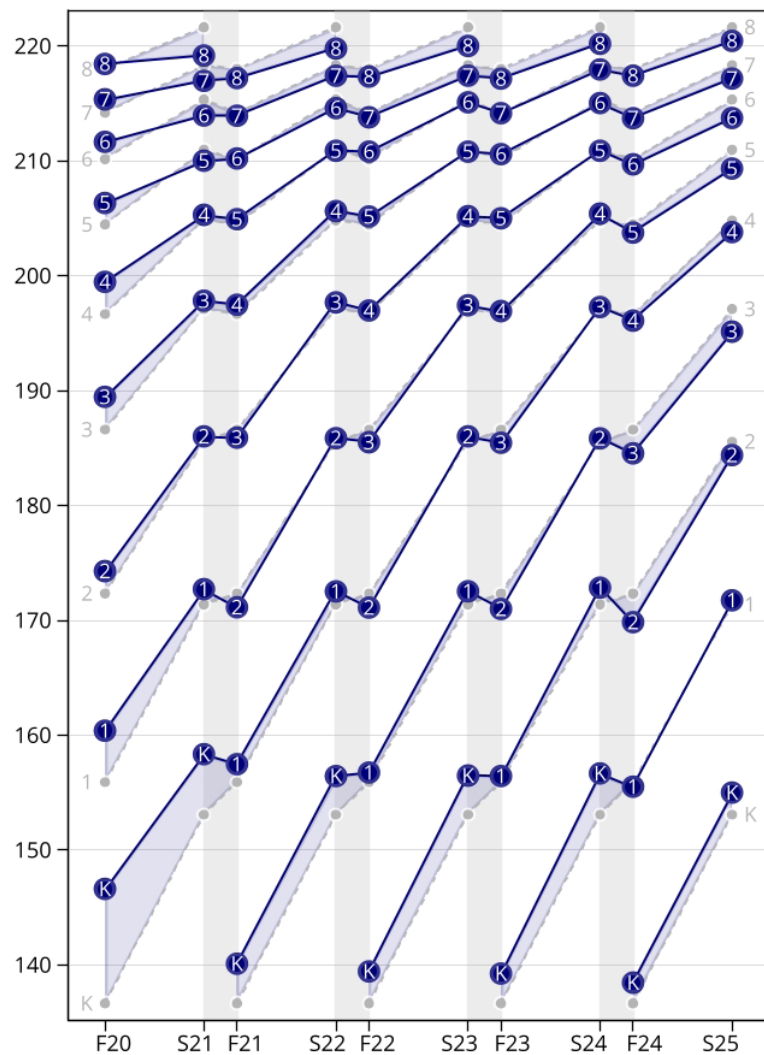
MAP Growth Mathematics

Average RIT scale score



MAP Growth Reading

Average RIT scale score

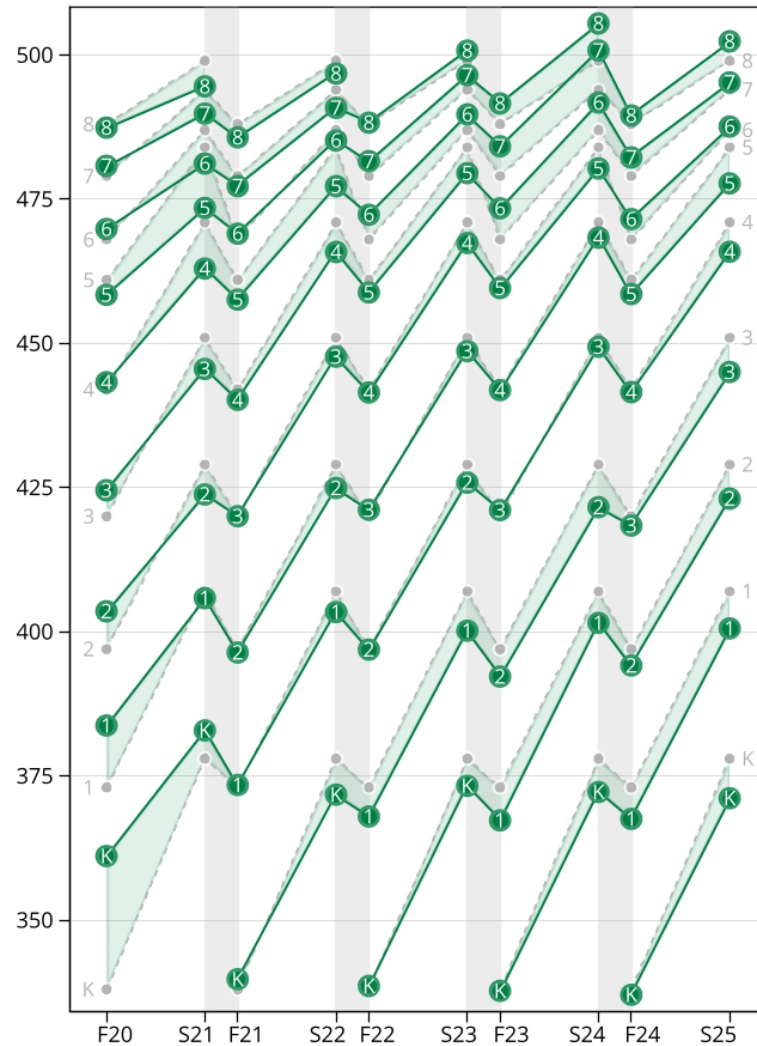


Notes: Dashed lines represent pre-pandemic national norms. Averages include only students with benchmark assessment scores for every possible testing period. The y-axis scales range from the kindergarten fall norm to the 8th grade spring norm, which differ slightly across subjects.

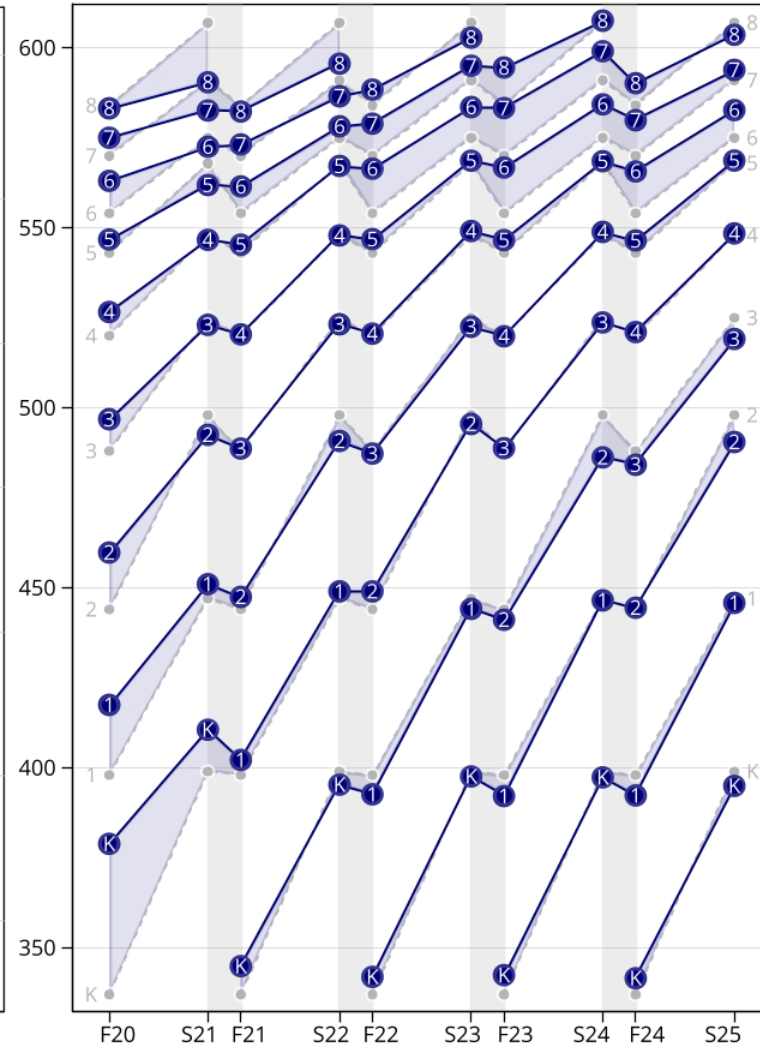
Figure 3.2. Trends in Average Scale Scores, i-Ready

i-Ready Mathematics

Average i-Ready diagnostic scale score

**i-Ready Reading**

Average i-Ready diagnostic scale score

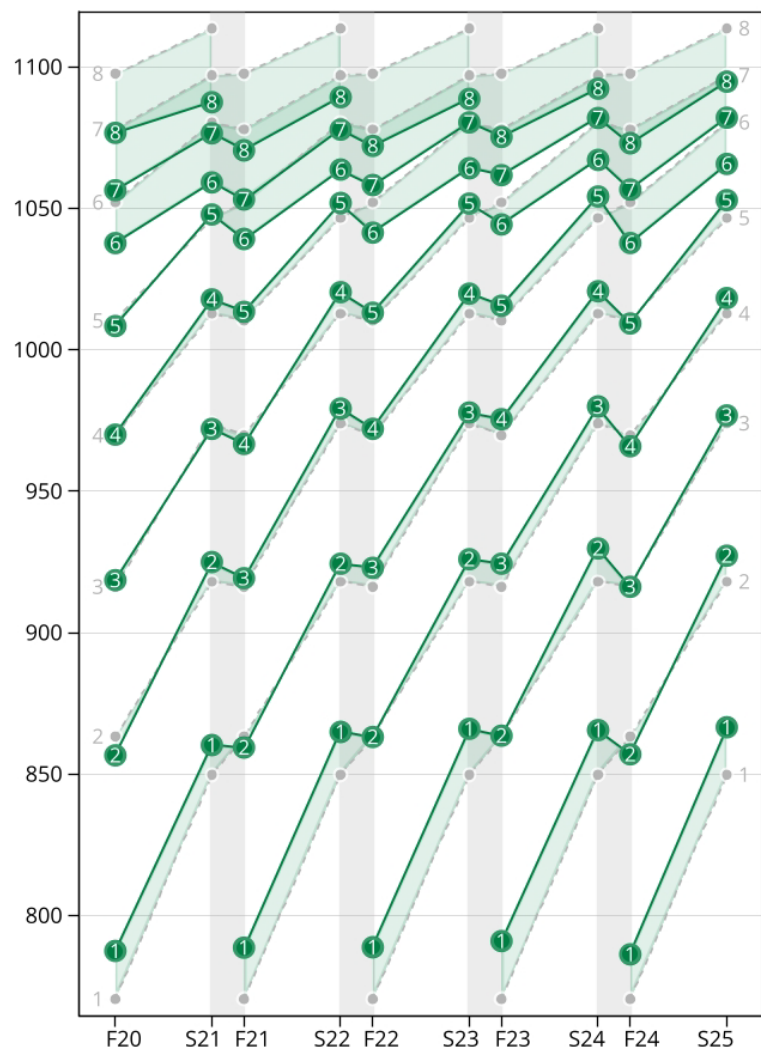


Notes: Dashed lines represent the 2018-19 median for MI students. Averages include only students with benchmark assessment scores for every possible testing period. The y-axis scales range from the kindergarten fall norm to the 8th grade spring norm, which differ slightly across subjects.

Figure 3.3. Trends in Average Scale Scores, Star 360

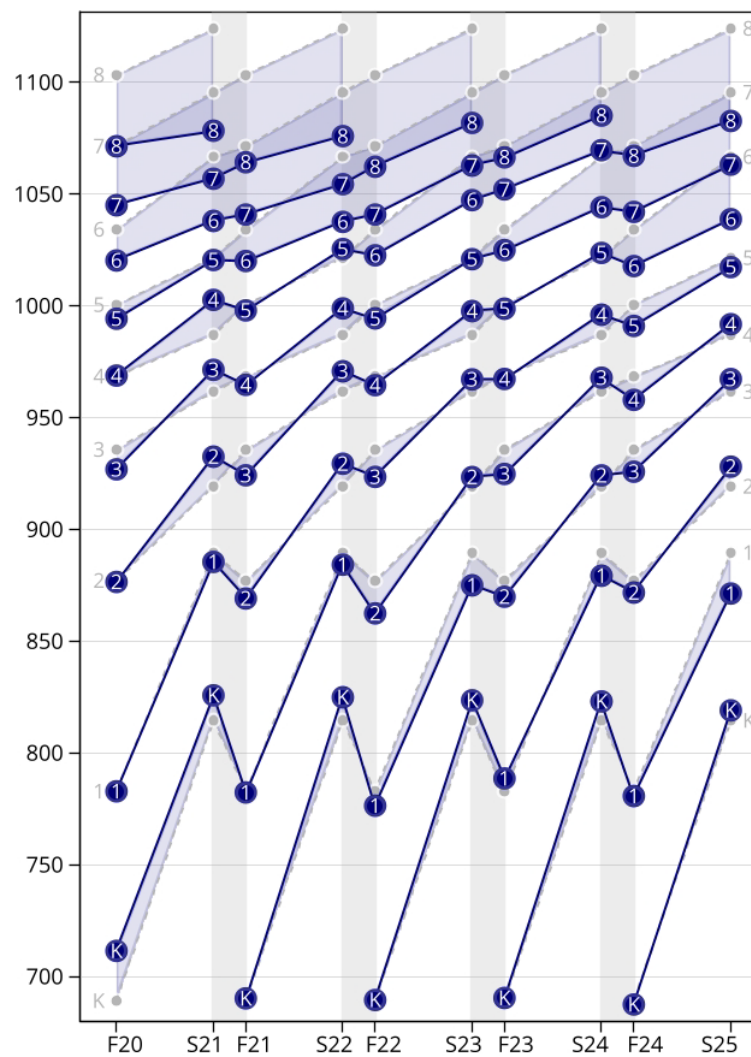
Star Math

Average unified scale score



Star Reading/Early Literacy

Average unified scale score



Notes: Dashed lines represent pre-pandemic national norms. Averages include only students with benchmark assessment scores for every possible testing period. The y-axis scales range from the kindergarten fall norm to the 8th grade spring norm, which differ slightly across subjects.

VARIATION IN STUDENT ACHIEVEMENT

While Figures 3.1 through 3.3 help us understand how Michigan students performed *on average*, these trends do not necessarily reflect all students' learning experiences or achievement outcomes. To better understand variations in student achievement trends, we examine changes in the distribution of scale scores over time. Figures 3.4 to 3.6 show spring score distributions for the pre-pandemic norming sample, the first COVID-affected year (spring 2021), and spring 2025. Appendix Figures A.2.1 to A.2.6 show the score distributions for all possible spring and fall testing periods, providing additional information about year-to-year distributional changes throughout the study period.

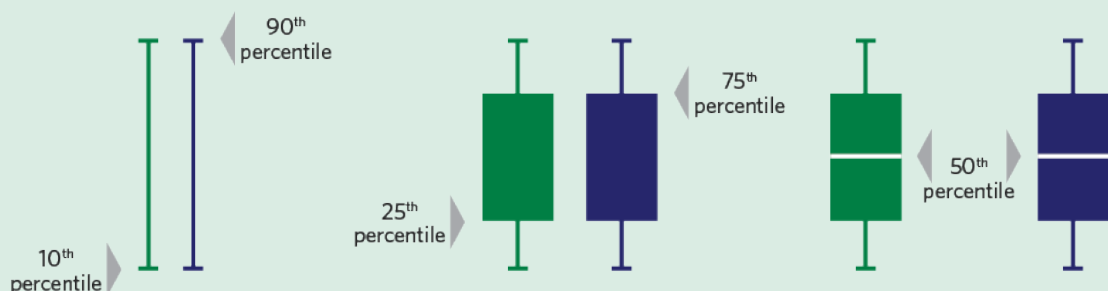
As expected on a vertically scaled test, the centers of these distributions (both for the national norming samples and for Michigan students) move upwards across grade levels, indicating that students' scores increase as they advance in age and grade level. The distributions also span wider ranges of scale scores in upper grade levels, indicating that there is more variation in students' achievement at higher grade levels. As discussed in our [prior report](#), median scores for Michigan students in 2020-21 were below pre-pandemic national medians, and gaps between Michigan's higher- and lower-achieving students that year were wider than those for the pre-pandemic national norming samples. In most grade levels, median scores changed relatively little between the 2020-21 and 2022-23 cohorts, with distributions remaining wider than pre-pandemic norms. On most assessments, the lowest-scoring Michigan students (those in the bottom 10%) had much lower scores than the bottom 10% of the national norming sample, while the highest-scoring students (top 10%) scored similarly to or slightly below the top 10% of the norming sample. These patterns suggest that disruptions to student learning and instruction during the COVID-19 pandemic had a disproportionate effect on lower-achieving students.

Scale score distributions for many benchmark assessments show notable improvements in performance between 2020-21 and 2024-25. For instance, the top panel of Figure 3.4 shows that by spring 2025, median math scores on the MAP Growth assessment were higher in every grade level compared to spring 2021, with the largest increases in grades 2 through 8. In these same grade levels, the 10th, 25th, 75th, and 90th percentiles also shifted upwards, indicating improvements in math achievement across the entire distribution of students. However, score distributions generally remain wider than would have been expected before the pandemic, especially in upper elementary grade levels.

While improvements in median scores for kindergarten and first grade students over the same period are smaller in comparison, they were above the national pre-pandemic median in both spring 2021 and spring 2025. As we've discussed in previous reports, differences in students' at-home testing environments in 2020-21 make it difficult to interpret test results for Michigan's youngest test-takers that year. The year-by-year distribution comparisons (available in Appendix Figures A.2.4 through A.2.6) show unusually high performance in these grade levels—especially among the upper half of the distribution—in spring 2021 compared to subsequent years. Comparing spring 2025 scores to spring 2022 (after most students returned to in-person schooling) instead of spring 2021, we see more prominent increases in median scores.

HOW TO INTERPRET FIGURES 3.4 TO 3.6

These figures show the **distribution of benchmark assessment scores** for students in each grade level in a particular testing period. We use lighter shades of green and blue to depict the distribution of scores for the **pre-pandemic norming sample**, and darker shades of the same colors to depict the distributions **of Michigan students'** benchmark assessment scores.



Each vertical line shows the **10th and 90th percentiles** of students' spring scores.

While each rectangle shows the **25th and 75th percentiles**.

The horizontal white line near the center of each rectangle represents the **50th percentile or median**.

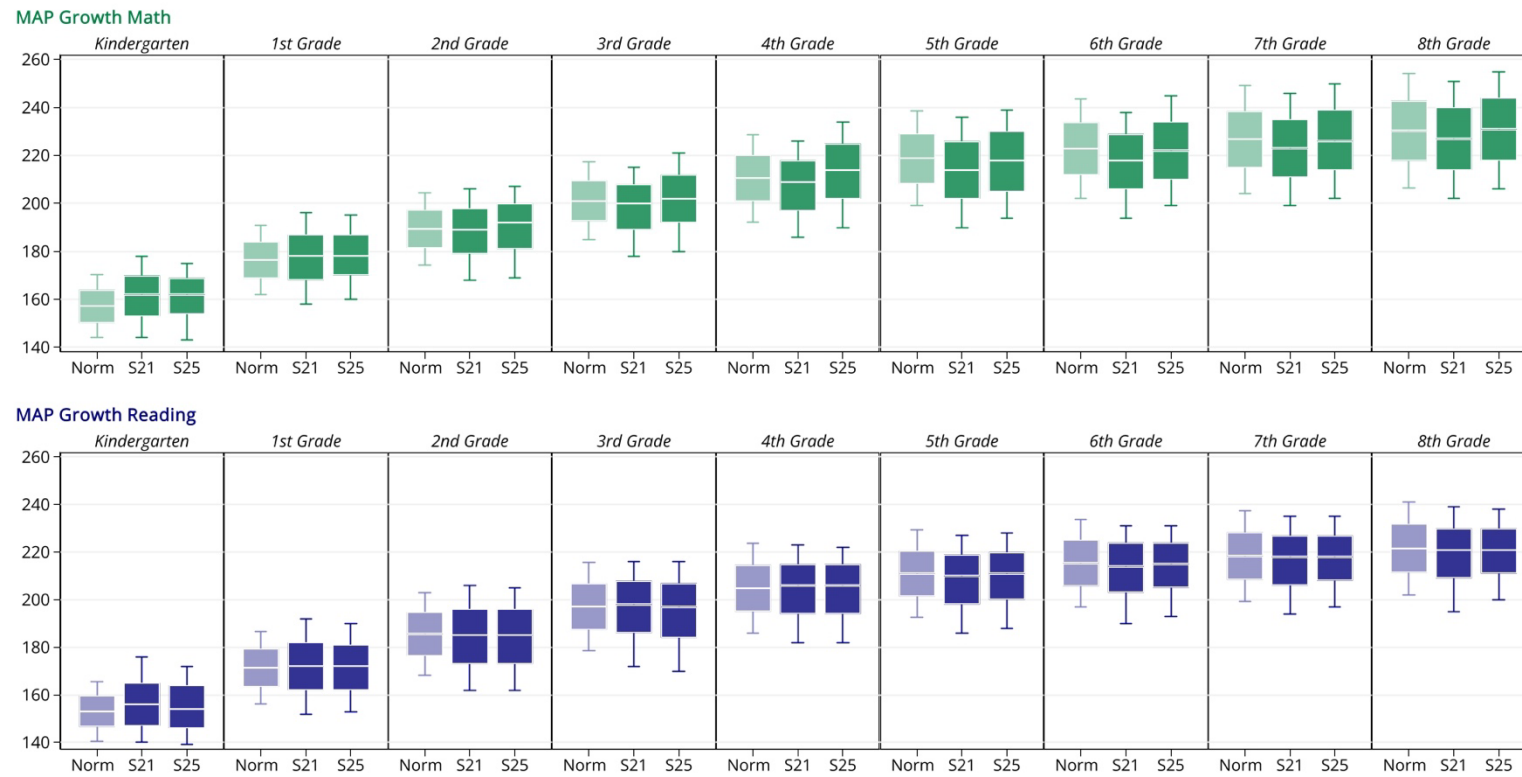
We use a “box-and-whisker” design to show the average achievement and how achievement varied across a group of students. Comparing the **positions** of boxes and whiskers across groups of students tells us how **achievement levels** differed among the groups. Comparing the total **lengths** of boxes and whiskers across groups of students tells us how the **variation in student achievement** differs between the groups.

Although Michigan students' average reading scores on the MAP Growth assessment did not increase to the same extent as their math scores (as we showed in Figure 3.1), the bottom panel of Figure 3.4 highlights other encouraging patterns. In several grade levels, the 10th or 25th percentiles increased between spring 2021 and spring 2025, while the 50th, 75th, and 90th percentiles remained about the same. This pattern suggests that the lowest-performing students in the most recent cohort achieved higher reading scores than their counterparts in spring 2021, possibly reflecting districts' use of instructional interventions targeting the students who were the furthest behind. As a result of these distributional shifts, gaps between the highest- and lowest-performing students have become smaller, especially in middle school grade levels. It is also important to note that median reading scores in early stages of the pandemic were much closer to national norms than median math scores. Despite relatively little change in average reading performance since 2020-21, median scores in both subjects were close to pre-pandemic norms at the end of 2024-25.

We find similar patterns on the i-Ready assessments. As Figure 3.5 shows, the distributions of i-Ready math scores for upper elementary and middle school students shifted upward between spring 2021 and spring 2025, indicating increases in performance for Michigan students at all achievement levels. Math score distributions in lower elementary grades narrowed between 2020-21 and 2024-25 but generally remained wider than the norm. Results from the i-Ready reading assessments show notable increases in test scores at the lower end of the distribution, narrowing gaps between higher- and lower-performing students. For students in 4th through 8th grade, these improvements extend to other parts of the distribution as well, suggesting more widespread progress across achievement levels. This pattern could reflect differences in how districts approached pandemic learning recovery across grade levels, with more targeted supports for lower-performing students in the earlier grades and broader (e.g., schoolwide) interventions in later grades.

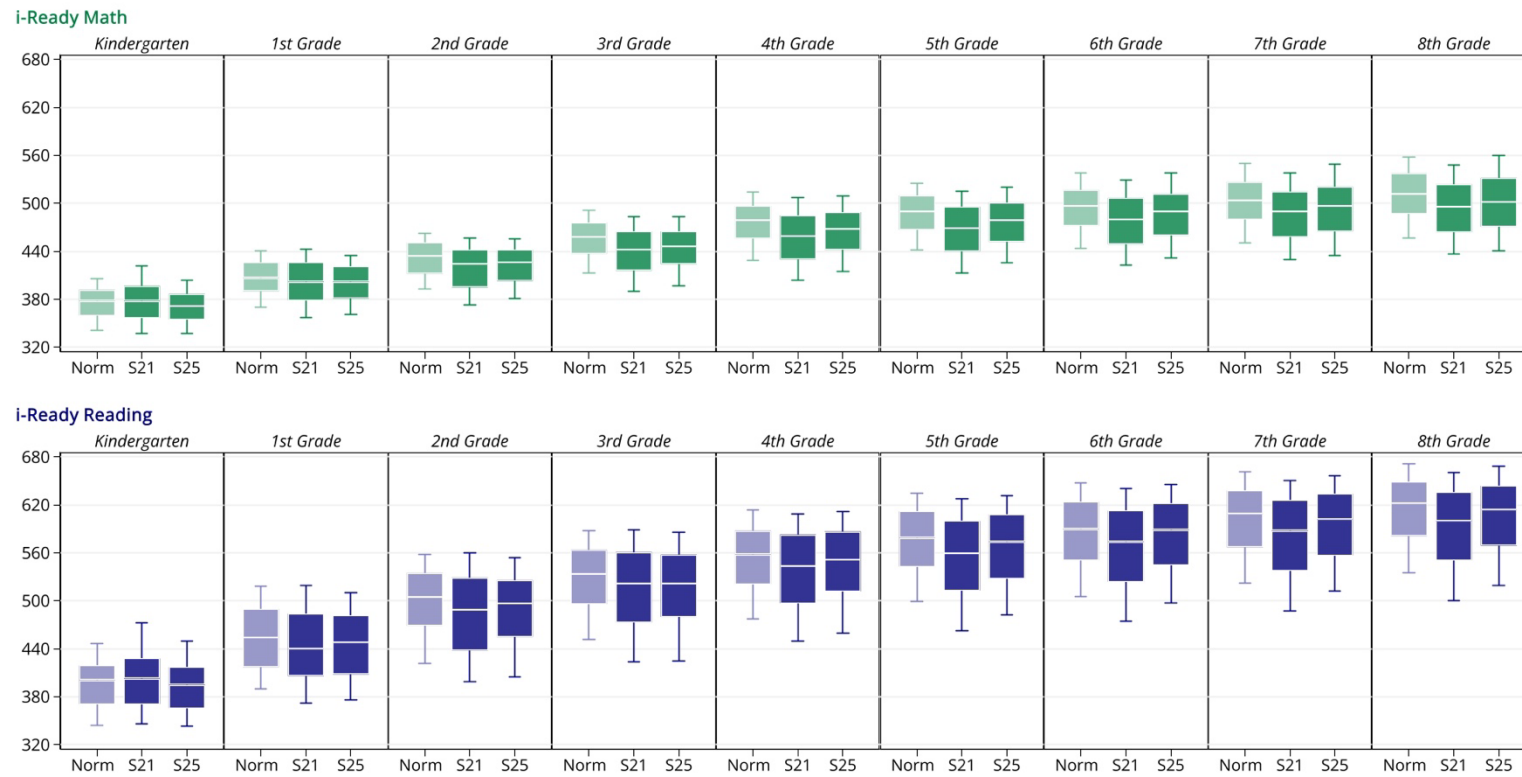
Test score distributions for the Star 360 assessments, shown in Figure 3.6, also show improvements between 2020-21 and 2024-25. In math, median scores for every grade level were higher in spring 2025 than in spring 2021, with notable gains at the 75th and 90th percentiles as well. Improvements in reading were less pronounced, and in several grades gains occurred only at the lower end of the distribution. The spread of scores within grades changed little, suggesting that gaps between higher- and lower-performing students have remained about the same as in spring 2021. While average math achievement has largely returned to pre-pandemic norms, reading remains below norms in all grade levels except kindergarten.

Figure 3.4. Distribution of Spring Scale Scores by School Year and Grade Level, MAP Growth



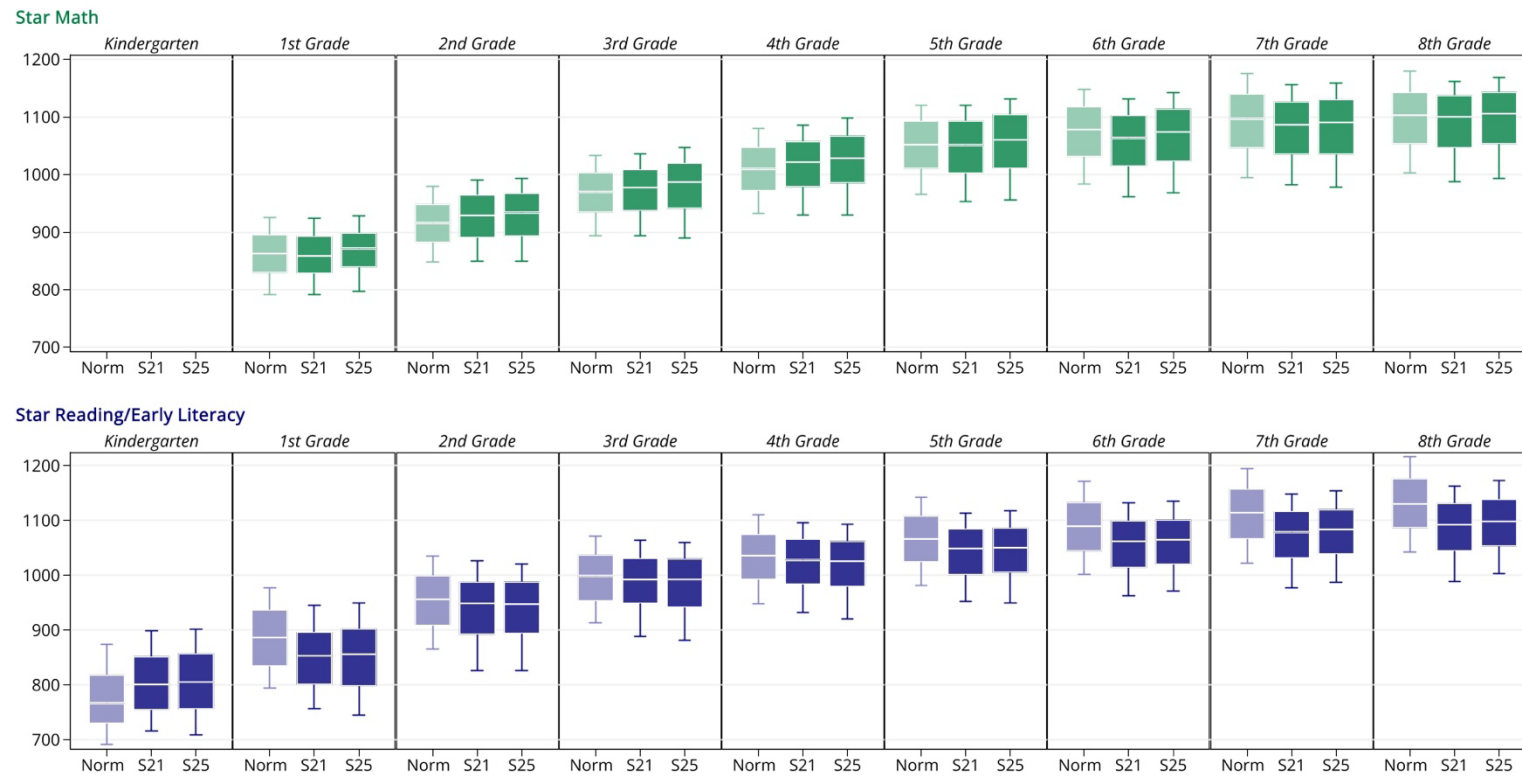
Notes: Each vertical line shows the 10th and 90th percentiles of students' spring scores, while each rectangle shows the 25th, 50th, and 75th percentiles. "Norm," "21," and "25" represent the pre-pandemic national norm and the spring testing periods in 2021 and 2025, respectively.

Figure 3.5. Distribution of Spring Scale Scores by School Year and Grade Level, i-Ready



Notes: Each vertical line shows the 10th and 90th percentiles of students' spring scores, while each rectangle shows the 25th, 50th, and 75th percentiles. "Norm," "21," and "25" represent the pre-pandemic national norm and the spring testing periods in 2021 and 2025, respectively.

Figure 3.6. Distribution of Spring Scale Scores by School Year and Grade Level, Star 360



Notes: Each vertical line shows the 10th and 90th percentiles of students' spring scores, while each rectangle shows the 25th, 50th, and 75th percentiles. "Norm," "21," and "25" represent the pre-pandemic national norm and the spring testing periods in 2021 and 2025, respectively.

REGRESSION-ADJUSTED PERCENTILE RANKS

The trends in Figures 3.1 to 3.6 illustrate how Michigan students in a particular grade level who took a particular assessment performed on average and the extent to which their performance varied. However, it is difficult to discern what these separate trends for each grade and assessment mean for the population of Michigan students overall, given the vast differences in the types of districts and students who participated in each test (shown in Table 2.2) and in achievement norms across grade levels. To assess the overall performance of Michigan students, we use a regression analysis that controls for differences across grade levels, assessment vendors, and the demographic composition of students within each district (i.e., percentages of students enrolled in each district by gender, race/ethnicity, economically disadvantaged status, special education status, and English learner status). We show the results from these analyses in Figures 3.7 to 3.10. We provide separate results for each individual assessment vendor and grade level in Appendix Figures A.3.1 to A.3.2.

While the data for this study does not include test scores from before the 2020-21 school year, evidence from Michigan's state summative assessments suggests that student learning rates had already declined somewhat between the initial school closures in March 2020 and the fall 2020 testing period, especially in math (Strunk et al., 2023). We find that, on average, students began the 2020-21 school year slightly above pre-pandemic norms in reading and below norms in math. As Figure 3.7 shows, average MAP Growth and i-Ready scores for students in fall 2020 were at the 53rd percentile in reading and in the 45th percentile in math, relative to students across the country who took the same assessments pre-pandemic.⁷

By spring 2021, Michigan students' scores had fallen below pre-pandemic reading norms and further below pre-pandemic math norms. Although declines in reading were steeper than in math, spring 2021 percentile ranks in math were still lower than those in reading, as math scores were already below national norms at the start of the school year.

HOW TO INTERPRET FIGURES 3.7 TO 3.10

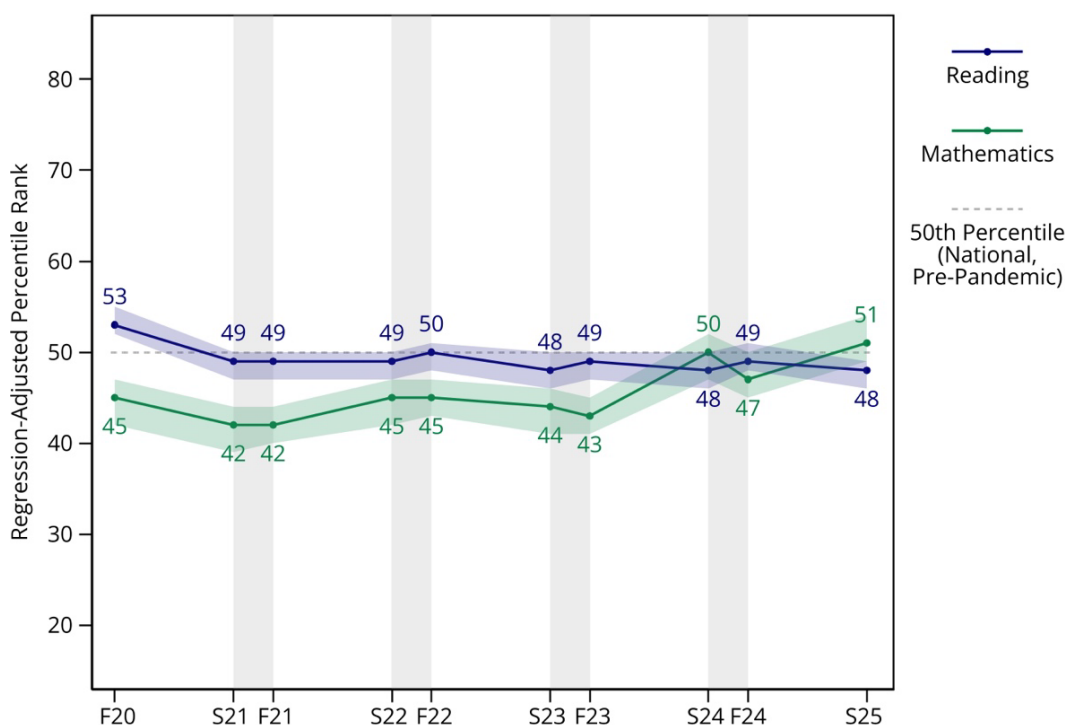
These figures show adjusted trends in average math and reading scores, standardized relative to pre-pandemic national norms for each vendor, grade, subject, and testing period. To ease interpretation of these values, we convert each estimate to a **percentile rank** to show where Michigan students' average scores fall relative to the national norming distributions for each assessment.

A percentile rank of 50 indicates that Michigan students scored at the pre-pandemic national average. If students learned at a rate consistent with pre-pandemic norms, we would see a **flat trend line**, indicating that Michigan students maintained the same percentile rank over time. If students learned at a slower rate than the norming sample, we would see a **decreasing trend**. If students' relative achievement decreased during the pandemic, **they would need to learn at a faster rate than the norming sample** to achieve the same percentile ranks they did before the pandemic.

The **shaded areas above and below each trend line** show the 95% confidence interval for each percentile rank estimate. This represents the range of values that the "true" percentile rank for Michigan students is likely to fall within, given that our estimates are based on a sample of students and not the full population. If the shaded area overlaps with the grey dashed line, this means that the estimate is not significantly different from the pre-pandemic national average.

Over the next four years, average reading scores for this same group of students held steady, remaining at roughly the same percentile rank. This pattern suggests that students learned at a rate comparable to the pre-pandemic norming sample, but not at the accelerated rate necessary to regain their higher relative standing from fall 2020. Math achievement, on the other hand, showed a stronger rebound. Average math scores returned to their fall 2020 percentile rank in spring 2022, dipped slightly the following year, and then rose sharply. Between fall 2023 and spring 2024, Michigan students' average math performance climbed from the 43rd to the 50th percentile, surpassing their reading performance for the first time within the span of this study. Despite a sizable dip in fall 2024, math achievement accelerated once again during the 2024-25 school year, reaching its highest point at the 51st percentile (just above the pre-pandemic norm) in spring 2025.

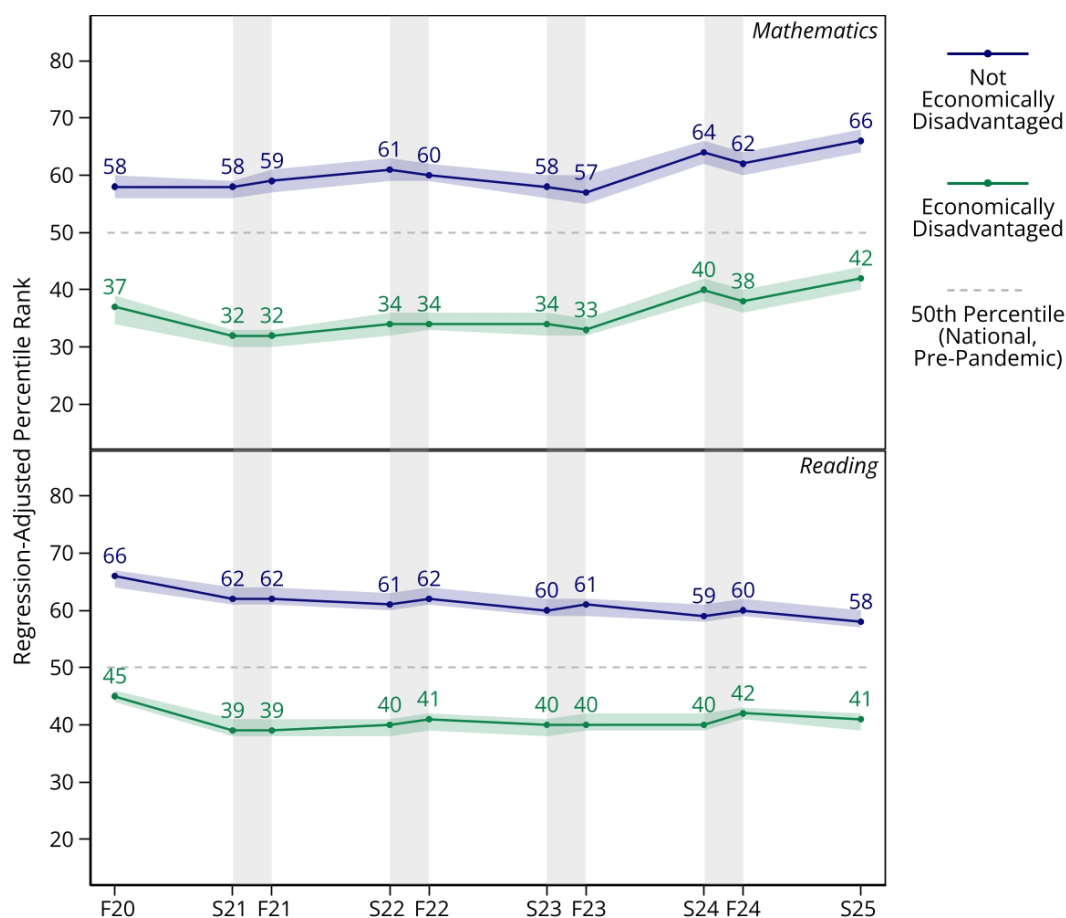
Figure 3.7. Regression-Adjusted Percentile Ranks
(MAP Growth & i-Ready, 3rd-8th Grade)



Notes: These regression estimates are based on district-grade average scores across students with MAP Growth or i-Ready scores in every possible testing period. We standardized scores relative to pre-pandemic national norms for each assessment and converted all estimates into percentile ranks. Models control for student demographics.

We use a similar approach to estimate gaps in average achievement across student subgroups, controlling for differences among tests, grade levels, and the composition of students within a district. Trends in regression-adjusted math achievement for students who are economically disadvantaged and their more advantaged peers (shown in Figure 3.8) differ sharply during the initial pandemic-affected year (2020-21) but generally mirror each other in subsequent years, with both resembling the overall trends in Figure 3.7.

Figure 3.8. Regression-Adjusted Percentile Ranks by Economic Status (MAP Growth & i-Ready, 3rd-8th Grade)



Notes: These regression estimates are based on district-grade average scores across students with MAP Growth or i-Ready scores in every possible testing period. We standardized scores relative to pre-pandemic national norms for each assessment and converted all estimates into percentile ranks. Models control for student demographics.

Between fall 2020 and spring 2021, economically disadvantaged students experienced a significant decline in math performance, dropping from the 37th percentile to the 32nd, while their more advantaged peers maintained a consistent percentile rank (58th) all year. As a result, the gap between the two subgroups widened. Both groups of students experienced relatively little change in math performance in 2021-22 and 2022-23, followed by rapid growth in 2023-24 and 2024-25. These recent gains were similar in magnitude for students who are and are not economically disadvantaged, elevating both groups above their fall 2020 percentile ranks but maintaining the widened gap between them.

Both subgroups of students experienced declines in reading achievement in 2020-21, though the decline was sharper for economically disadvantaged students than for their peers. Between the fall and spring of that year, reading scores for economically disadvantaged students dropped from the 45th to the 39th percentile (a 6 percentile-point change), while those for

students who are not economically disadvantaged decreased from the 66th to the 62nd percentile (a 4 percentile-point change). Over the next four years, students who are economically disadvantaged maintained and at times slightly improved their percentile ranks, ending the 2024-25 school year at the 41st percentile.

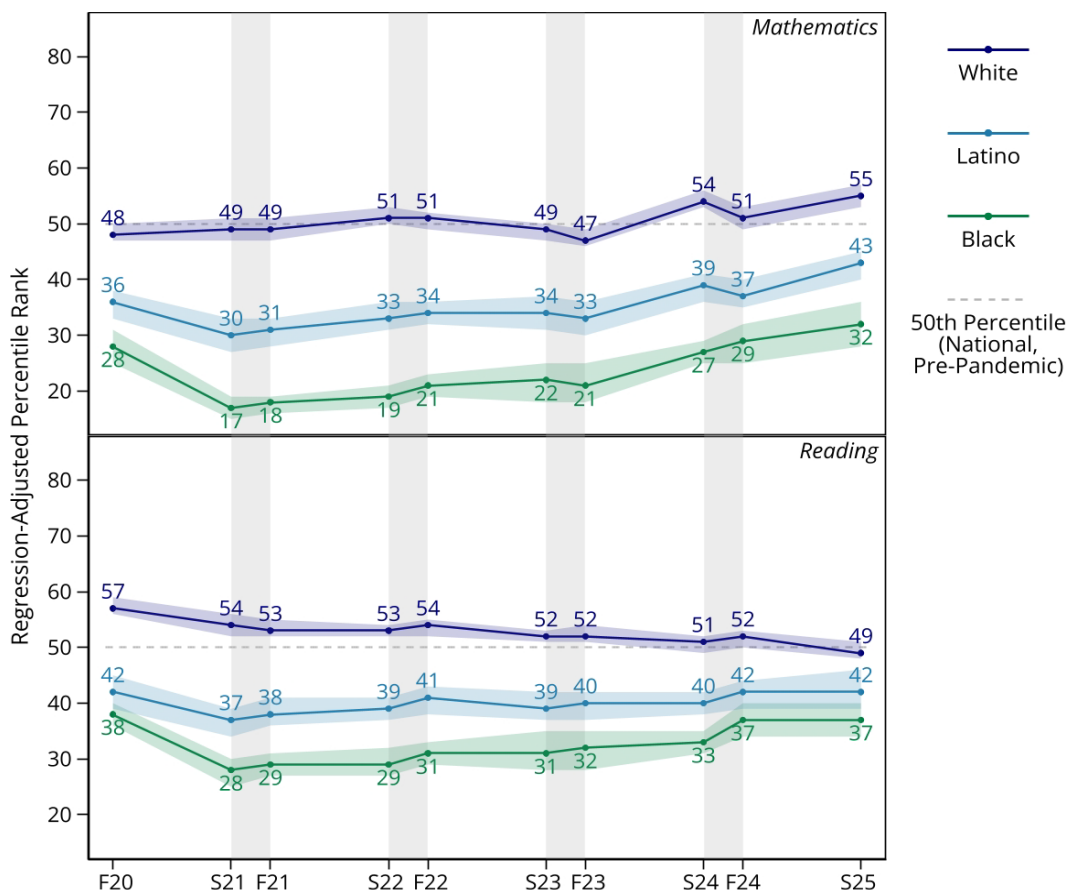
During the same period, students who are not economically disadvantaged experienced continued declines, with average reading scores dropping by about one percentile point each school year until reaching the 58th percentile in spring 2025. Although this means that Michigan students who are not economically disadvantaged grew at a slower rate, on average, than students in the pre-pandemic national norming samples, their achievement levels remained above national norms throughout the full 5-year period. In other words, their baseline achievement was high enough that these decreases in relative performance moved their scores closer to the pre-pandemic national norm but never below it.

We also find notable differences in relative achievement trends for students of different racial and ethnic groups. Our prior reports showed that the initial achievement declines in 2020-21 were steeper for students of color than for their White peers. These early declines widened longstanding gaps in math and reading achievement. As Figure 3.9 shows, the gap between Black and White students' percentile ranks was about 20 percentile points in math and 19 percentile points in reading in fall 2020, growing to 32 and 26 percentile points, respectively, by spring 2021. Similarly, the gap between Latino and White students' relative achievement increased from 12 to 19 percentile points in math and increased from 15 to 17 percentile points in reading. Gaps between Black and Latino students widened as well, growing from 8 to 13 percentile points in math and 4 to 9 percentile points in reading.

On average, students of color experienced a greater degree of learning recovery than their White peers in subsequent years, lessening these gaps. For instance, Figure 3.9 shows that White students' relative math achievement decreased during the 2022-23 school year, while Latino students maintained their percentile rank and Black students increased theirs. Similarly, White students' relative reading achievement decreased between the fall and spring of the 2022-23, 2023-24, and 2024-25 school years, while Black and Latino students either maintained or improved their relative performance. In several instances, Black students made additional gains during the summer months, returning to school in the fall with higher relative performance than at the end of the prior year, while their White and Latino peers either experienced declines or a lesser degree of growth.

As a result of these differential trends, gaps in reading achievement across students of different races/ethnicities narrowed, reaching a smaller level in spring 2025 than at any other time over the past 5 years. The gap in math achievement between Black and White students had narrowed to 23 percentile points by spring 2025, far smaller than in spring 2021 but still wider than in fall 2020. Gaps in reading achievement narrowed more drastically, as Black and Latino students' relative reading performance increased year after year while White students experienced continued declines. In spring 2025, the gap between Black and White students' relative reading achievement was only 12 percentile points, notably smaller than the 19 percentile-point gap in fall 2020 and less than half the size of the gap in spring 2021.

Figure 3.9. Regression-Adjusted Percentile Ranks by Race/Ethnicity (MAP Growth & i-Ready, 3rd-8th Grade)

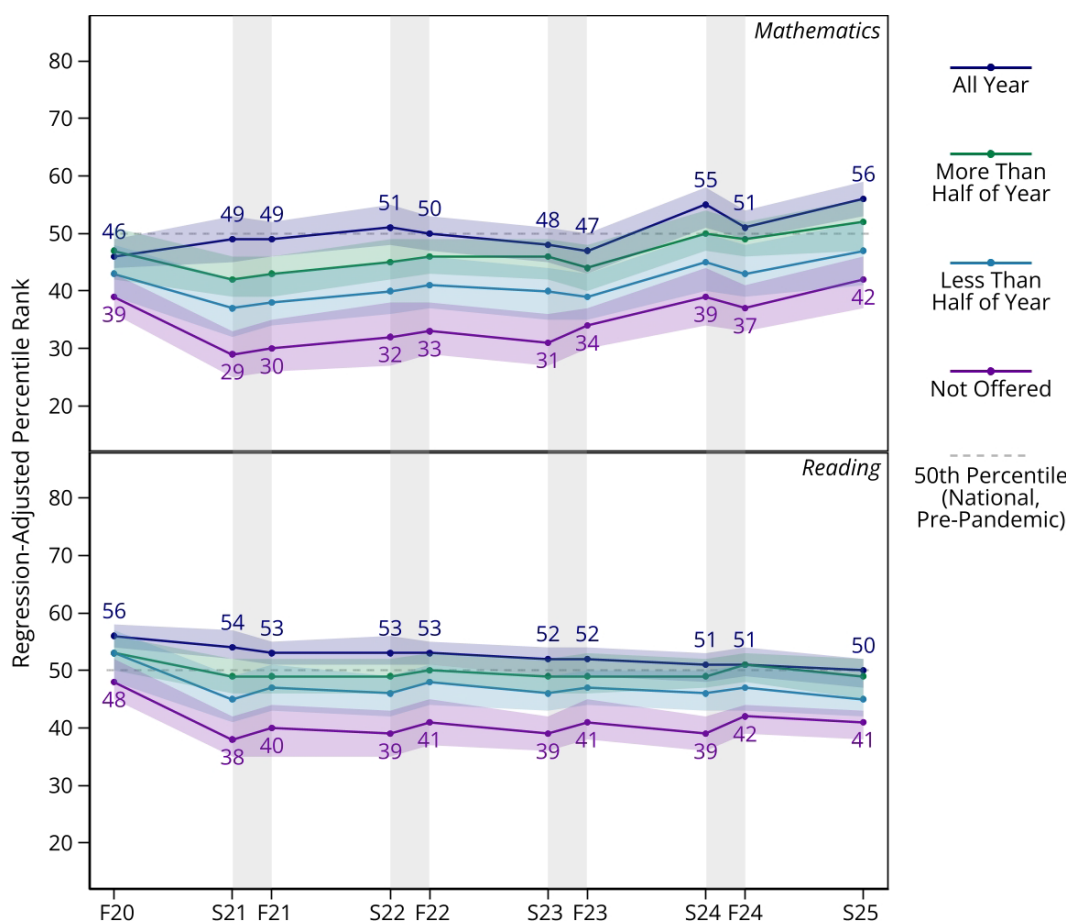


Notes: These regression estimates are based on district-grade-average scores across students with MAP Growth or i-Ready scores in every possible testing period. We standardized scores relative to pre-pandemic national norms for each assessment and converted all estimates into percentile ranks. Models control for student demographics. We do not show results for students who are Asian, Native American, Hawaiian or Pacific Islander, or two or more races due to low sample sizes within some of the grade levels and assessment vendors in our analysis.

Students' learning trajectories differed depending on their access to in-person instruction during the 2020-21 school year. As shown in prior reports, average math achievement decreased for students in all types of districts except those that offered in-person instruction in all 9 months (September through May) of the 2020-21 school year. Although all districts that were hybrid or remote for at least part of that year experienced declines, the extent of those declines varied depending on the amount of in-person instruction the district offered. Declines were smallest in districts that offered in-person instruction for more than half (5-8 months) of the year, followed by those that were in-person for less than half (1-4 months) of the year, and steepest in districts that did not offer in-person instruction at all. Initial declines in reading achievement followed a similar pattern, except that districts that offered in-person instruction experienced slight declines, albeit to a lesser extent than other districts.

As a result of these differential declines in 2020-21, gaps in achievement between districts offering different modes of instruction became larger. For example, Figure 3.10 shows that average math scores in fall 2020 were at the 46th percentile in districts that offered in-person instruction all year and the 39th percentile in those that did not offer in-person instruction at all, a 7 percentile-point gap. By spring 2021, this increased to a 20 percentile-point gap, with math scores for districts offering the most and least in-person instruction at the 49th and 29th percentiles, respectively.

Figure 3.10. Regression-Adjusted Percentile Ranks by Access to In-Person Instruction in 2020-21 (MAP Growth & i-Ready, 3rd-8th Grade)



Note: These regression estimates are based on district-grade-average scores across students with MAP Growth or i-Ready scores in every possible testing period. We standardized scores relative to pre-pandemic national norms for each assessment and converted all estimates into percentile ranks. Models control for student demographics. Modality categories are based on the mode(s) of instruction (in-person, hybrid, or remote) that each district reported offering in each month of the 2020-21 school year.

Gaps in reading achievement also widened that year, increasing from 8 percentile points in fall 2020 to 16 percentile points in spring 2021. Between spring 2021 and spring 2025, achievement gaps between districts that offered in-person instruction throughout all of 2020-21 and those that did not offer in-person instruction decreased from 20 to 14 percentile points

in math and decreased from 16 to 9 percentile points in reading. While both gaps have reduced significantly, the reading gap remains nearly 30% larger and the math gap remains twice as large as in fall 2020.

Across all ten testing periods, math and reading achievement were consistently highest in districts that were in-person for the first pandemic-affected school year (all 9 months from September 2020 to May 2021), followed by those that were in-person for more than half (5-8 months) of the year, and those that were in-person for less than half (1-4 months) of the year, and consistently lowest for districts that did not offer in-person instruction at all in 2020-21. Gaps in reading achievement between districts that were in-person all year and those that were in-person for part of the year were generally smaller than the gaps between districts that were in-person for part of the year and those that were not in-person at all. Math gaps, on the other hand, are similar in size between consecutive modality categories. This pattern suggests that each increasing level of access to in-person instruction was associated with a similar increase in math achievement, whereas in reading, having access to any in-person instruction at all was associated with a large increase in achievement, and further increases in in-person instruction were associated with smaller increases in achievement comparatively. In both subjects, gaps between districts that offered in-person instruction for most or all of the 2020-21 school year start to converge in later years, suggesting a faster rate of recovery among districts with shorter-lasting disruptions to in-person learning.

PROFICIENCY RATES

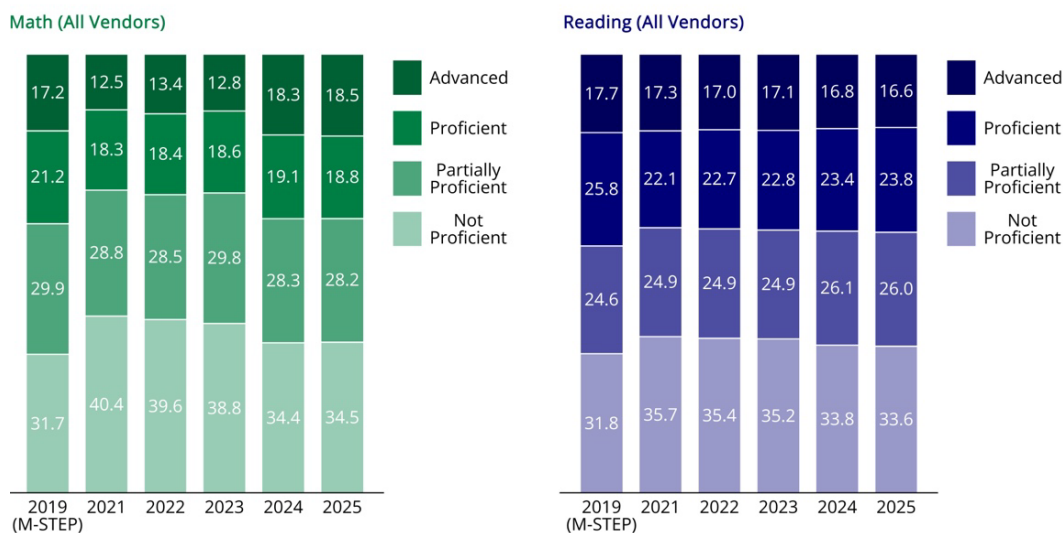
For a general understanding of how Michigan students' performance on benchmark assessments compares to state standards for grade-level proficiency, we map student benchmark assessment scores to approximate M-STEP proficiency levels. Figure 3.11 shows the percentages of Michigan 3rd- to 7th-grade students classified into each of the four M-STEP proficiency levels, based on the scale score ranges that each assessment provider uses to map students' benchmark assessment scores to equivalent M-STEP proficiency categories. To understand how these proficiency rates compare to similar students' performance pre-pandemic, we show the actual proficiency rates from the 2018-19 M-STEP among all students in the districts that provided benchmark assessment data for the 2024-25 school year.⁸

As shown in our [previous report](#), proficiency rates for Michigan students were substantially lower on 2020-21 benchmark assessments than on the 2018-19 M-STEP, with more students scoring within the "not proficient" category and fewer in the "proficient" and "advanced" categories. Despite slight increases in scale scores over the next two years, the distribution of students across proficiency levels remained about the same in 2021-22 and 2022-23, before improving substantially in math and slightly in reading in 2023-24.

Newly available data for the 2024-25 school year show proficiency holding steady, maintaining the previous year's levels but not improving significantly beyond them. Figure 3.11 shows that, across all 3rd- through 7th-grade students and all benchmark assessment providers, the percentages of students scoring within each proficiency level changed only slightly between spring 2024 and spring 2025. In math, we see a slight shift of students from the "proficient" category to the "advanced" category, with the bottom two levels ("not proficient" and "partially

proficient”) staying about the same size. This pattern is consistent with the increases in average math achievement observed in earlier subsections of this report. In reading, the percentages of students scoring in each of the middle two proficiency levels increased slightly, while the percentages in the highest and lowest levels decreased slightly, possibly reflecting the decreasing variation in reading achievement we observed in our distributional analyses (Figures 3.4 through 3.6).

Figure 3.11. M-STEP Proficiency Levels and Vendor-Defined Benchmark Assessment Equivalencies, Grades 3-7

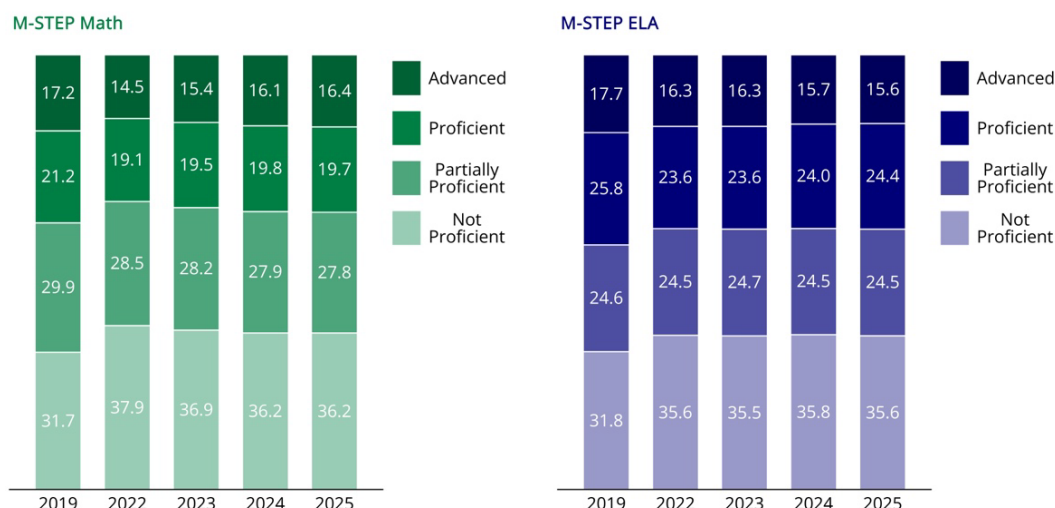


Notes: These percentages include all 3rd- through 7th-grade students with benchmark assessment data for the spring 2025 testing period on any state-approved benchmark assessment.

These patterns are consistent with M-STEP data from the same group of school districts. As Figure 3.12 shows, proficiency rates on the 2025 M-STEP were very similar to those in 2024. The slight shifts we observe between proficiency levels on the M-STEP assessments mirror those estimated from the benchmark assessment data in Figure 3.11. For instance, the percentage of 3rd to 7th graders who scored within the “advanced” performance level on the M-STEP math assessment increased by 0.3 percentage points, mirroring the 0.2 percentage-point increase we estimated based on benchmark assessment scores. Similarly, the percentage of students whose M-STEP ELA scores were in the “proficient” range increased by 0.4 percentage points, matching our estimate from the benchmark assessment data.

Although these aggregate changes in proficiency are negligible, our vendor-specific analyses (available in Appendix Figure A.1.1-A.1.8) show more notable changes among some groups of districts. In particular, i-Ready and Star 360 districts show consistent improvements over time, with the percentage of students scoring in the “not proficient” range decreasing in both subjects in each year from 2022 to 2025. Proficiency trends among MAP Growth districts, on the other hand, closely resemble the overall trend.

Figure 3.12. M-STEP Proficiency Levels, Grades 3-7
(All Districts With 2024-25 Benchmark Assessment Data)



Note: These percentages include all 3rd- through 7th-grade students in districts that provided benchmark assessment data for any state-approved assessment for the spring 2025 testing period.

STUDENT GROWTH

Considering the wide variation we observed in Michigan students' achievement levels in Figures 3.4 to 3.6, changes in average performance over time are unlikely to fully reflect the types or extents of growth that many Michigan students experience throughout each school year. To understand the extent of student learning progress and its variation across the state, we examine the percentage and characteristics of students who exhibited different types of growth patterns each school year. We compare these patterns to pre-pandemic norms for "typical growth" and assess changes for Michigan students from year to year.

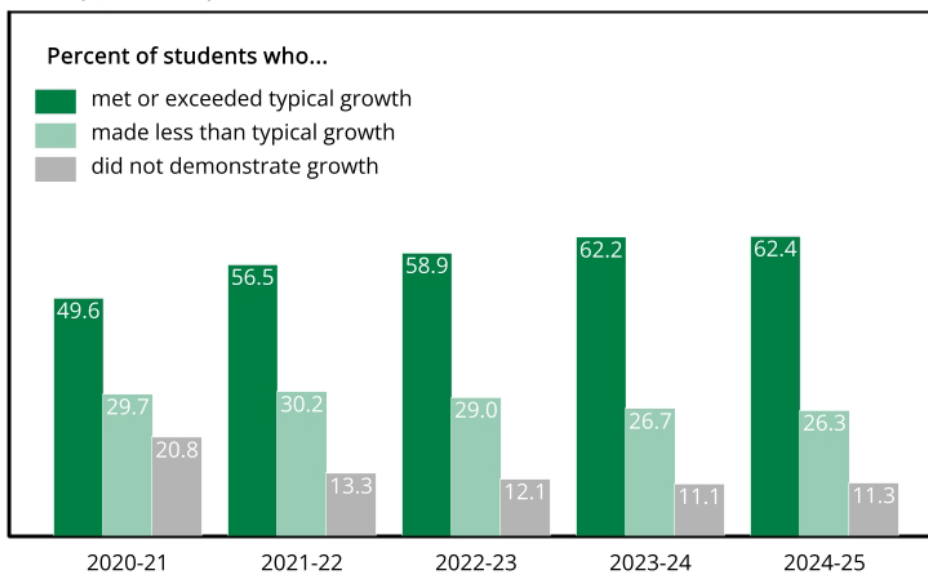
We define "typical growth" as the median increase in scale scores between the fall and spring testing periods of the same school year for students from the pre-pandemic national norming samples who were in the same grade level, took the same assessment, and had similar baseline scores on their fall assessments. Thus, before the COVID-19 pandemic, we would expect about 50% of students to meet or exceed "typical growth" each year.⁹ Figures 3.13 through 3.18 show the percentages of students each year whose growth between the fall and spring testing periods fell into each of the following three categories:

1. **met or exceeded typical growth** (i.e., the increases to their scale scores between the fall and spring testing periods met or surpassed the growth norm for students in their grade level with similar prior achievement scores);
2. **made less than typical growth** (i.e., their scale scores increased by less than the pre-pandemic growth norm for students in their grade with similar prior scores); and
3. **did not demonstrate growth** (i.e., their scale scores either did not change or decreased from fall to spring).

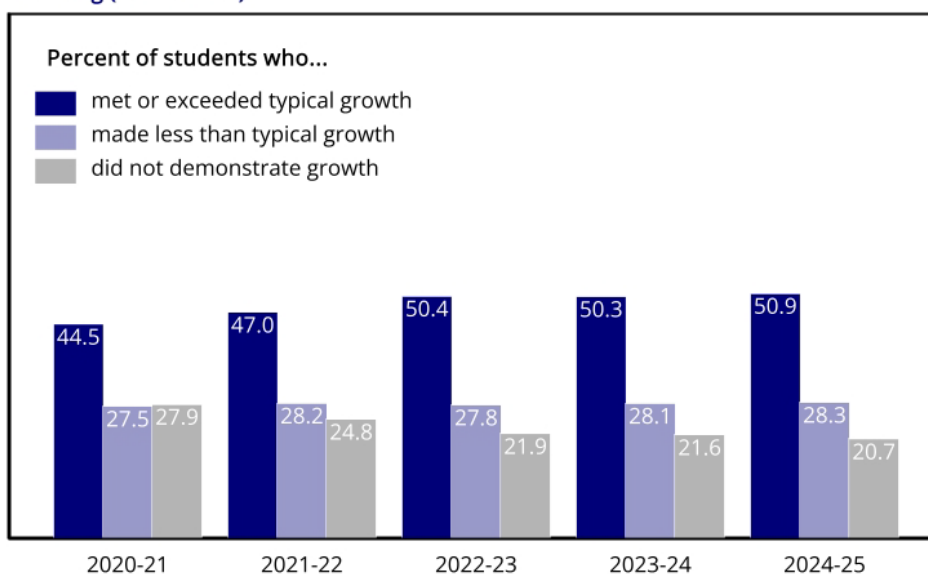
Figure 3.13 shows overall growth outcomes for each school year, averaged across all assessment providers, grade levels, and initial performance quintiles. As we showed in prior reports, students in 2020-21 were less likely to meet or exceed typical growth and more likely to not demonstrate any growth at all, compared to students nationwide before the pandemic. While more students reached their growth targets and fewer made no growth at all in 2021-22, 2022-23, and 2023-24 than in 2020-21, the percentage who did not demonstrate any growth still exceeded pre-pandemic norms.

Figure 3.13. Fall-to-Spring Growth Outcomes by School Year

Math (All Vendors)



Reading (All Vendors)



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students' initial achievement on their fall benchmark assessment.

Figure 3.13 shows slight improvements but relatively little change in growth outcomes between 2023-24 and 2024-25. For the fourth consecutive year in math and the third consecutive year in reading, at least 50% of students met or exceeded the pre-pandemic growth norm for their grade, assessment, and initial achievement level. Specifically, 62% of students achieved this level of growth on their math benchmark assessments (about the same as in 2023-24) and 51% did so on their reading assessments (slightly more than in 2023-24). These rates indicate that Michigan students were more likely to reach their targets in math and about equally as likely to reach their targets in reading, compared to similar students nationwide who took the same assessments before the pandemic.

As shown earlier in this section, these four years of accelerated math growth resulted in many Michigan students “catching up” to pre-pandemic math norms. Although just over 50% of Michigan students achieved a “typical” year of reading growth in 2022-23, 2023-24, and 2024-25, their reaching *achievement* has not yet caught up to pre-pandemic levels. Students’ growth targets are based on where they started at the beginning of each school year, meaning that students who were already behind grade-level standards in the fall would need to achieve more than a typical year’s growth to both “catch up” to standards for students entering their current grade level *and* learn the new content expected for students advancing to the next grade level. For example, a student who begins the school year half a grade level behind would need to grow by one and one-half grade-levels to “catch up” by the end of the year.

In addition to showing these general trends across all MDE-approved benchmark assessments, we provide results separately for each individual assessment in Appendix Figures A.4.1 through A.4.4. Although just over 50% of students in the overall sample reached or exceeded their reading growth targets, this appears to be driven by the higher rate of growth among i-Ready districts, where about 59% of students met or surpassed typical reading growth each year, whereas fewer than 50% of students in MAP Growth and Star 360 districts reached their reading targets. As we noted in our prior report, the vendor-specific figures show a sudden surge in performance on the MAP Growth math assessment in 2023-24. While this change is consistent in direction with the overall results shown in Figure 3.13, it is much larger in magnitude than corresponding improvements on the Star and i-Ready assessments, and contrasts with national MAP Growth trends (Lewis & Kuhfeld, 2024). This improvement does not appear to be a one-time outlier, as students met their MAP Growth math targets at similarly high rates in 2024-25.

While there were more students in each of the past five school years who did not demonstrate growth than would have been expected before the pandemic, these were generally not the same students year after year. For the sample of students with growth data from all five school years, Table 3.1 shows the percentage who achieved each growth outcome a particular number of times over the five-year period. For example, the leftmost cell in the third row of the table indicates that just under two-thirds of students demonstrated at least some math growth all five years (i.e., 64% were never in the “did not demonstrate growth” category). The corresponding cell in the bottom panel indicates that 37% of students demonstrated at least some reading growth in all five years. Virtually all students demonstrated some growth over the 5-year period, and the overwhelming majority (98% and 96% in math and reading, respectively) met or exceeded typical growth at least once. On average, students’ math growth exceeded pre-pandemic medians in at least three of the five years.

Table 3.1. Frequency of Each Growth Outcome for the Same Students Across Five School Years						
	Percent of Students by Frequency of Growth Outcome					
	Never	1 of 5 Years	2 of 5 Years	3 of 5 Years	4 of 5 Years	All 5 Years
MATH						
Met or Exceeded Typical Growth	1.7%	9.0%	21.5%	31.3%	26.3%	10.2%
Made Less Than Typical Growth	18.0%	34.7%	29.6%	13.8%	3.5%	0.4%
Did Not Demonstrate Growth	64.2%	26.7%	7.4%	1.4%	0.2%	0.0%
READING						
Met or Exceeded Typical Growth	4.2%	16.5%	29.5%	29.3%	16.5%	4.0%
Made Less Than Typical Growth	19.5%	33.7%	28.2%	13.9%	4.1%	0.5%
Did Not Demonstrate Growth	36.5%	37.1%	19.2%	6.1%	1.1%	0.1%

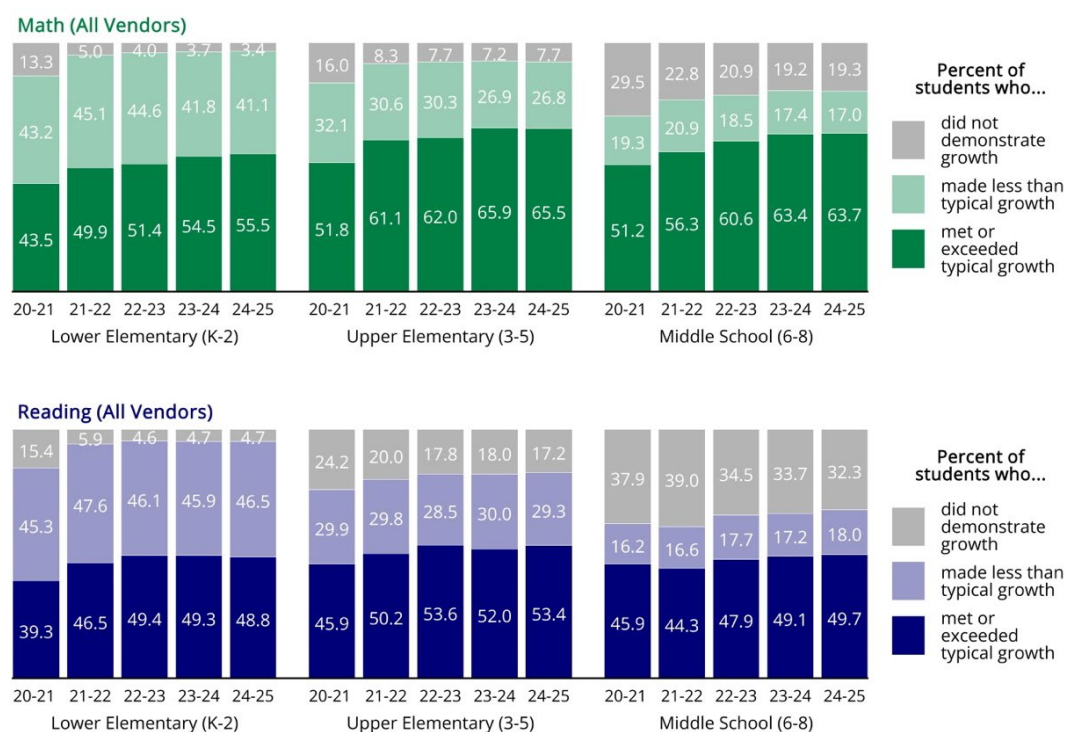
Notes: Percentages include only students with fall-to-spring growth data for all five school years. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students’ initial achievement on their fall benchmark assessment.

Across all grade ranges, growth outcomes have improved continually over the last five years. For upper elementary and middle school students, Figure 3.14 shows annual increases in students meeting or exceeding pre-pandemic growth norms in earlier years, leveling off in later years. Reading growth follows a similar pattern at the lower elementary level, while math growth among students in this grade range continued to improve through the 2024-25 school year.

Results for each individual grade level (available in Appendix Figures A.5.1 to A.5.3, both overall and separately for the MAP Growth and i-Ready assessments) show some variation from these overall patterns.¹⁰ For instance, both math and reading growth among 8th-grade students increased every year, while growth in other middle school grades either tapered or decreased slightly in later years. The abrupt overall improvements that we observed for the MAP Growth assessments are evident across all individual grade levels, while i-Ready math growth is far steadier over time in comparison.

Although overall growth rates differ substantially across grade ranges, these differences are consistent with pre-pandemic national norms. For instance, norms for the MAP Growth assessment (available in our [Fall 2021 report](#)) show that the percentage of students expected to not demonstrate growth increases across grade levels and the percentage expected to make less than typical growth decreases (by definition, the percentage expected to meet or exceed typical growth is constant at 50% for all grade levels). The relative shares of Michigan students in the top and middle segments of the stacked bars in Figure 3.14 and Appendix Figures A.5.1 through A.5.3 all exhibit this same pattern across grade levels.

Figure 3.14. Fall-to-Spring Growth Outcomes by School Year and Grade Range

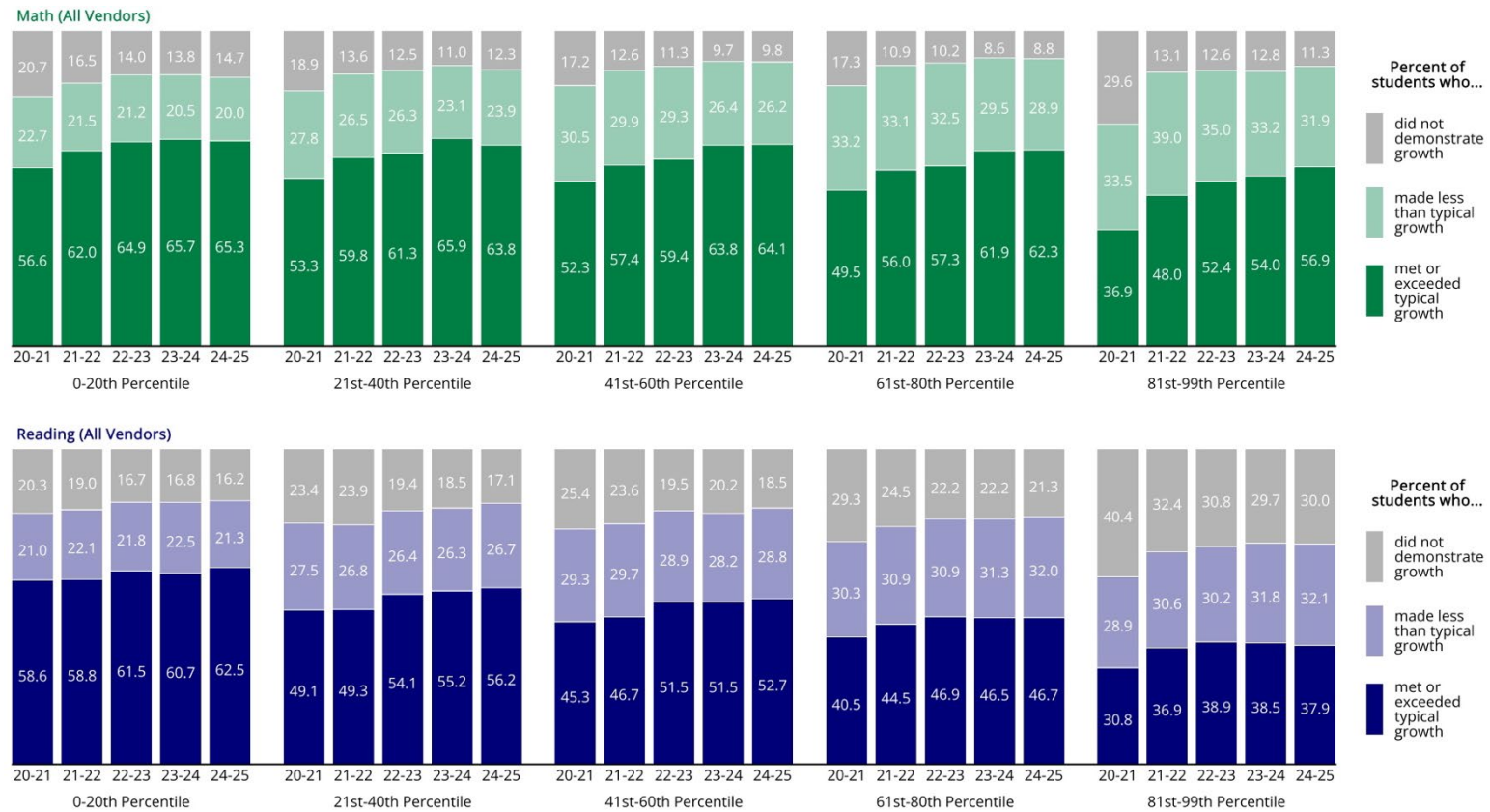


Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students' initial achievement on their fall benchmark assessment.

Growth trends vary across students with different baseline achievement levels, based on the percentile rank of their fall benchmark assessment scores. As Figure 3.15 shows, more than 50% of students in the lowest initial achievement quintile (i.e., those with fall percentile ranks of 20 or below) met or exceeded their growth targets each year. This indicates that, even in the first pandemic-affected year (2020-21), growth among Michigan students with the lowest baseline performance exceeded pre-pandemic norms. The same was true for the 2nd and 3rd math quintiles (i.e., students with fall math scores in the 21st through 60th percentiles). For students in higher initial performance quintiles, growth trailed behind pre-pandemic norms in 2020-21 but increased in subsequent years. By 2024-25, more than 50% of students in each initial performance quintile met or exceeded typical math growth, as did those in the first three quintiles of initial reading performance. The top two reading quintiles (i.e., students with initial scores in the 61st percentile or above) remain less likely than students in the pre-pandemic national norming sample to reach their growth targets.

As Appendix Figures A.5.4 and A.5.5 show, this pattern does not extend to all benchmark assessments. While reading growth outcomes decrease across initial performance quintiles on the MAP Growth assessment, these outcomes are consistent across quintiles on the i-Ready assessments. Across all initial achievement levels, growth on the i-Ready reading assessments trailed behind pre-pandemic norms in 2020-21 and surpassed pre-pandemic norms in all subsequent years.

Figure 3.15. Fall-to-Spring Growth Outcomes by School Year and Initial Performance Quintile



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students’ initial achievement on their fall benchmark assessment.

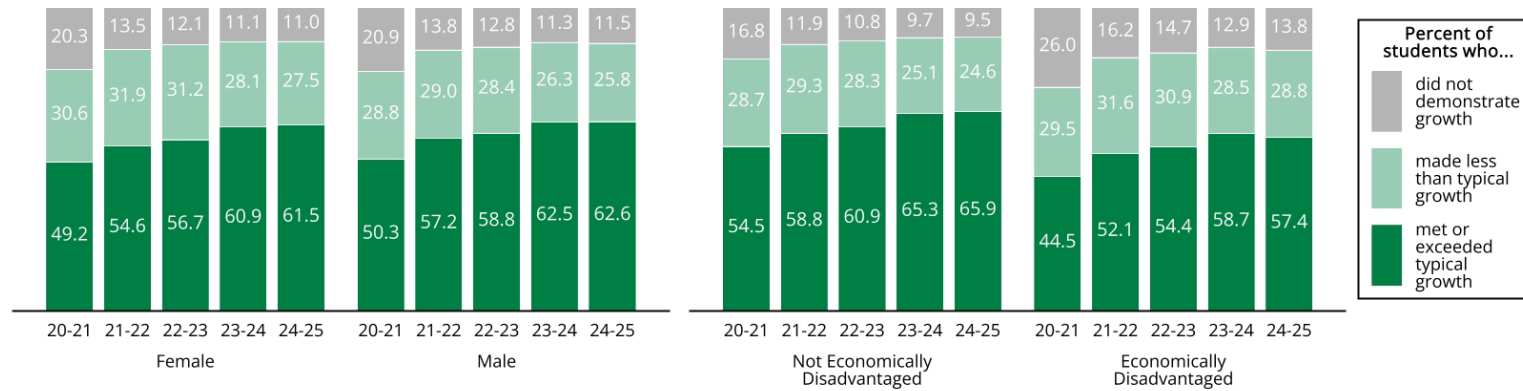
Growth trends across demographic subgroups, shown in Figures 3.16 through 3.18 and by vendor in Appendix Figures A.6.1 through A.6.6, generally resemble the overall growth trends in Figure 3.13. Students in most subgroups were similarly or slightly more likely to meet or exceed typical math growth in 2024-25 compared to 2023-24. The only two exceptions to this pattern are Black students and students who are economically disadvantaged, who were slightly less likely to reach their math growth targets in 2024-25 than in the prior year, but still more likely to do so than students in the pre-pandemic norming sample. The percentages of students not demonstrating any growth increased slightly for these two subgroups, whereas they decreased slightly or remained the same for other subgroups. Reading growth remained steady between 2023-24 and 2024-25 across all subgroups.

We noted in our previous report that most of the initial improvements in student growth outcomes took place in districts that either did not offer in-person instruction at all in 2020-21 or did so for only part of the year. As Figure 3.19 shows, more than 50% of students in districts that offered in-person instruction all year met or exceeded typical math and reading growth in 2020-21 (meaning that they were more likely than students in the pre-pandemic national norming samples to reach these growth targets), while fewer than 50% of those whose districts did not offer in-person instruction throughout the full school year met or exceeded growth targets in either subject. Each increase in access to in-person instruction (i.e., none, less than half of the year, more than half of the year, all year) was associated with an increase in the share of students meeting or exceeding their growth targets and a decrease in the share not demonstrating growth at all. Growth outcomes for students whose districts did not offer in-person instruction in at least part of 2020-21 improved substantially the following year, while growth outcomes stayed about the same for those whose districts offered in-person instruction all year. In subsequent years, the percentages of students who met or exceeded typical growth remained above 50% in math and close to 50% in reading regardless of their level of access to in-person instruction in 2020-21.

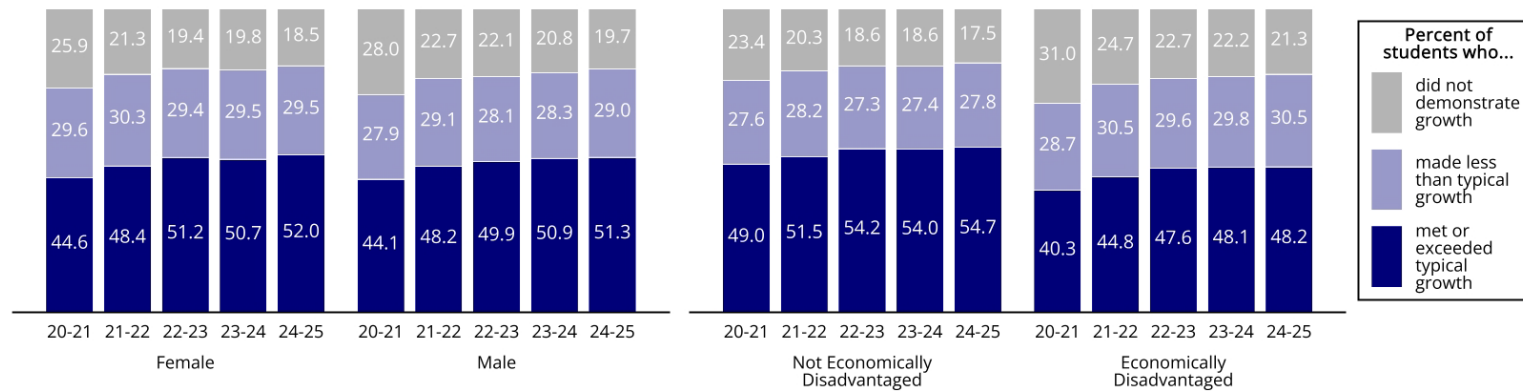
Consistent with the overall trend, the percentage of students meeting or exceeding typical math growth increased substantially for each district modality subgroup in 2023-24. In 2024-25, students in districts that were remote for at least part of the 2020-21 school year saw an additional increase in math growth, with districts that were remote all year experiencing the starkest improvement. In contrast, the percentage of students making typical math growth decreased slightly between 2023-24 and 2024-25 in districts that offered in-person instruction throughout all of 2020-21. However, students in these districts were still more likely than their counterparts in other districts to meet their growth targets. In reading, districts that did not offer any in-person instruction in 2020-21 were the only group to experience a non-negligible increase in growth in 2024-25, while growth in districts that were in-person for all or some of the year remained relatively stable. Our vendor-specific analyses (available in Appendix Figures A.7.1-A.7.2) show similar patterns for the i-Ready assessments, but less differentiation across district modality subgroups on the MAP Growth assessments.

Figure 3.16. Fall-to-Spring Growth Outcomes by School Year and Demographic Subgroup

Math (All Vendors)



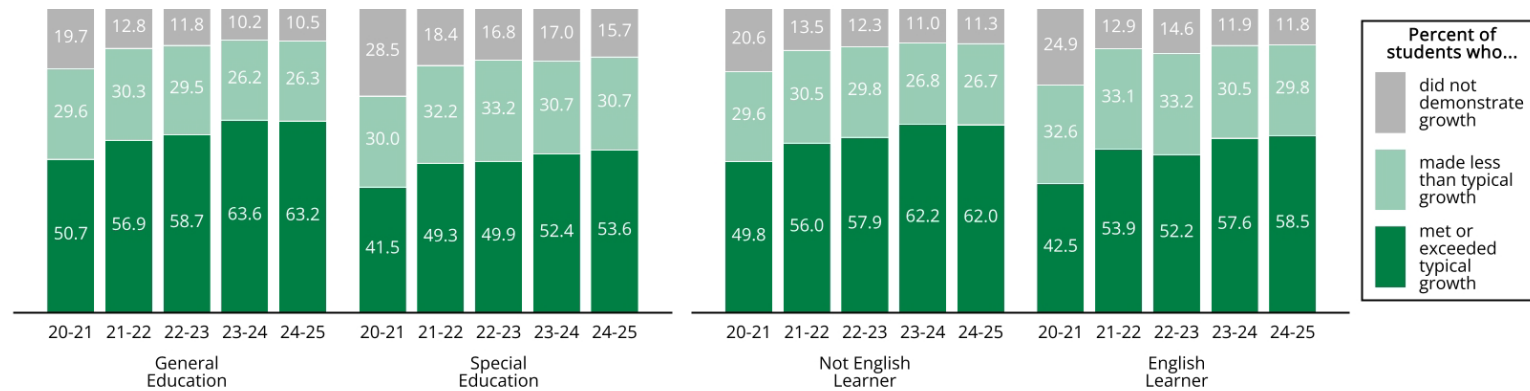
Reading (All Vendors)



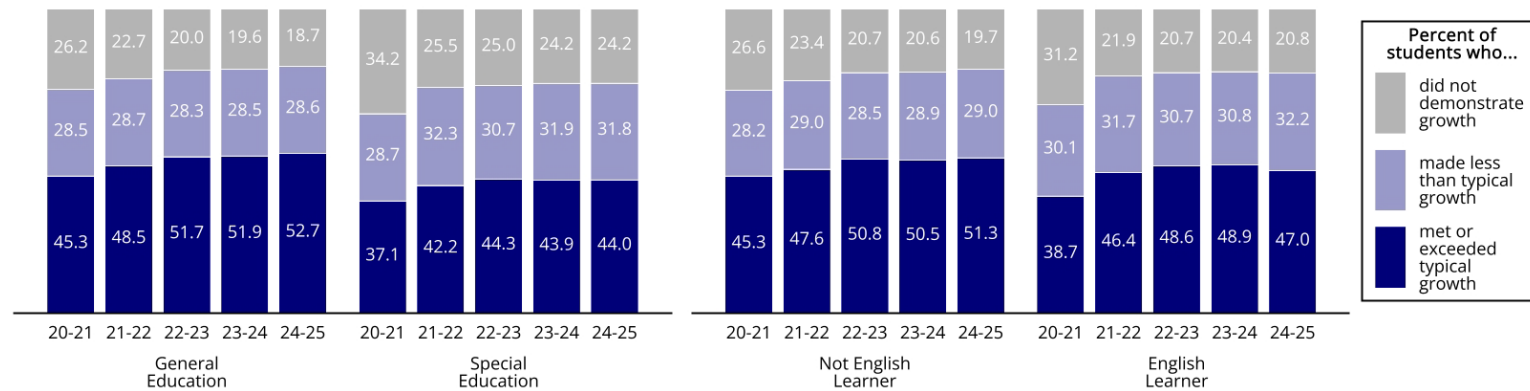
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students’ initial achievement on their fall benchmark assessment.

Figure 3.17. Fall-to-Spring Growth Outcomes by School Year and Student Subgroup

Math (All Vendors)

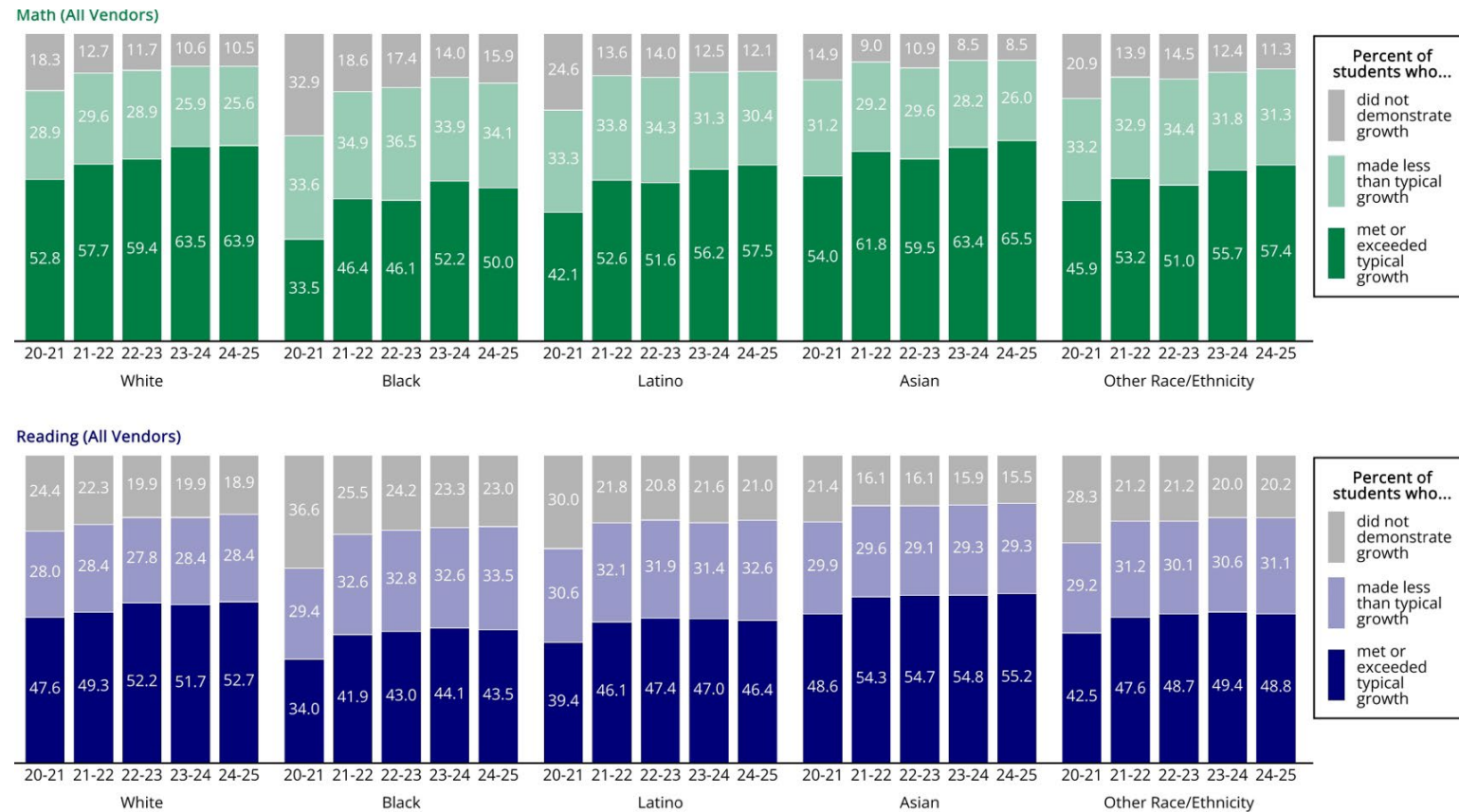


Reading (All Vendors)



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students’ initial achievement on their fall benchmark assessment.

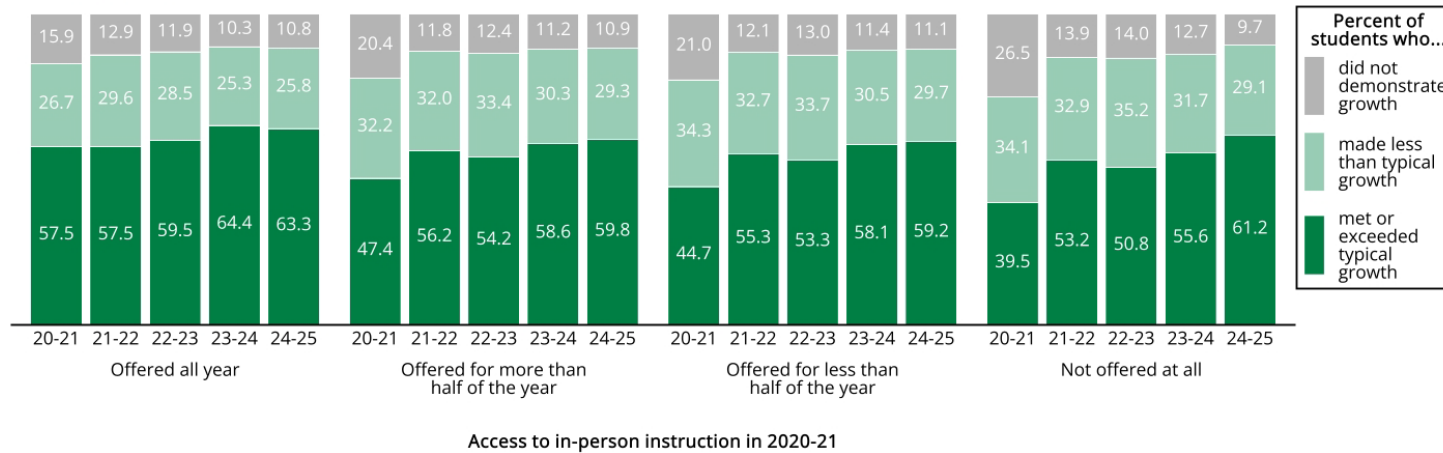
Figure 3.18. Fall-to-Spring Growth Outcomes by School Year and Student Race/Ethnicity



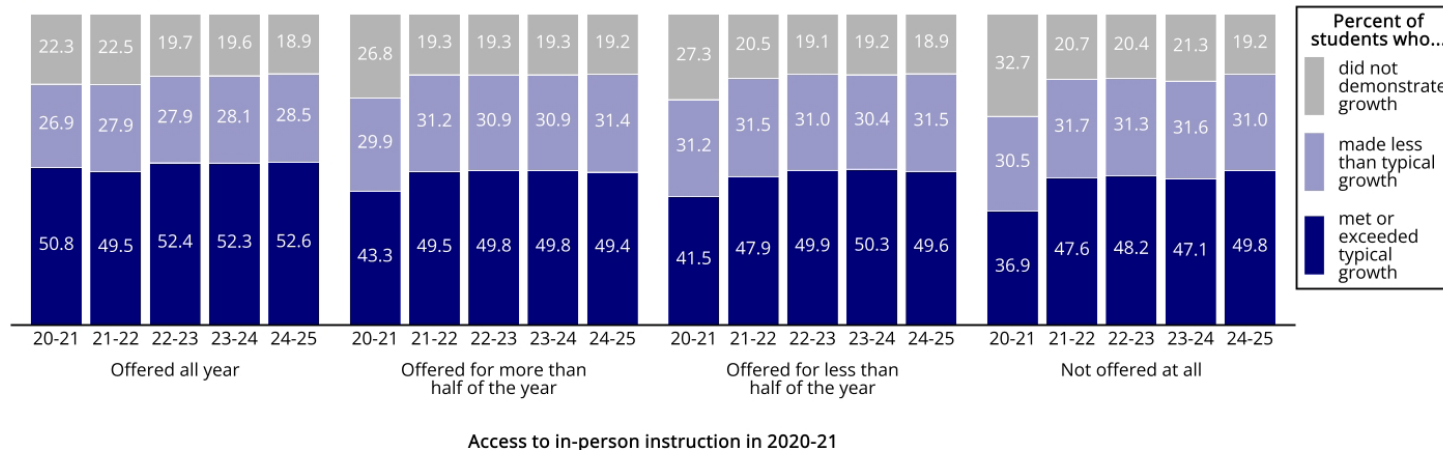
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students’ initial achievement on their fall benchmark assessment. The “Other Race/Ethnicity” category includes students who are Native American, Hawaiian or Pacific Islander, or two or more races; we cannot show separate bars for each of these groups due to low sample sizes.

Figure 3.19. Fall-to-Spring Growth Outcomes by School Year and Access to In-Person Instruction in 2020-21

Math (All Vendors)



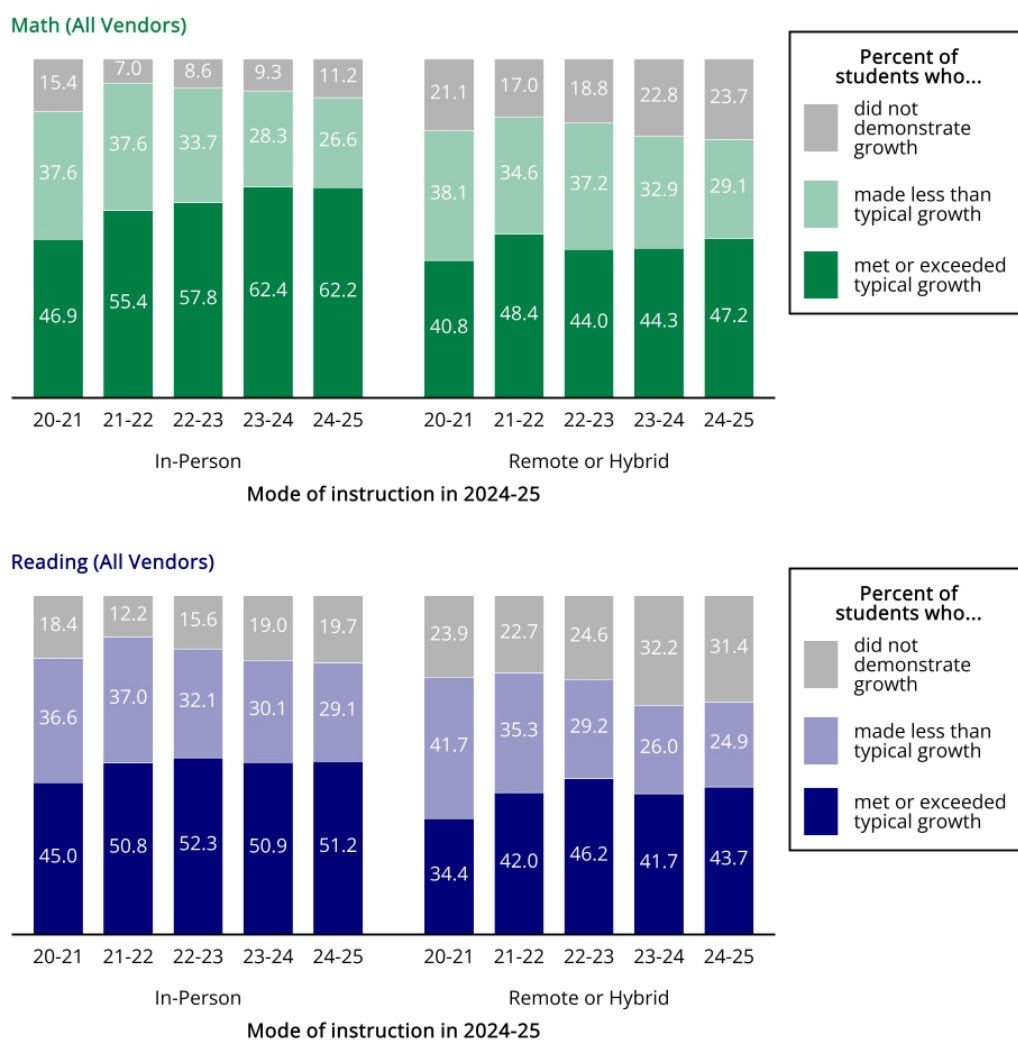
Reading (All Vendors)



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students’ initial achievement on their fall benchmark assessment. Modality categories are based on the mode(s) of instruction (in-person, hybrid, or remote) that each district reported offering in each month of the 2020-21 school year.

Very few students (only about 1%) were still learning in a remote or hybrid format in 2024-25, mostly those who attend charter schools that have always operated virtually. Figure 3.20 compares growth outcomes between this small group of students and the 99% who participated in in-person instruction in 2024-25. We show these same students' growth outcomes in prior school years as well, even if they did not participate in the same mode of instruction in those years. For example, the 2020-21 percentages for remote and hybrid students in Figure 3.20 show how the students who received remote instruction in 2024-25 performed four years earlier.

Figure 3.20. Fall-to-Spring Growth Outcomes by School Year and Mode of Instruction



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, which vary depending on the subject area, grade level, and students' initial achievement on their fall benchmark assessment. Modality categories reflect the primary mode in which a student received instruction in 2024-25.

For students who learned in-person in 2024-25, Figure 3.20 shows yearly improvements in math growth through 2023-24 and little change in 2024-25. Reading growth among this group of students increased in 2021-22 and 2022-23, leveling off in later years. In contrast, students who learned in a hybrid or remote setting in 2024-25 became less likely to demonstrate growth on their benchmark assessments each year after 2021-22 (i.e., the percentages who did not demonstrate growth increased). However, it is important to consider that hybrid and remote modalities are most common among students in higher grade levels. Growth norms also change as students advance to higher grade levels; changes in scale scores over the course of a school year tend to be smaller and the likelihood of not demonstrating any growth increases as students become older. Thus, the patterns in Figure 3.20 may at least partially reflect expected changes in growth over a 5-year period for students in the age groups most likely to participate in hybrid or remote instruction.

Section Four: Takeaways and Implications

This report furthers our analyses of Michigan student learning during and after the COVID-19 pandemic by examining math and reading benchmark outcomes throughout the past five school years. We explore trends in achievement and growth, as measured by math and reading benchmark assessments for grades K-8, and compare Michigan student results to those of other students nationwide who took the same assessments pre-pandemic. We examine how these patterns differ across subgroups of Michigan students and how they have changed between fall 2020 and spring 2025.

While this report deepens our understanding of how Michigan public school students progressed and learned during the 2020-21 through 2024-25 school years, we must consider several data limitations when interpreting results. Most importantly, our analyses are based on imperfect and incomplete data, representing only a subset of the K-8 student population across the state. This is notable because students who were most affected by the pandemic may have been less likely to participate in benchmark assessments and therefore may be underrepresented. Additionally, given that many districts administered benchmark testing virtually in the fall of 2020, it is difficult to assess fall 2020 performance or interpret growth measures that use fall 2020 achievement as a baseline. Moreover, the data available for this study does not include any prior test results for Michigan students from before fall 2020. While we can use national norms for each assessment from before the pandemic as comparison points to see how Michigan students' performance compares to students across the country in a "typical" school year, these norms may not reflect how Michigan students would have performed.

The key findings described below show that Michigan students have made meaningful progress but have not yet fully recovered from the pandemic-era disruptions to student learning. Policymakers, educators, and other stakeholders should use these data to inform the work of local and state education agencies as they continue to address the COVID-19 pandemic's tremendous effects. As we move further from the height of the pandemic, benchmark assessment data can continue to provide valuable information about student learning and support evidence-based decision-making and continuous improvement throughout the state.

KEY FINDINGS

Michigan students made large short-term math achievement gains in both 2023-24 and 2024-25 but only a portion of these gains persisted over the summer.

Michigan students experienced rapid growth in math achievement in 2023-24, advancing from the 43rd to the 50th percentile (relative to pre-pandemic national norms) between the fall and spring testing periods. However, their relative achievement fell to just the 47th percentile when they returned to school the following fall. Accelerated math growth during the 2024-25 school year enabled students to regain lost progress and reach their highest percentile ranking yet (51st) in the spring of 2025.

Although math growth surpassed national norms in each of the past two years, achievement declines in between the two years exceeded typical levels of “summer slide.” This could mean that focusing on within-year gains alone may overstate students’ longer-term progress. For instance, despite the state average math performance increasing by 4 percentile points between the fall and spring of 2024-25, students ended the year only 1 percentile point above their spring 2024 rank. Michigan’s cumulative math growth across school years is more consistent than its rapid within-year growth with the modest levels of recovery on benchmark and summative assessments nationally (Curriculum Associates, 2025; Dewey et al., 2025; Lewis & Kuhfeld, 2025).

Although average reading achievement remains stagnant, gaps between Michigan’s highest- and lowest-performing readers are improving.

On average, reading achievement has not yet rebounded from the declines in the early stages of the pandemic. Michigan students began the 2020-21 school year above national norms in reading, with average scores at the 53rd percentile. By the end of that year, reading achievement fell to the 49th percentile (just below the national median), and has remained within 1 percentile point of this ranking ever since. This stagnation in reading, and its contrast from trends in math performance, is consistent with national results from the MAP Growth and i-Ready assessments (Curriculum Associates, 2025; Lewis & Kuhfeld, 2025).

The distribution of achievement widened during the pandemic, meaning that students’ academic levels varied to a greater extent than would have been expected in earlier years. Although average reading scores remain stagnant, we find evidence of improvements among Michigan’s lowest-scoring readers, especially in middle school grades. As a result of these gains at the lower end of the distribution, gaps between high- and low-performing readers are shrinking. Although these gaps are narrowing, they have not yet fully recovered to pre-pandemic norms. Demographic gaps in reading achievement, which also widened during the pandemic, have narrowed significantly. In spring 2025, gaps in reading performance between students of different racial groups and economic statuses had not only recovered to their fall 2020 levels but improved beyond them. In contrast, math gaps between these student subgroups have improved to some extent since spring 2021 but remain larger than in fall 2020.

Districts that were fully remote in 2020-21 are “catching up” to the rest of the state in terms of student growth but remain behind in achievement.

In the early stages of the pandemic, drastic gaps in average achievement emerged between school districts offering fully in-person instruction and those that were fully remote. Between the fall and spring of the 2020-21 school year, the gap in reading scores between these districts doubled, and the gap in math scores nearly tripled. While students in districts that offered in-person instruction all year met targets for “typical” growth at similar rates to the pre-pandemic norming samples for their assessments, this was not the case for those in districts that were remote for at least part of the year. Students whose districts offered no in-person instruction at all in 2020-21 were the least likely to meet their growth targets and the least likely to demonstrate any growth at all.

Student growth outcomes improved across all groups of districts in subsequent years, but were consistently lowest among the districts that were fully remote in 2020-21. In 2024-25, the districts that were fully remote saw continued increases in growth, while growth remained stagnant for all other groups of districts. For the first time, students in fully remote districts grew at similar—and in some cases even higher—rates than their peers who had access to at least some in-person instruction in 2020-21. This accelerated growth helped to narrow achievement gaps between fully remote and fully in-person districts but was not enough to completely offset their differential declines in 2020-21. As of spring 2025, there is still a 14 percentile-point gap in average math scores between these districts—twice the size of their 7 percentile-point gap in fall 2020, but significantly smaller than their 20 percentile-point gap in spring 2021. The reading gap has nearly diminished to its initial size, at 9 percentile points in spring 2025 compared to 8 percentile points in fall 2020.

IMPLICATIONS

Sustaining recovery beyond short-term gains.

The strong academic growth observed in recent years, particularly in math, shows that recovery is possible when sustained investments and coordinated strategies are in place. However, the large summer declines and uneven persistence of gains underscore the complexity of academic recovery and the need to reach beyond short-term remediation to support sustained learning over time. It remains unclear whether these patterns reflect temporary effects of specific recovery strategies, differences in assessment timing or conditions, or missed opportunities to extend progress through the summer months. Continued monitoring and research can help to identify effective strategies and inform state investments to foster long-term results rather than temporary rebounds.

Continued emphasis on early literacy.

The slower and less consistent recovery in reading is part of a broader pattern: Michigan’s elementary reading performance has been declining since before the pandemic (National Center for Education Statistics, 2024). The state has already taken significant steps to strengthen early literacy through new dyslexia screening requirements, continued implementation of the

Read by Grade Three Law (excluding the retention provision), and new state budget allocations to support early literacy initiatives. These policy efforts provide a strong foundation for addressing new and longstanding concerns about early literacy in Michigan.

Variation in learning levels and instructional needs.

Even as achievement gaps between student groups begin to narrow, the overall range of academic performance within classrooms remains wider than before the pandemic. This variation—while improving modestly in some subjects and grades—presents ongoing challenges for instruction, staffing, and curriculum design. Schools and districts may need to strengthen tiered support systems, expand access to interventionists and specialists, and ensure that curricula and assessment tools are appropriate for addressing a broader spectrum of student needs. Continued professional learning and resource investment will be crucial to support teachers in meeting their students where they are.

References

- Barnum, M., & Belsha, K. (2023, October 2). *Blizzard of state test scores shows some progress in math, divergence in reading*. Chalkbeat.
<https://www.chalkbeat.org/2023/10/2/23896045/state-test-scores-data-math-reading-pandemic-era-learning-loss>
- Cohodes, S., Goldhaber, D., Hill, P., Ho, A., Kogan, V., Polikoff, M., Sampson, C., & West, M. (2022). *Student achievement gaps and the pandemic: A new review of evidence from 2021-2022* (No. ED622905). ERIC. <https://files.eric.ed.gov/fulltext/ED622905.pdf>
- Curriculum Associates. (2020a). *I-Ready diagnostic national norms tables for reading and mathematics for grades K-8 2020-21* (Research Report No. RR 2020-40). Curriculum Associates, LLC.
<https://cdn.bfldr.com/LS6J0F7/as/ck29g9k45bstghwgvs8m4xmb/iready-norms-tables-K-8>
- Curriculum Associates. (2020b). *Scores on i-Ready Diagnostic that are equivalent to performance levels on the Michigan Student Test of Educational Progress (M-STEP)* (Research Report No. RR 2020-29). Curriculum Associates, LLC.
- Curriculum Associates. (2021). *Understanding student learning: Insights from fall 2021* (pp. 1–40) [Curriculum Associates Research Brief]. Research on Unfinished Learning.
<https://www.curriculumassociates.com/-/media/mainsite/files/i-ready/iready-understanding-student-learning-paper-fall-results-2021.pdf>
- Curriculum Associates. (2025, July). *Annual report: The state of student learning in 2025*.
<https://www.curriculumassociates.com/research-and-efficacy/annual-report-the-state-of-student-learning-in-2025>

- Dewey, D., Fahle, E., Kane, T. J., Reardon, S. F., & Staiger, D. O. (2025). *Education recovery scorecard. February 2025: Pivoting from recovery to long-term reform*. Center for Education Policy Research, Harvard University, and The Educational Project Opportunity at Stanford University. <https://educationrecoveryscorecard.org/wp-content/uploads/2025/02/Pivoting-from-Pandemic-Recovery-to-Long-Term-Reform-A-District-Level-Analysis.pdf>
- Fahle, E., Kane, T. J., Reardon, Sean, & Staiger, D. O. (2024). *The first year of pandemic recovery: A district-level analysis* (Education Recovery Scorecard). Center for Education Policy Research, Harvard University, The Educational Opportunity Project at Stanford University. <https://educationrecoveryscorecard.org/wp-content/uploads/2024/01/ERS-Report-Final-1.31.pdf>
- Halloran, C., Hug, C. E., Jack, R., & Oster, E. (2023). *Post COVID-19 test score recovery: Initial evidence from state testing data* (Working Paper No. 31113; NBER Working Paper Series). National Bureau of Economic Research. <https://www.nber.org/papers/w31113>
- Lewis, K., & Kuhfeld, M. (2024). *Recovery still elusive: 2023-24 student achievement highlights persistent achievement gaps and a long road ahead*. NWEA Research. https://www.nwea.org/uploads/recovery-still-illusive-2023-24-student-achievement-highlights-persistent-achievement-gaps-and-a-long-road-ahead_NWEA_researchBrief.pdf
- Lewis, K., & Kuhfeld, M. (2025). *Math recovery continues, reading remains stalled in spring 2025* (Trend Snapshots). NWEA Research. <https://www.nwea.org/research/publication/trend-snapshots-math-recovery-continues-reading-remains-stalled-in-spring-2025/>
- McEachin, A., & Atteberry, A. (2017). The impact of summer learning loss on measures of school performance. *Education Finance and Policy*, 12(4), 468–491. https://doi.org/10.1162/edfp_a_00213

- MDE. (2019). *Technical report: Spring 2019 Michigan Student Test of Educational Progress (M-STEP)*. Michigan Department of Education. https://www.michigan.gov/-/media/Project/Websites/mde/Year/2020/05/14/Spring_2019_M-STEP_Technical_Report_Main_report.pdf?rev=0c3bbf9629ea411395157233c92439e0
- National Assessment of Educational Progress. (2022). *Reading and mathematics scores decline during COVID-19 pandemic*. National Center for Education Statistics. <https://www.nationsreportcard.gov/highlights/ltr/2022/>
- National Center for Education Statistics. (2024). *2024 reading state snapshot report* (The Nation's Report Card). <https://nces.ed.gov/nationsreportcard/subject/publications/stt2024/pdf/2024220MI4.pdf>
- NWEA. (2020). *Linking study report: Predicting performance on the Michigan state assessment system in grades 3-8 ELA and mathematics based on NWEA MAP Growth scores*. Northwest Evaluation Association. https://www.nwea.org/content/uploads/2016/12/MI-MAP-Growth-LinkingStudy-Report_NWEA_2020-12-22.pdf
- Quinn, D. M., Cooc, N., McIntyre, J., & Gomez, C. J. (2016). Seasonal dynamics of academic achievement inequality by socioeconomic status and race/ethnicity: Updating and extending past research with new national data. *Educational Researcher*, 45(8), 443–453. <https://doi.org/10.3102/0013189X16677965>
- Renaissance Learning. (2019). *Pathway to proficiency: Linking Star Reading and Star Math to the Michigan Student Test of Educational Progress (M-STEP)* [Technical Paper]. Renaissance Learning, Inc. <https://doc.renlearn.com/KMNet/R0053649AF33BE0B.pdf>
- Renaissance Star Assessments. (2021a). *Star assessments for early literacy technical manual* [Technical Manual]. Renaissance Learning, Inc. <https://star-help.renaissance.com/hc/en-us/articles/12483321397019-Star-Assessments-for-Early-Literacy-Technical-Manual>

- Renaissance Star Assessments. (2021b). *Star assessments for math technical manual* [Technical Manual]. Renaissance Learning, Inc. <https://star-help.renaissance.com/hc/en-us/articles/11583043402267-Star-Assessments-for-Math-Technical-Manual>
- Renaissance Star Assessments. (2021c). *Star assessments for reading technical manual* [Technical Manual]. Renaissance Learning, Inc. <https://star-help.renaissance.com/hc/en-us/articles/12542471051803-Star-Assessments-for-Reading-Technical-Manual>
- Smarter Balanced Assessment Consortium. (2020). *Smarter Balanced validity research percentiles* [Research Report]. Smarter Balanced Validity Research. <https://validity.smarterbalanced.org/reports-and-specifications/percentiles/>
- Smarter Balanced Assessment Consortium. (2021). *2020-21 interim technical report* [Technical Report]. University of California. https://technicalreports.smarterbalanced.org/2020-21_interim-report/_book/
- Strunk, K. O., Hopkins, B., Kilbride, T., Imberman, S., & Yu, D. (2023). *The path of student learning delay during the COVID-19 pandemic: Evidence from Michigan*. Education Policy Innovation Collaborative. <https://epicedpolicy.org/wp-the-path-of-student-learning-delay-during-covid-19/>
- Thum, Y. M., & Kuhfeld, M. (2020). *NWEA 2020 MAP Growth: Achievement status and growth norms for students and schools* (pp. 1–574) [White paper]. Northwest Evaluation Association. <https://teach.mapnwea.org/impl/normsResearchStudy.pdf>
- von Hippel, P. T. (2020, April 9). How will the Coronavirus crisis affect children's learning? Unequally. *Education Next*. <https://www.educationnext.org/how-will-coronavirus-crisis-affect-childrens-learning-unequally-covid-19/>

Endnotes

¹ This number is smaller than the 704 districts that provided student-level data for the 2024-25 school year because 13 of those districts provided only data for fall 2024 but not for spring 2025.

² This is largely driven by Detroit Public Schools Community District, which is the largest school district in Michigan and accounts for more than one-fifth of all students who took an i-Ready assessment despite there being 88 districts that used i-Ready.

³ The results we present in this report are aggregated to the state level. To prevent identification of any individual students from very small subgroups, we do not show results for any cells that represent fewer than ten students.

⁴ Some vendors have published new norms for their benchmark assessments since this study began. For comparability across school years and report iterations, we have continued to use the same norms that were in place for each assessment in 2020-21.

⁵ A notable exception to this pattern is that fall 2020 scores for students in lower elementary grades were often substantially above pre-pandemic norms. We attribute this mostly to more favorable at-home testing conditions for younger students rather than a true reflection of their achievement at that time. We discuss this finding in greater detail in our report on [Michigan's Fall 2021 Benchmark Assessments](#).

⁶ Given the differences in characteristics of students from i-Ready districts relative to the state average (see Section Two of this report), we use the distributions of scale scores from Michigan districts that completed the i-Ready assessments in 2018-19 as comparison points instead of national norms. Michigan students' average i-Ready scores, both before and during pandemic-affected years, are very far below the national norms for these assessments, making it difficult to interpret visual trends when we use these as comparison points. While the Michigan-specific medians from 2018-19 do not represent the same exact groups of students or districts who participated in these assessments in 2020-21 through 2024-25, they represent a more comparable population than the national norming sample.

⁷ These estimates are slightly different than the ones we showed in prior reports for the same testing periods. This is because we limit our regression analyses to just the students and districts with comparable benchmark assessment data for every possible testing period, as this ensures that the trends in the figures reflect changes in achievement among a consistent group of students rather than changes in test participation. Given that benchmark assessments are no longer required by law, fewer districts and students participated in 2023-24 and 2024-25 and therefore no longer meet the inclusion criteria for this analysis. As a result, our estimates for earlier time periods are based on a slightly different sample than our estimates for the same time periods in past reports.

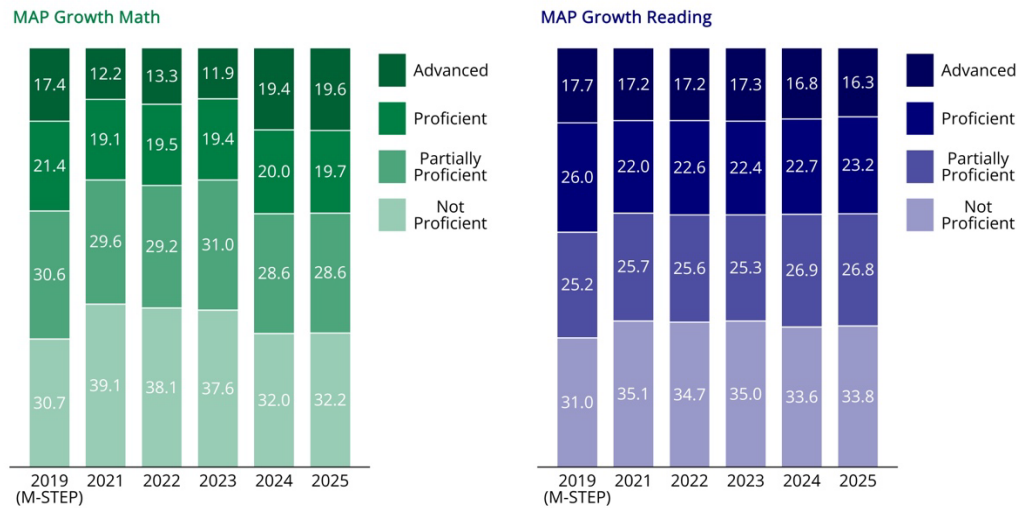
⁸ While we do not know exactly how students would have performed on benchmark assessments in 2018-19, we consider the M-STEP proficiency rates from that year to be a reasonable approximation, given the close alignment between actual M-STEP proficiency rates and our estimates based on benchmark assessments in the years when data from both types of assessments are available.

⁹ We note that this definition of “typical growth” or “growth target” differs in meaning from the way practitioners use similar terms, such as “growth goals,” in the classroom. In classroom contexts, teachers likely set student growth goals or targets that represent what the teacher expects an individual student to achieve in a given period. This is different from the targets for “typical growth” that we use in this report, which indicate the median growth that students with similar prior scores achieved before the pandemic.

¹⁰ Although we include data from all four benchmark assessment vendors in our overall growth analyses, we provide only appendix figures with vendor-specific subgroup breakdowns for MAP Growth and i-Ready. This is because there are too few students in the Star 360 and Smarter Balanced ICA samples to make meaningful comparisons across subgroups.

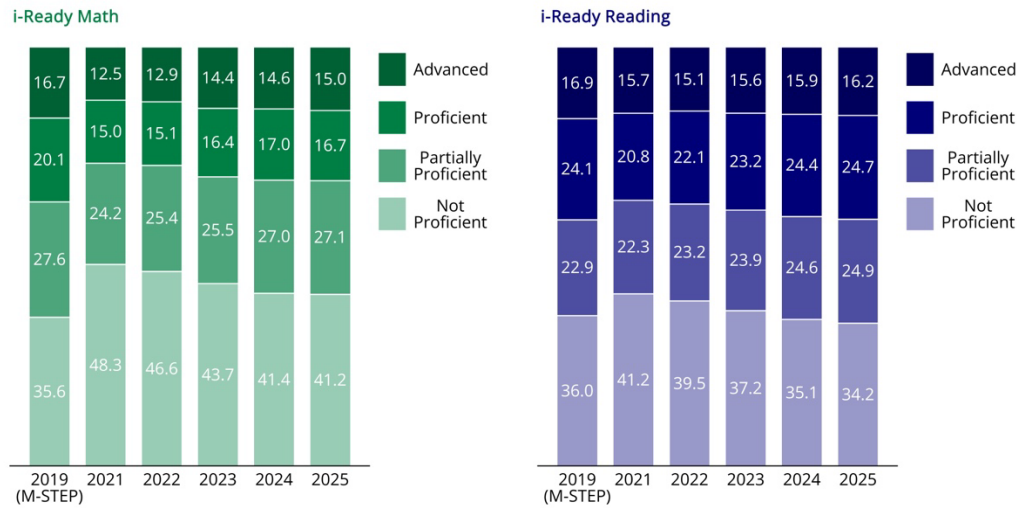
Appendix:

Figure A.1.1. M-STEP Proficiency Levels and Vendor-Defined Benchmark Assessment Equivalencies, Grades 3-7 (MAP Growth)



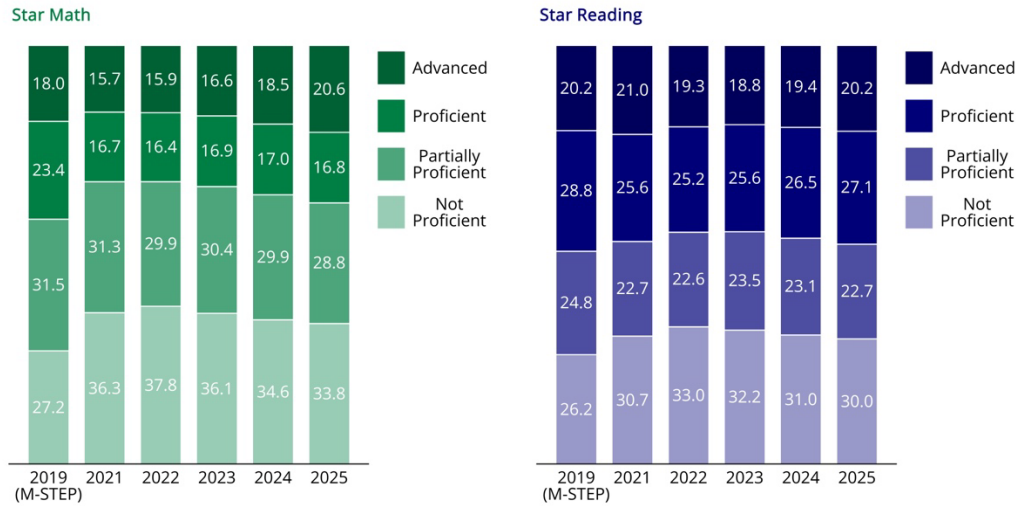
Notes: These percentages include all 3rd- through 7th-grade students with benchmark assessment data for the spring 2025 testing period from a MAP Growth assessment.

Figure A.1.2. M-STEP Proficiency Levels and Vendor-Defined Benchmark Assessment Equivalencies, Grades 3-7 (i-Ready)



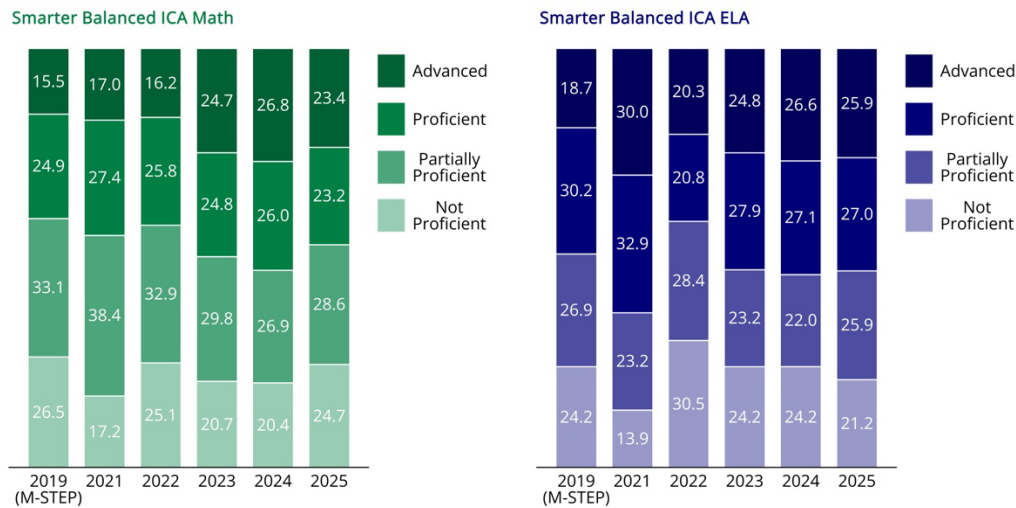
Notes: These percentages include all 3rd- through 7th-grade students with benchmark assessment data for the spring 2025 testing period from an i-Ready assessment.

Figure A.1.3. M-STEP Proficiency Levels and Vendor-Defined Benchmark Assessment Equivalencies, Grades 3-7 (Star 360)



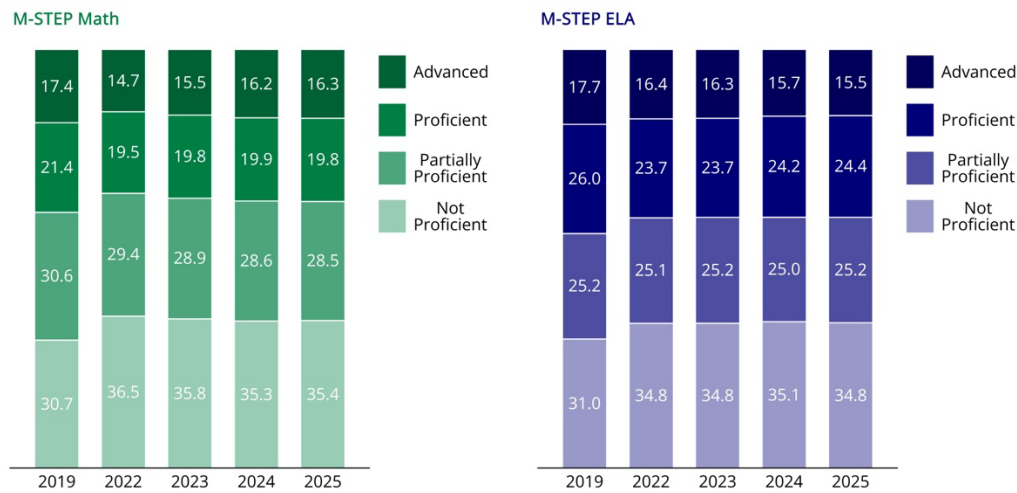
Notes: These percentages include all 3rd- through 7th-grade students with benchmark assessment data for the spring 2025 testing period from a Star 360 assessment.

Figure A.1.4. M-STEP Proficiency Levels and Vendor-Defined Benchmark Assessment Equivalencies, Grades 3-7 (Smarter Balanced ICA)



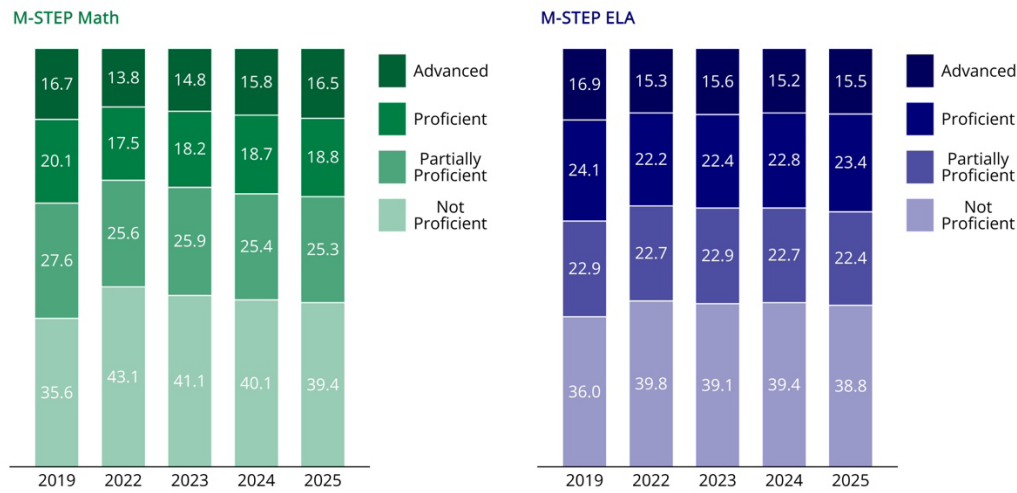
Notes: These percentages include all 3rd- through 7th-grade students with benchmark assessment data for the spring 2025 testing period from a Smarter Balanced ICA assessment.

Figure A.1.5. M-STEP Proficiency Levels, Grades 3-7 (MAP Growth Districts)



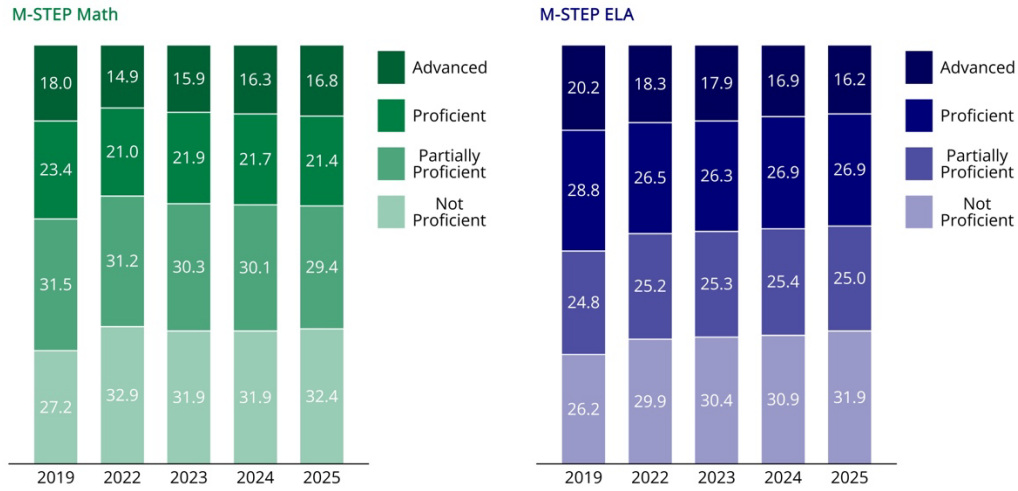
Notes: These percentages include all 3rd- through 7th-grade students in districts that provided MAP Growth data for the spring 2025 testing period.

Figure A.1.6. M-STEP Proficiency Levels, Grades 3-7 (i-Ready Districts)



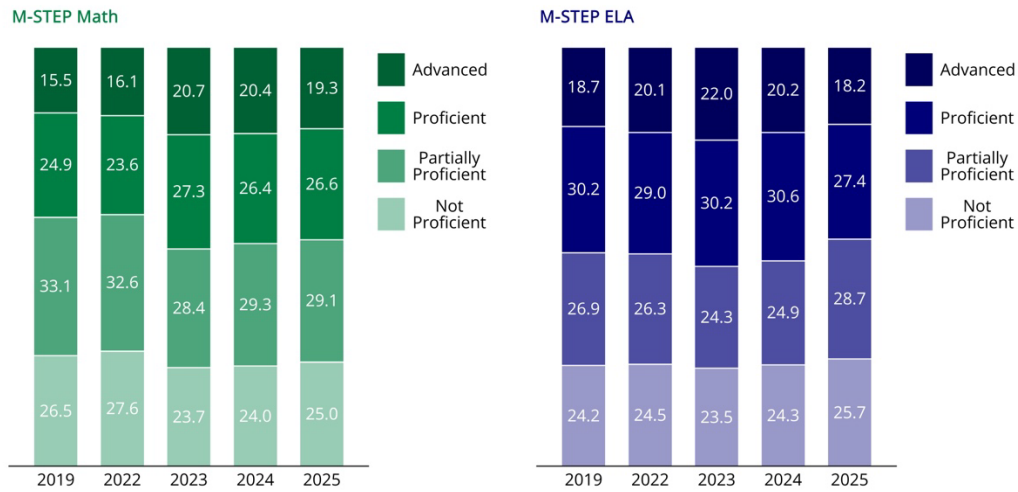
Notes: These percentages include all 3rd- through 7th-grade students in districts that provided i-Ready data for the spring 2025 testing period.

Figure A.1.7. M-STEP Proficiency Levels, Grades 3-7 (Star 360 Districts)



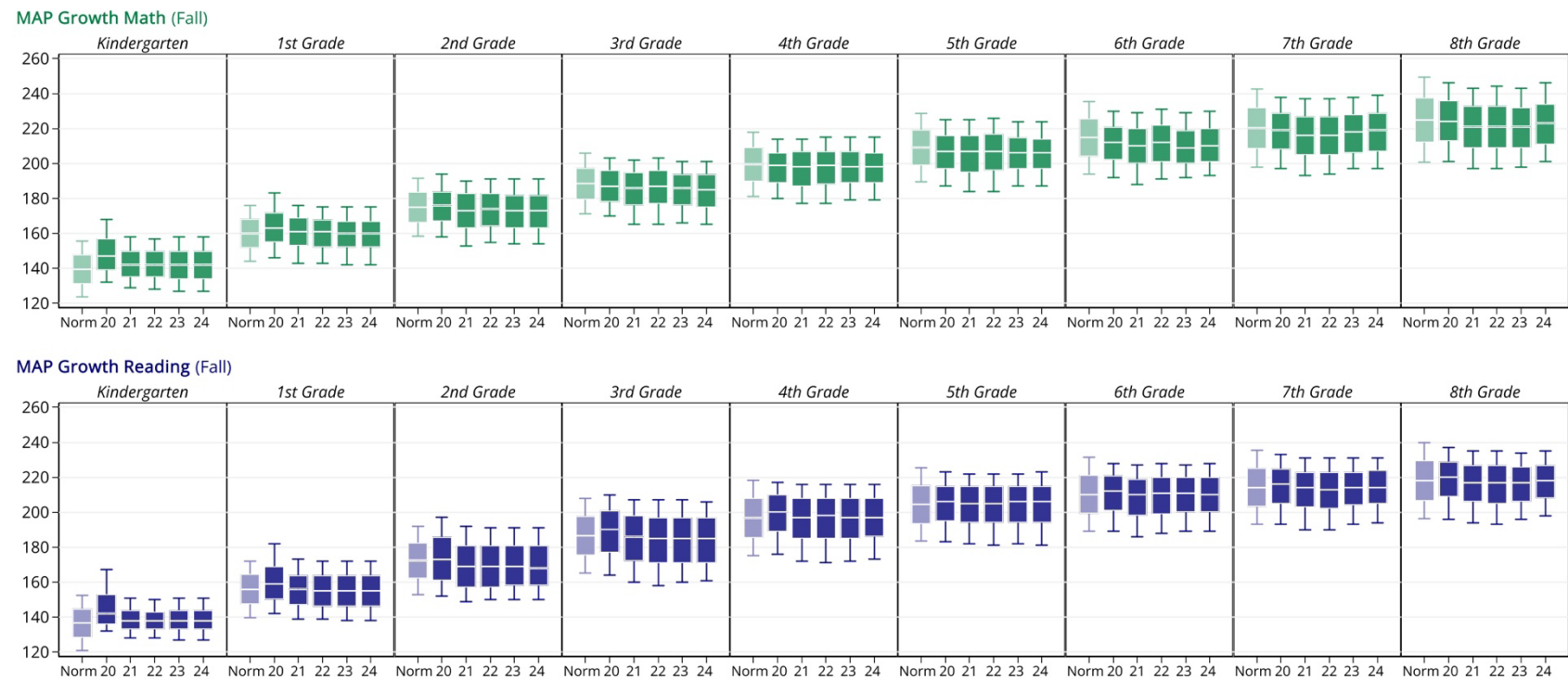
Notes: These percentages include all 3rd- through 7th-grade students in districts that provided Star 360 data for the spring 2025 testing period.

Figure A.1.8. M-STEP Proficiency Levels, Grades 3-7 (Smarter Balanced ICA Districts)



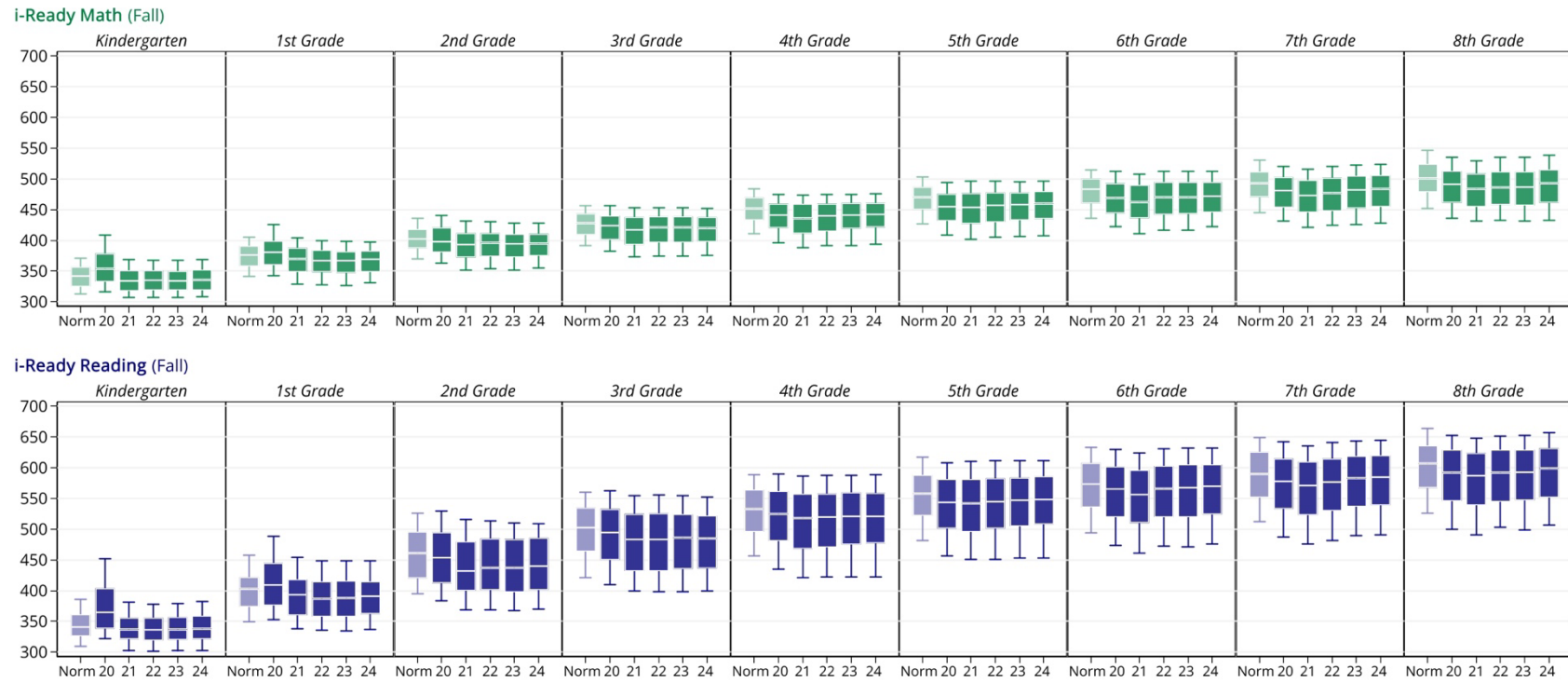
Notes: These percentages include all 3rd- through 7th-grade students in districts that provided Smarter Balanced ICA data for the spring 2025 testing period.

Figure A.2.1. Distribution of Fall Scale Scores by School Year and Grade Level, MAP Growth (All Years)



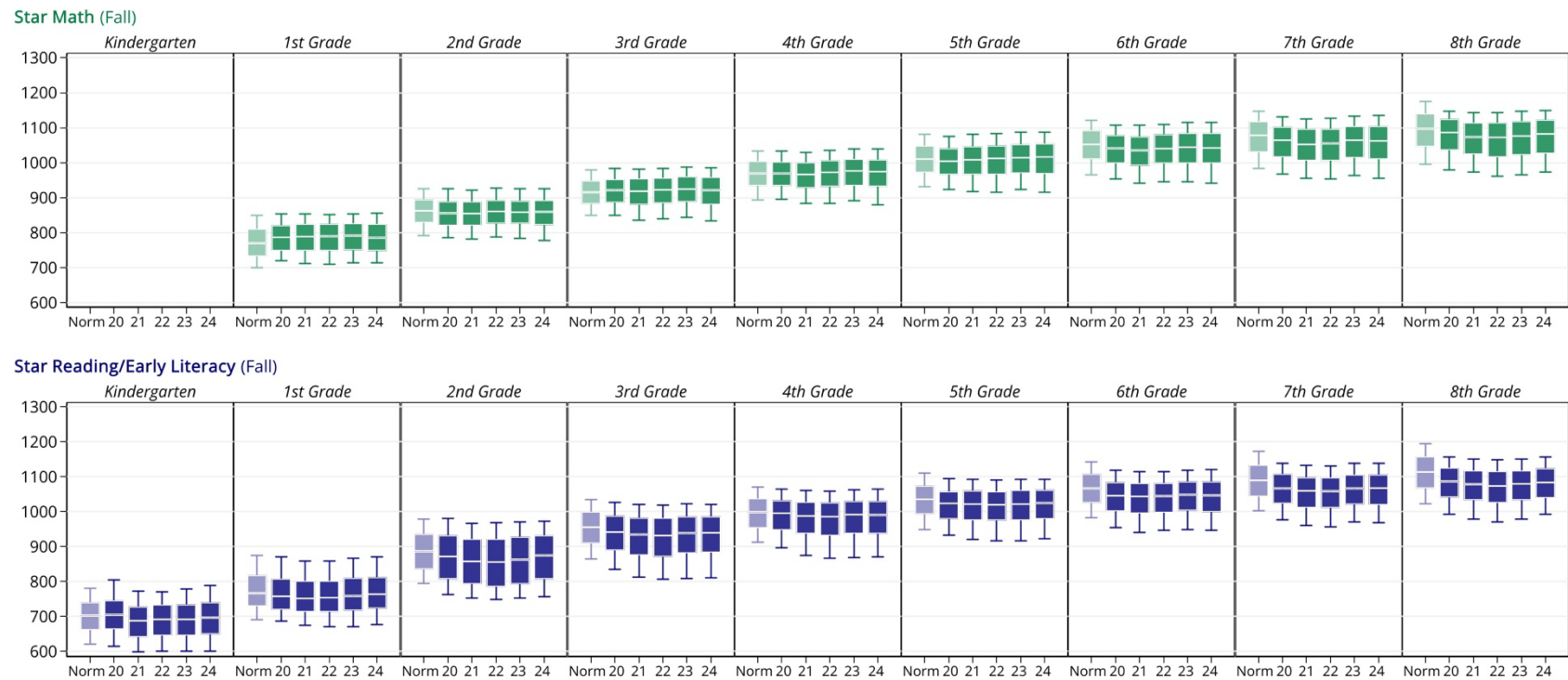
Notes: Each vertical line shows the 10th and 90th percentiles of students' fall benchmark assessment scores, while each rectangle shows the 25th, 50th, and 75th percentiles. Each lighter-shaded box and whisker represents the pre-pandemic national norming distribution.

Figure A.2.2. Distribution of Fall Scale Scores by School Year and Grade Level, i-Ready (All Years)



Notes: Each vertical line shows the 10th and 90th percentiles of students' fall benchmark assessment scores, while each rectangle shows the 25th, 50th, and 75th percentiles. Each lighter-shaded box and whisker represents the pre-pandemic national norming distribution.

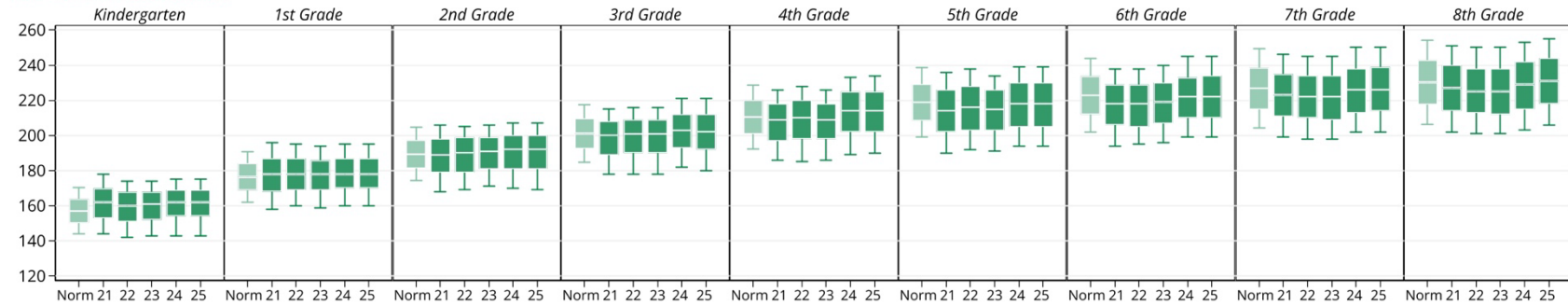
Figure A.2.3. Distribution of Fall Scale Scores by School Year and Grade Level, Star 360 (All Years)



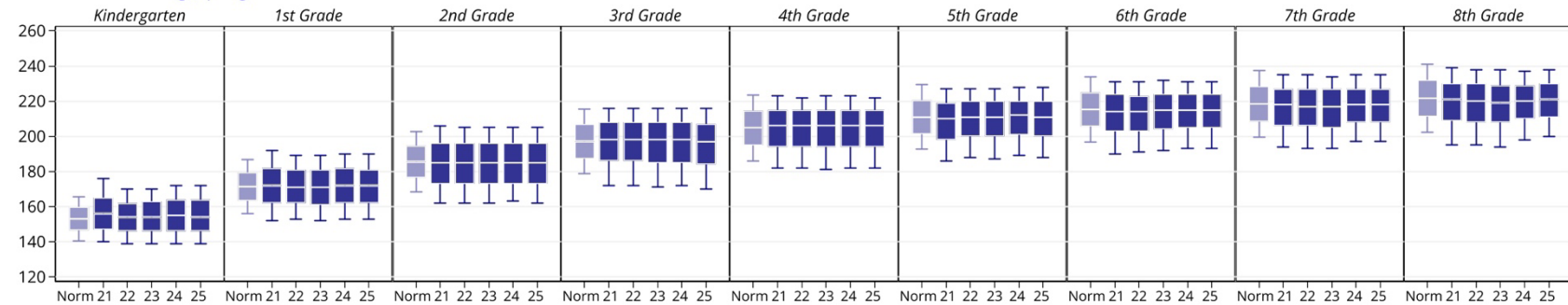
Notes: Each vertical line shows the 10th and 90th percentiles of students' fall benchmark assessment scores, while each rectangle shows the 25th, 50th, and 75th percentiles. Each lighter-shaded box and whisker represents the pre-pandemic national norming distribution.

Figure A.2.4. Distribution of Spring Scale Scores by School Year and Grade Level, MAP Growth (All Years)

MAP Growth Math (Spring)

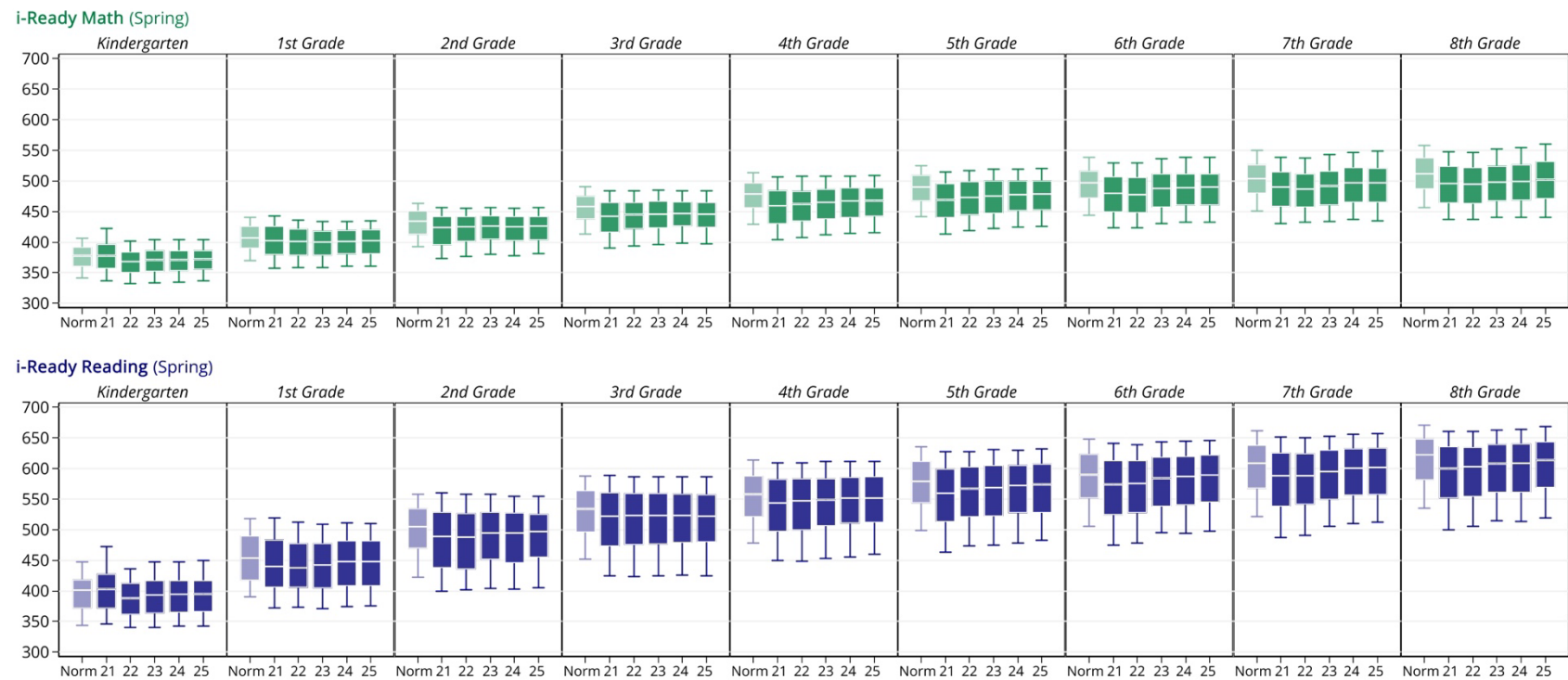


MAP Growth Reading (Spring)



Notes: Each vertical line shows the 10th and 90th percentiles of students' spring benchmark assessment scores, while each rectangle shows the 25th, 50th, and 75th percentiles. Each lighter-shaded box and whisker represents the pre-pandemic national norming distribution.

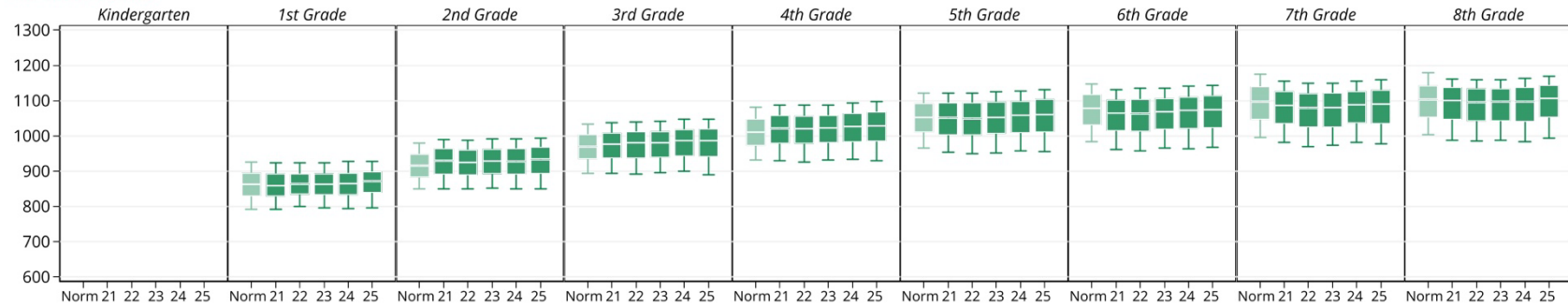
Figure A.2.5. Distribution of Spring Scale Scores by School Year and Grade Level, i-Ready (All Years)



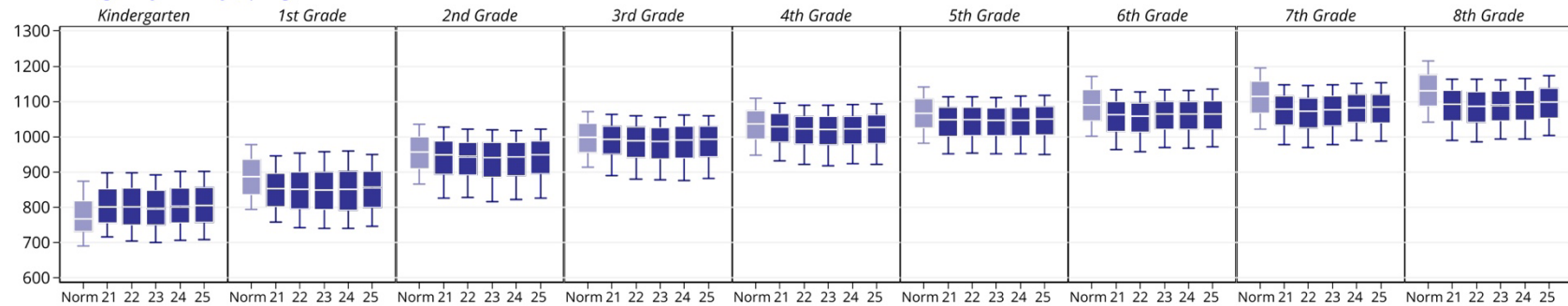
Notes: Each vertical line shows the 10th and 90th percentiles of students' spring benchmark assessment scores, while each rectangle shows the 25th, 50th, and 75th percentiles. Each lighter-shaded box and whisker represents the pre-pandemic national norming distribution.

Figure A.2.6. Distribution of Spring Scale Scores by School Year and Grade Level, Star 360 (All Years)

Star Math (Spring)

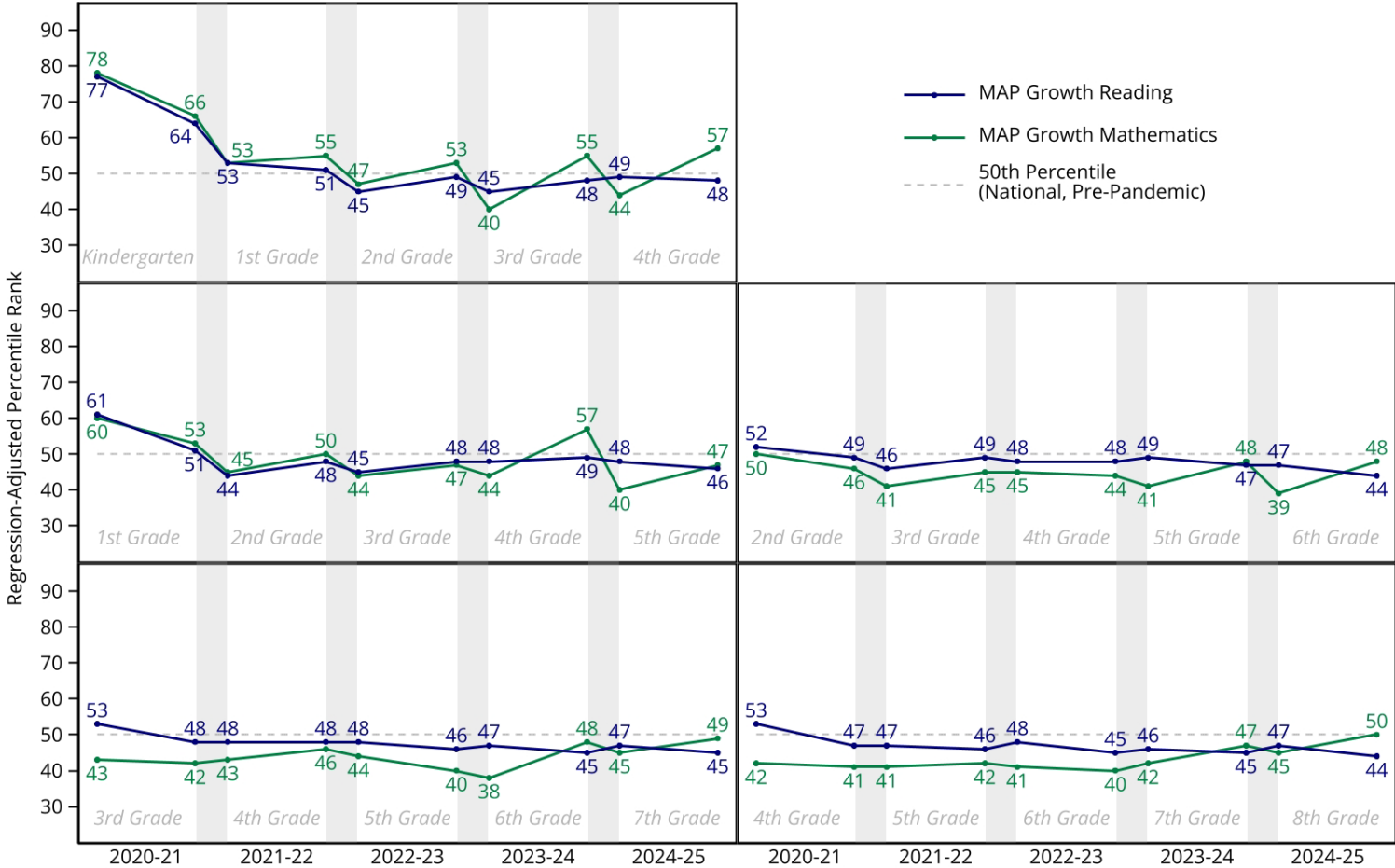


Star Reading/Early Literacy (Spring)



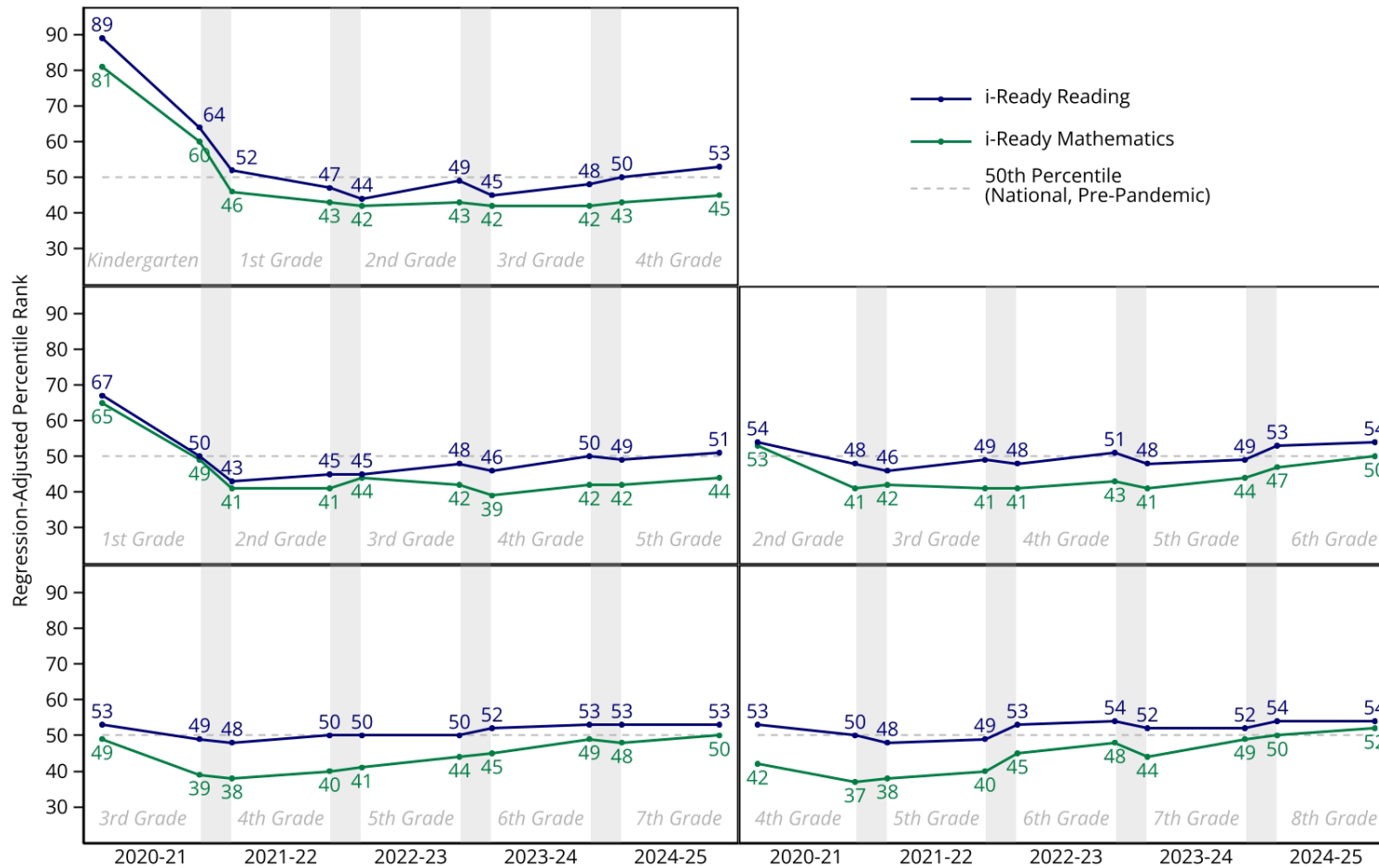
Notes: Each vertical line shows the 10th and 90th percentiles of students' spring benchmark assessment scores, while each rectangle shows the 25th, 50th, and 75th percentiles. Each lighter-shaded box and whisker represents the pre-pandemic national norming distribution. The Star Math assessment is only normed for 1st grade and above.

Figure A.3.1. Regression-Adjusted Percentile Ranks by Semester and Grade Level (MAP Growth)



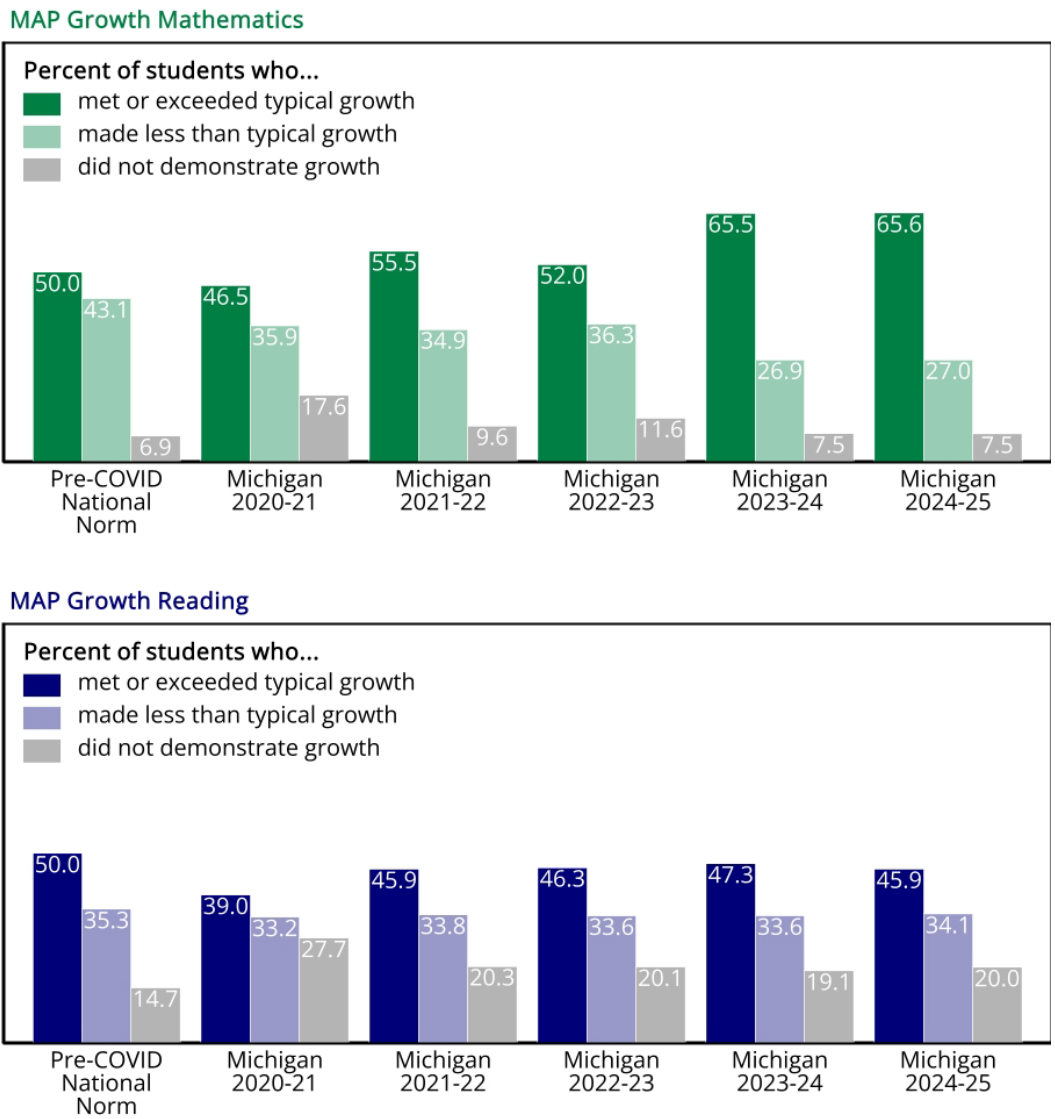
Notes: These regression estimates are based on district-grade-average scores across students with MAP Growth scores in every possible testing period. We standardized scores relative to pre-pandemic national norms for each assessment and converted all estimates into percentile ranks for interpretability.

Figure A.3.2. Regression-Adjusted Percentile Ranks by Semester and Grade Level (i-Ready)



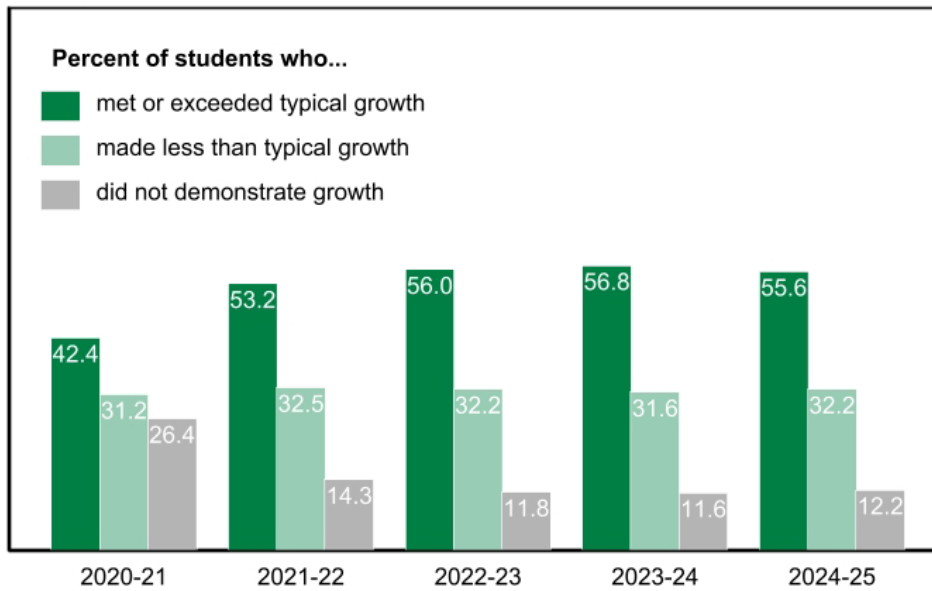
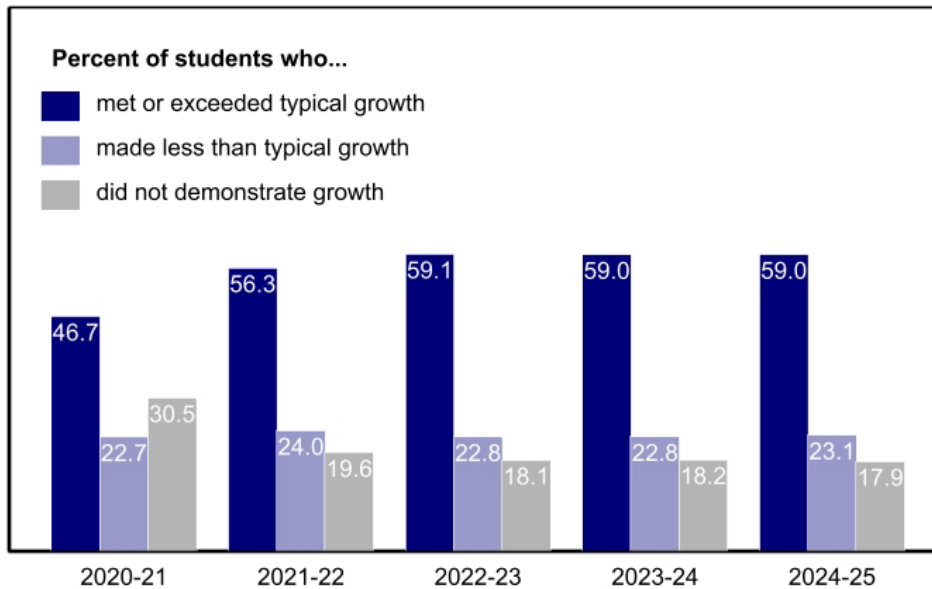
Notes: These regression estimates are based on district-grade-average scores across students with i-Ready scores in every possible testing period. We standardized scores relative to pre-pandemic national norms for each assessment and converted all estimates into percentile ranks for interpretability.

Figure A.4.1. Fall-to-Spring Growth Outcomes by School Year (MAP Growth)



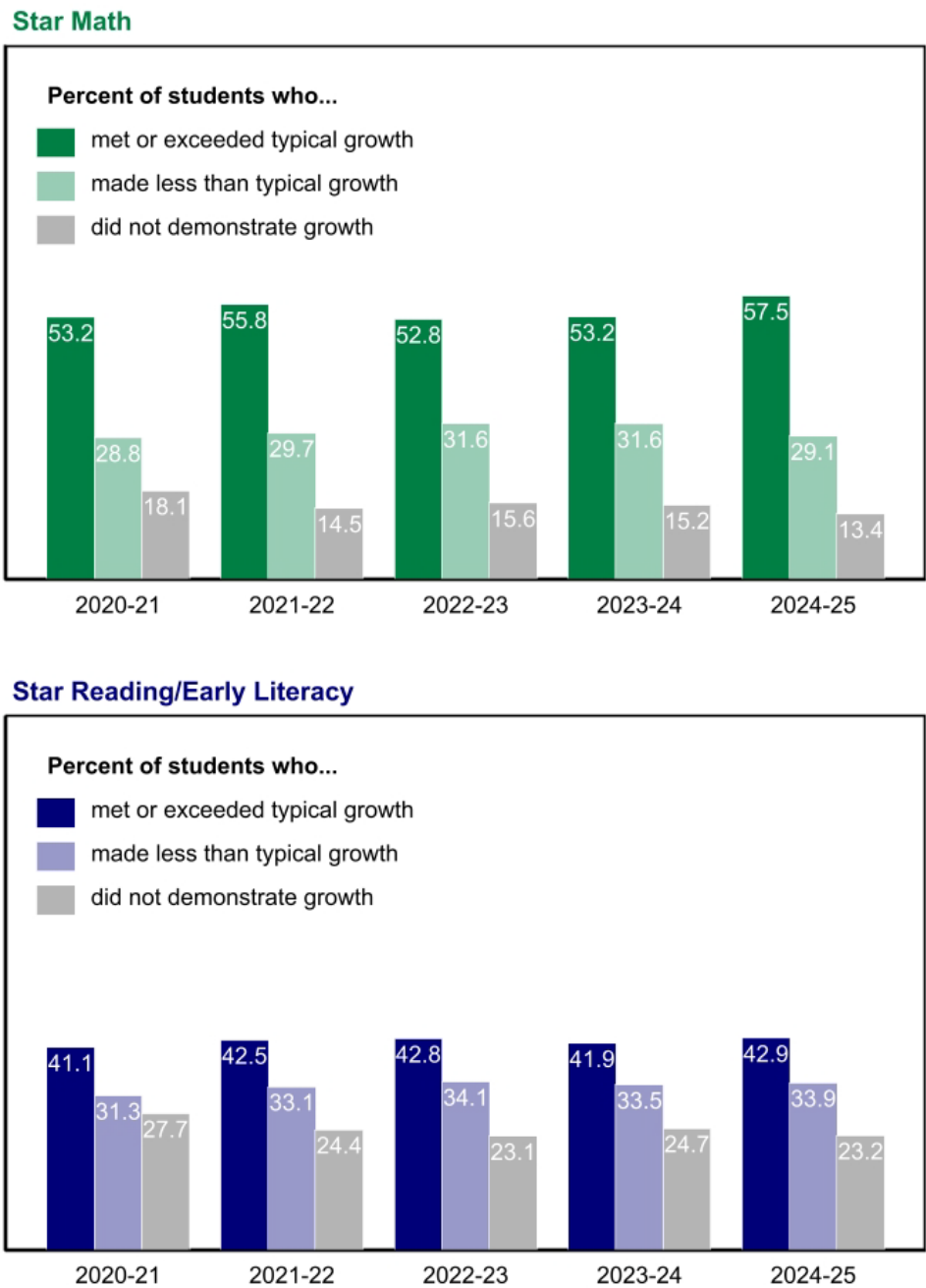
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

Figure A.4.2. Fall-to-Spring Growth Outcomes by School Year (i-Ready)

i-Ready Mathematics**i-Ready Reading**

Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

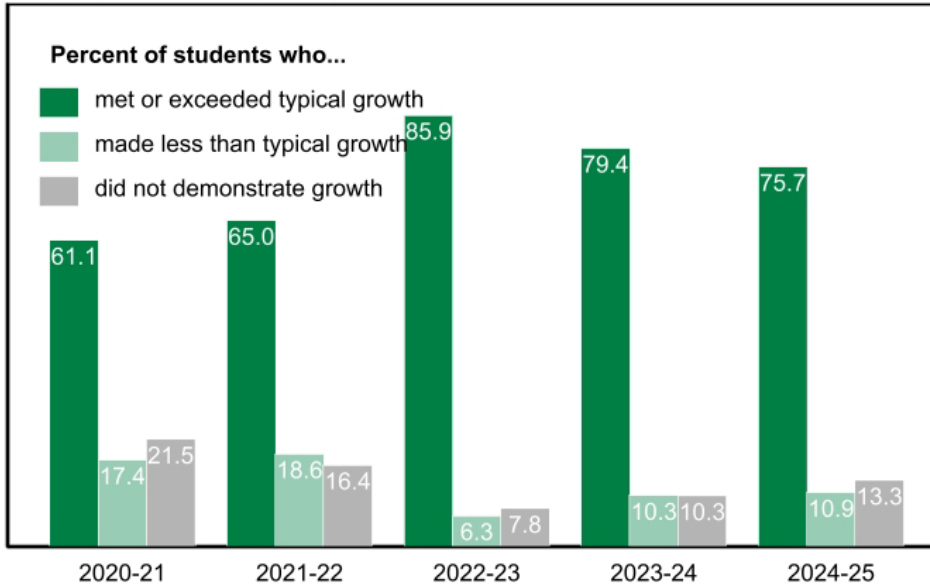
Figure A.4.3. Fall-to-Spring Growth Outcomes by School Year (Star 360)



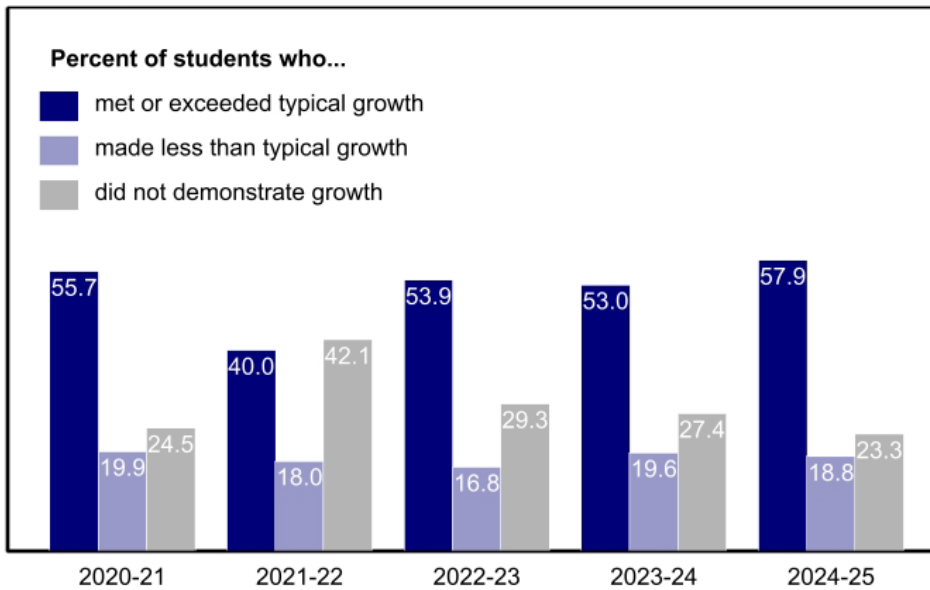
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

Figure A.4.4. Fall-to-Spring Growth Outcomes by School Year
(Smarter Balanced ICA)

Smarter Balanced Mathematics ICA

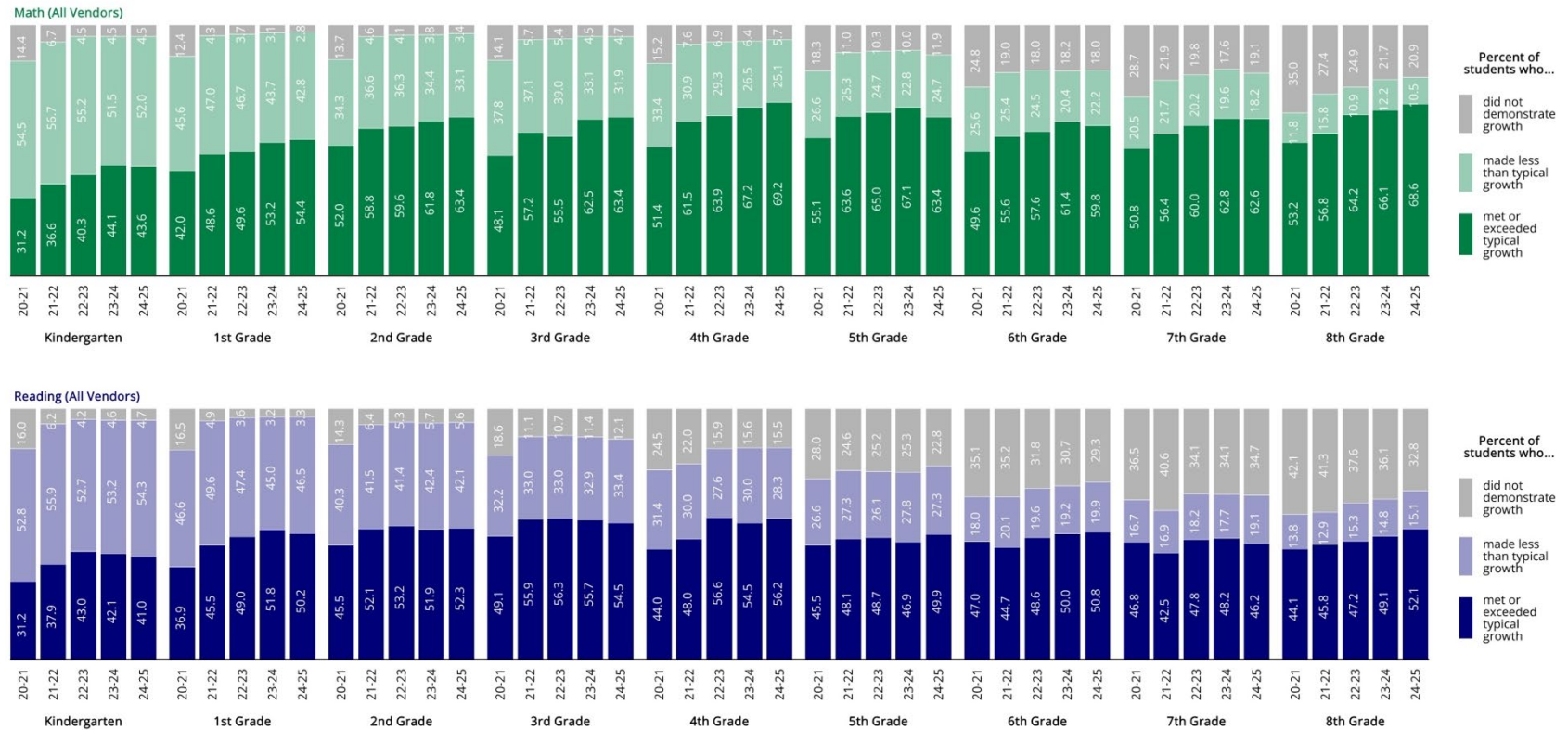


Smarter Balanced ELA ICA



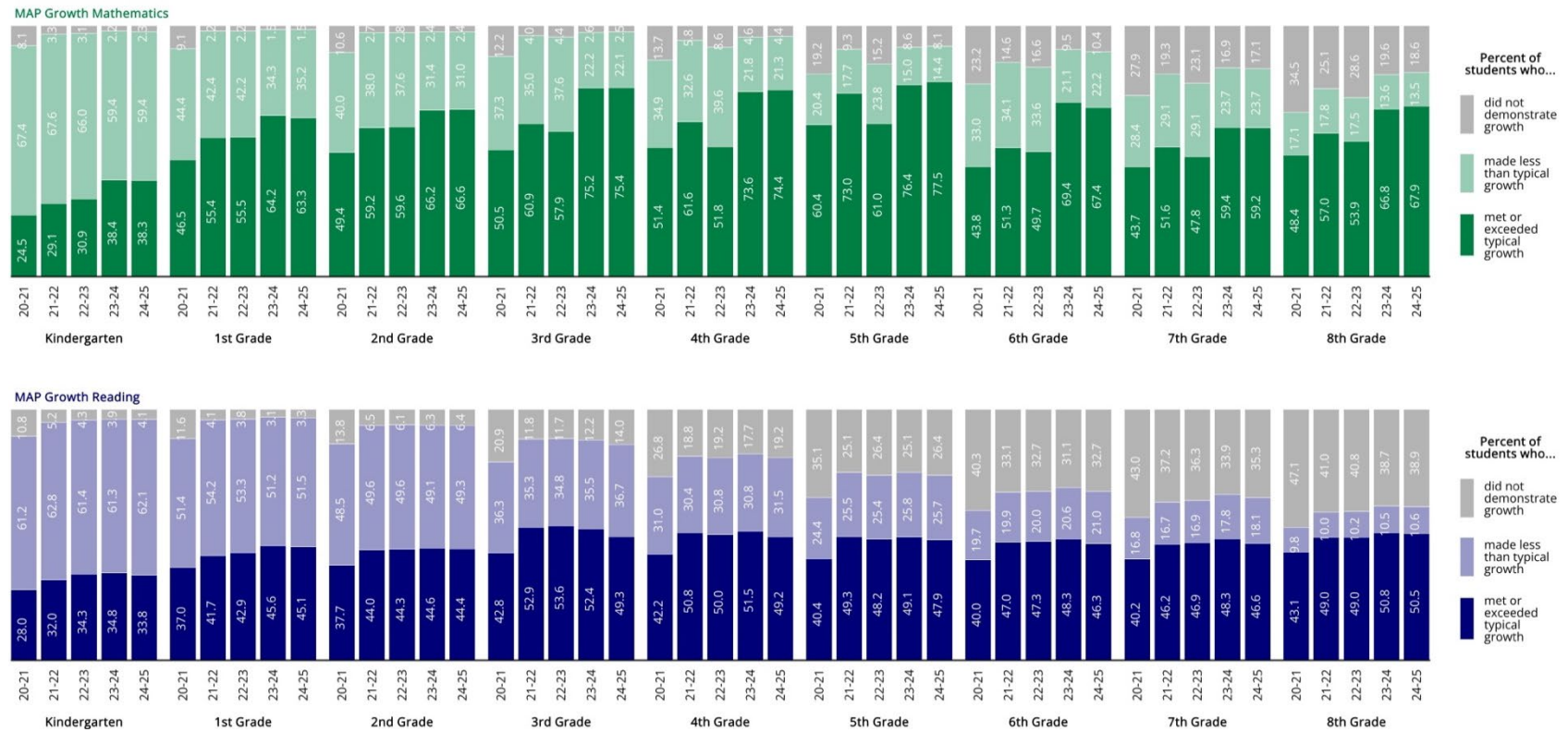
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student's initial achievement on their fall benchmark assessment.

Figure A.5.1. Fall-to-Spring Growth Outcomes by School Year and Grade Level (All Vendors)



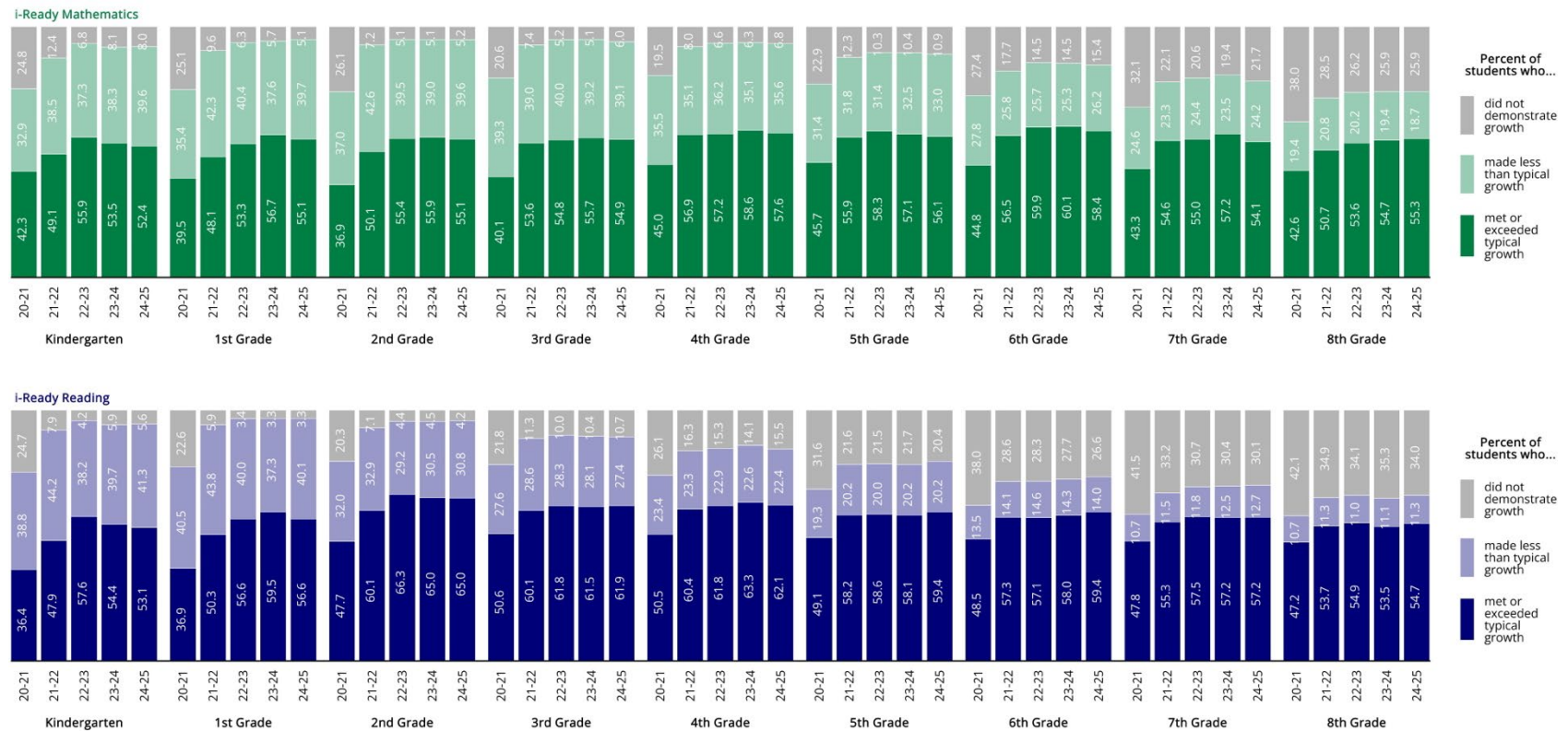
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

Figure A.5.2. Fall-to-Spring Growth Outcomes by School Year and Grade Level (MAP Growth)



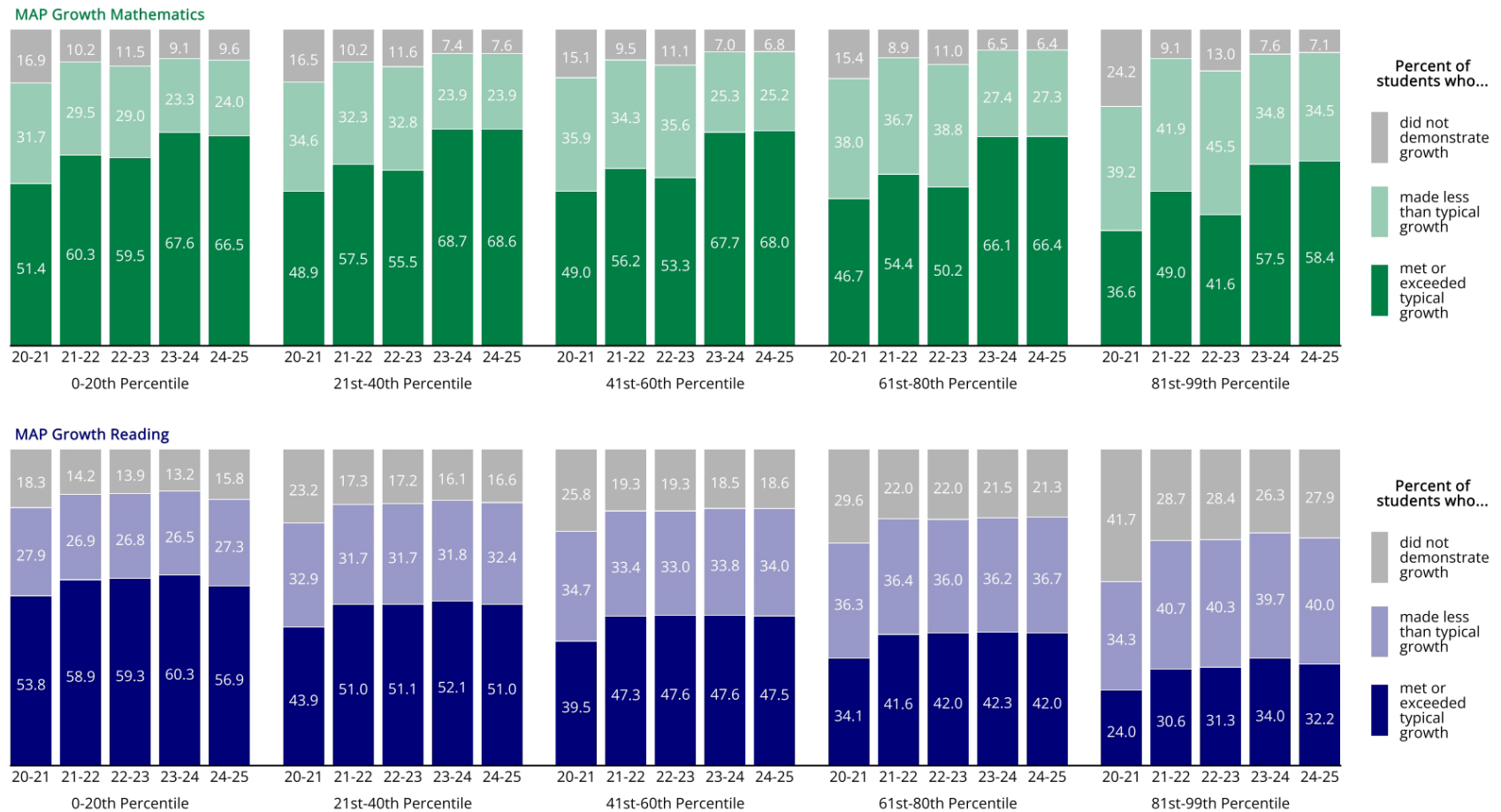
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student's initial achievement on their fall benchmark assessment.

Figure A.5.3. Fall-to-Spring Growth Outcomes by School Year and Grade Level (i-Ready)



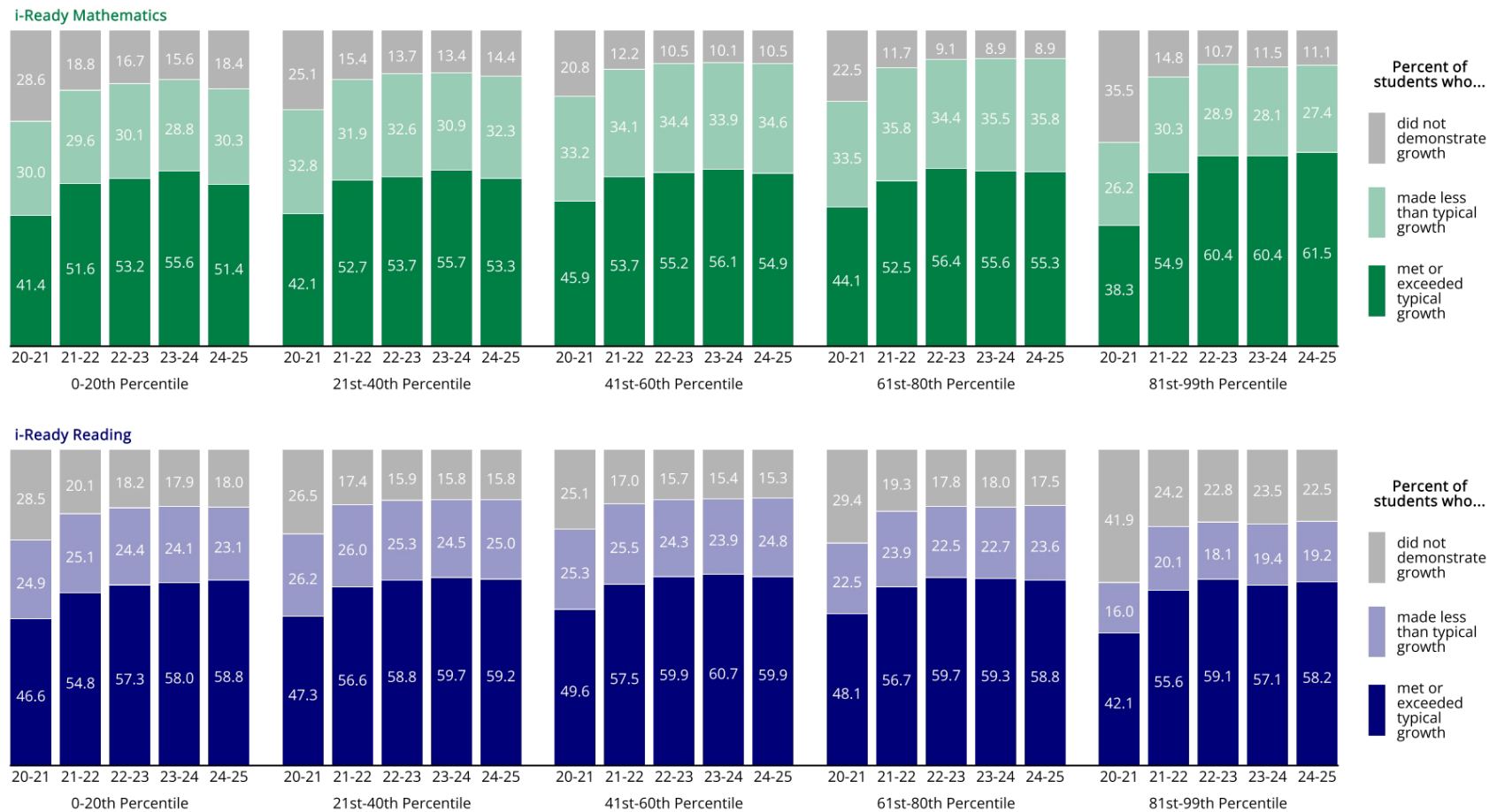
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

Figure A.5.4. Fall-to-Spring Growth Outcomes by School Year and Fall Achievement Level (MAP Growth)



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

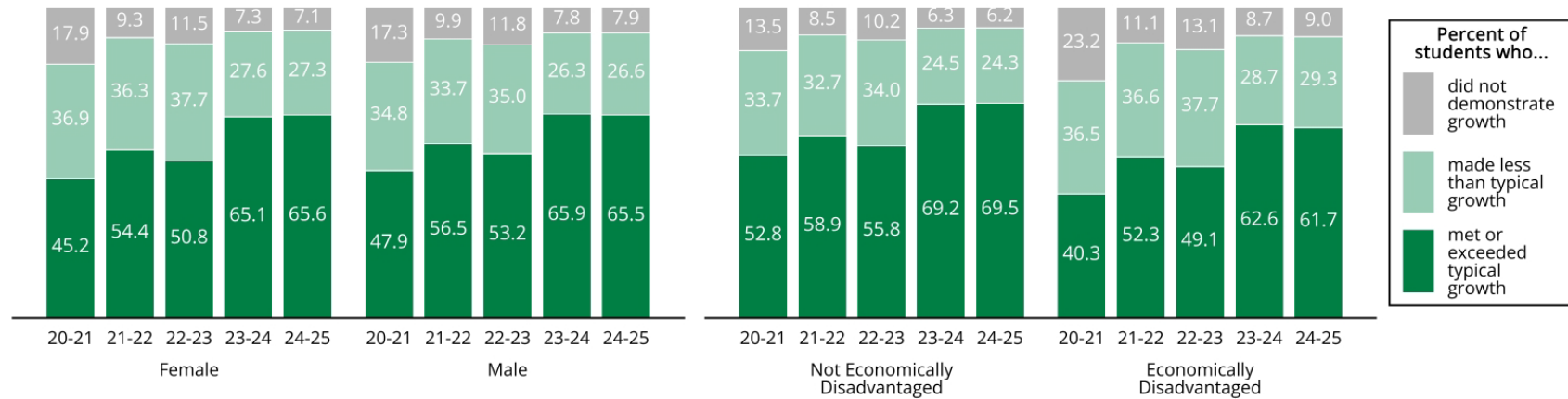
Figure A.5.5. Fall-to-Spring Growth Outcomes by School Year and Fall Achievement Level (i-Ready)



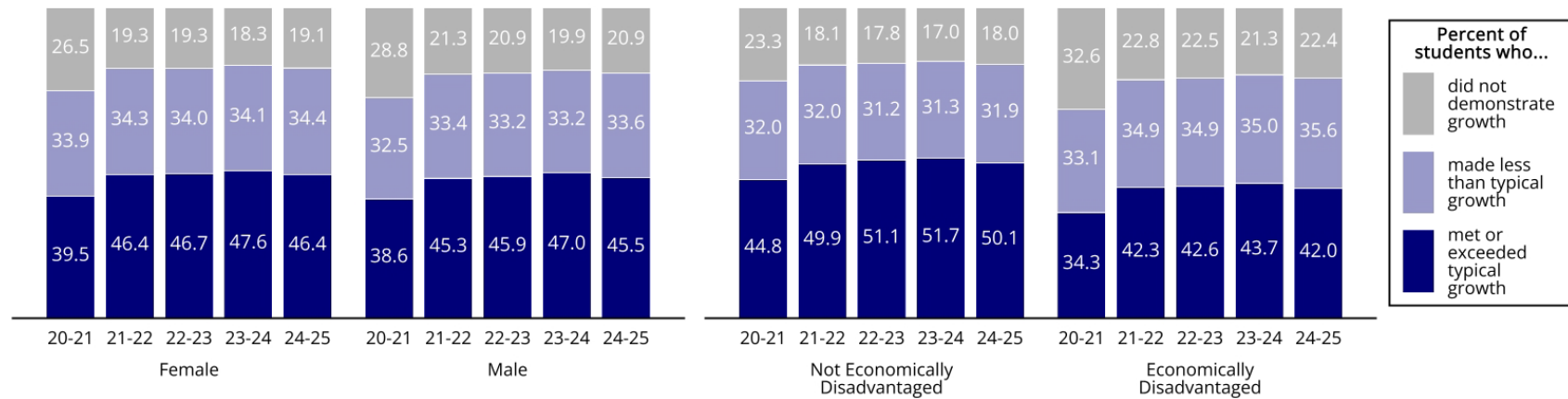
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

Figure A.6.1. Fall-to-Spring Growth Outcomes by School Year and Demographic Subgroup (MAP Growth)

MAP Growth Mathematics



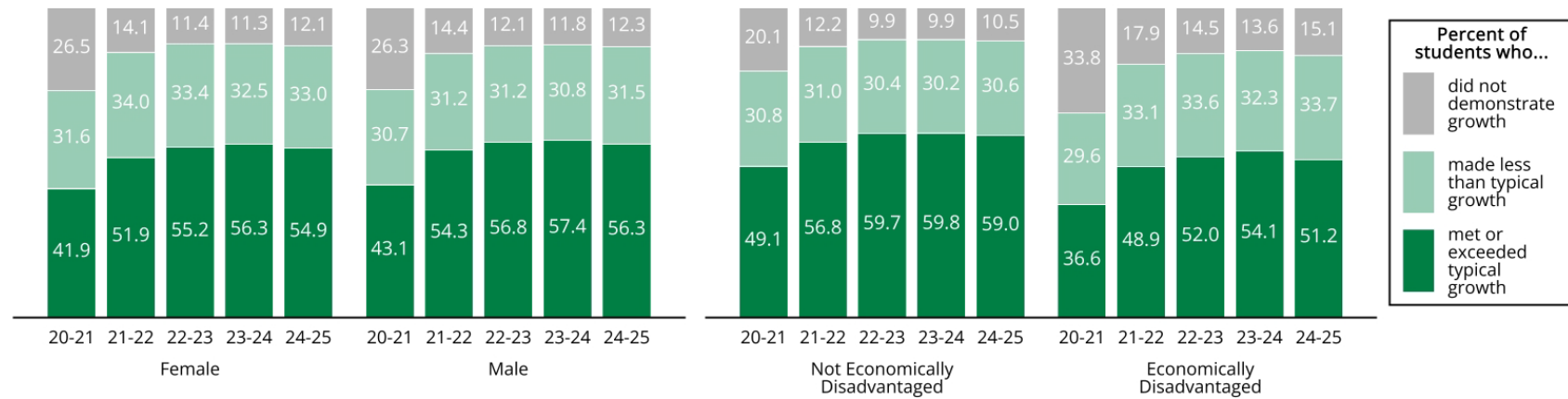
MAP Growth Reading



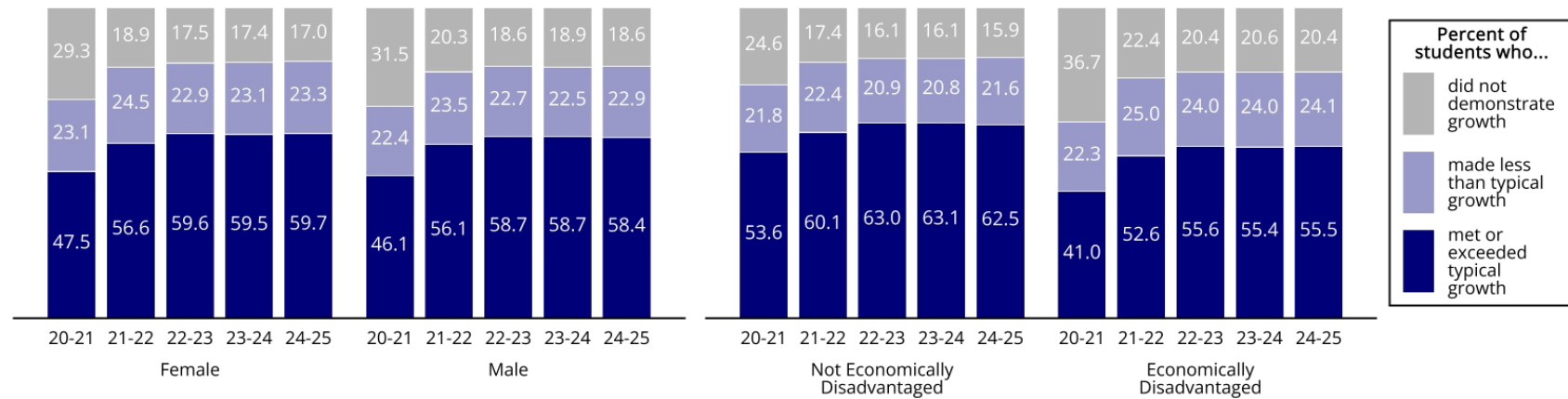
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student's initial achievement on their fall benchmark assessment.

Figure A.6.2. Fall-to-Spring Growth Outcomes by School Year and Demographic Subgroup (i-Ready)

i-Ready Mathematics



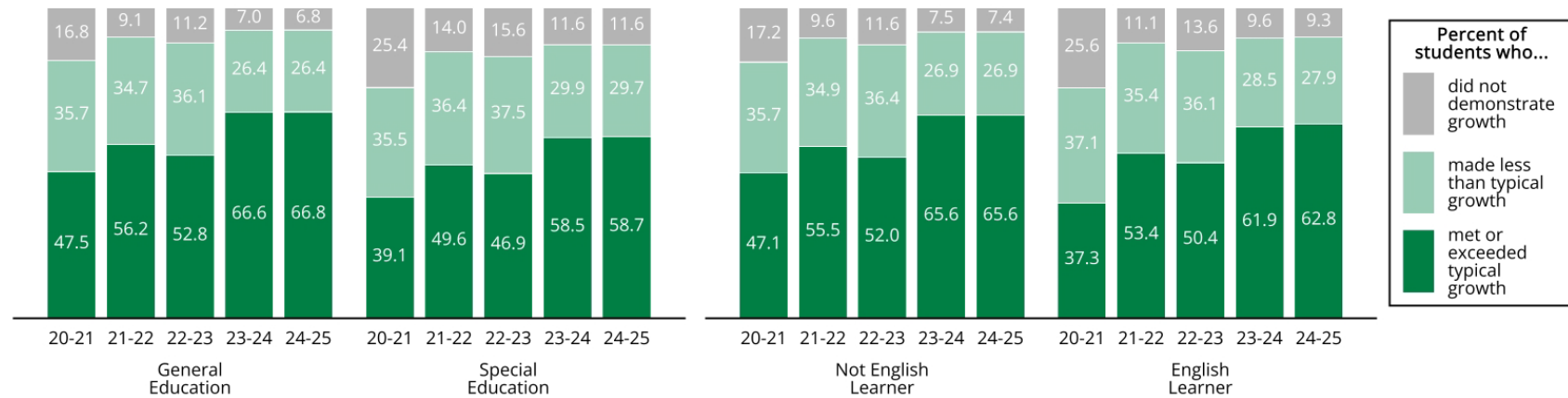
i-Ready Reading



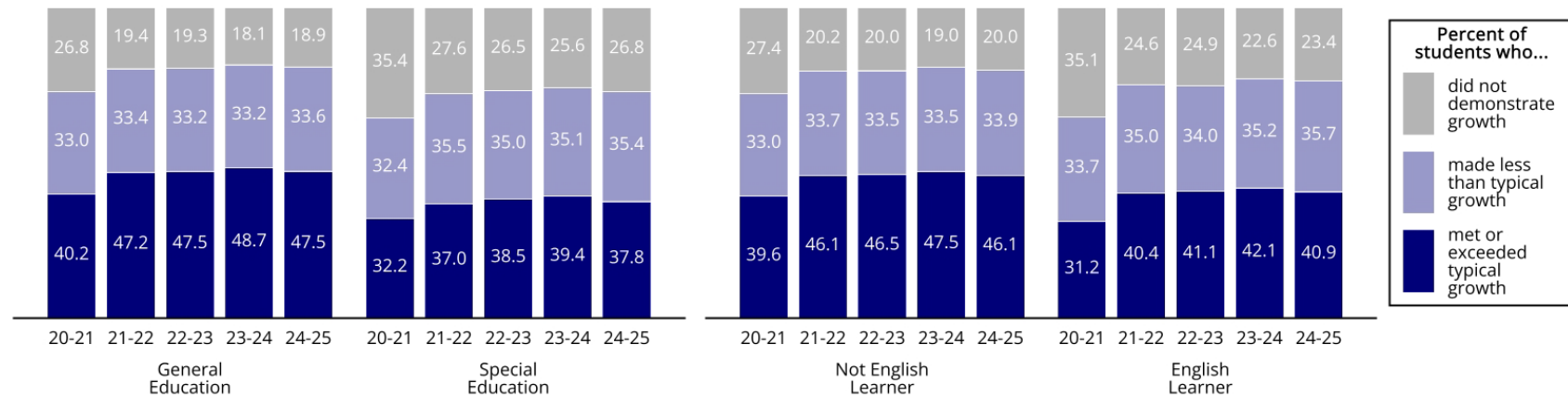
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student's initial achievement on their fall benchmark assessment.

Figure A.6.3. Fall-to-Spring Growth Outcomes by School Year and Student Subgroup (MAP Growth)

MAP Growth Mathematics



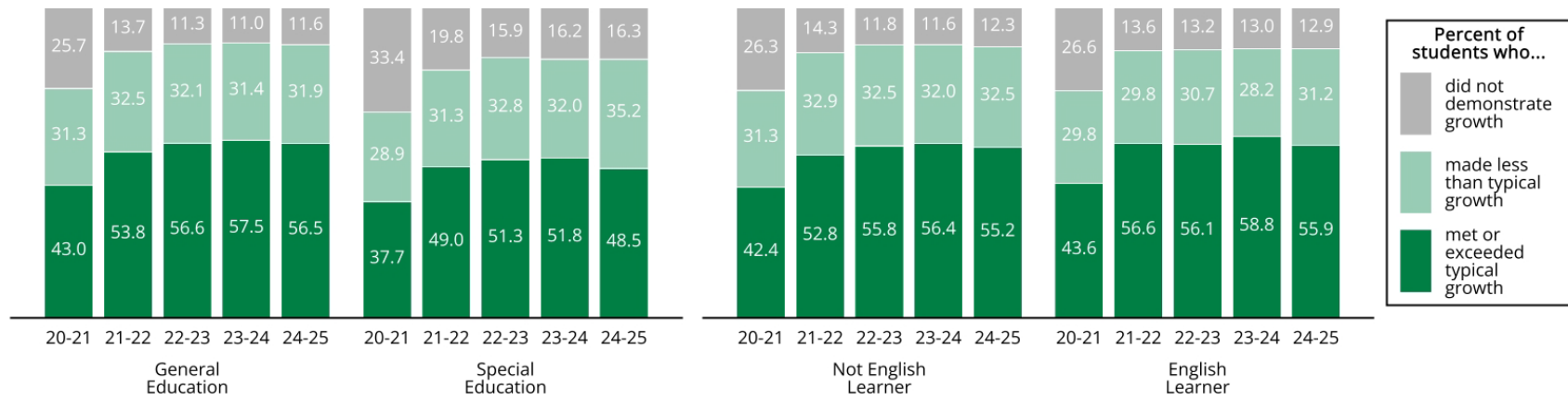
MAP Growth Reading



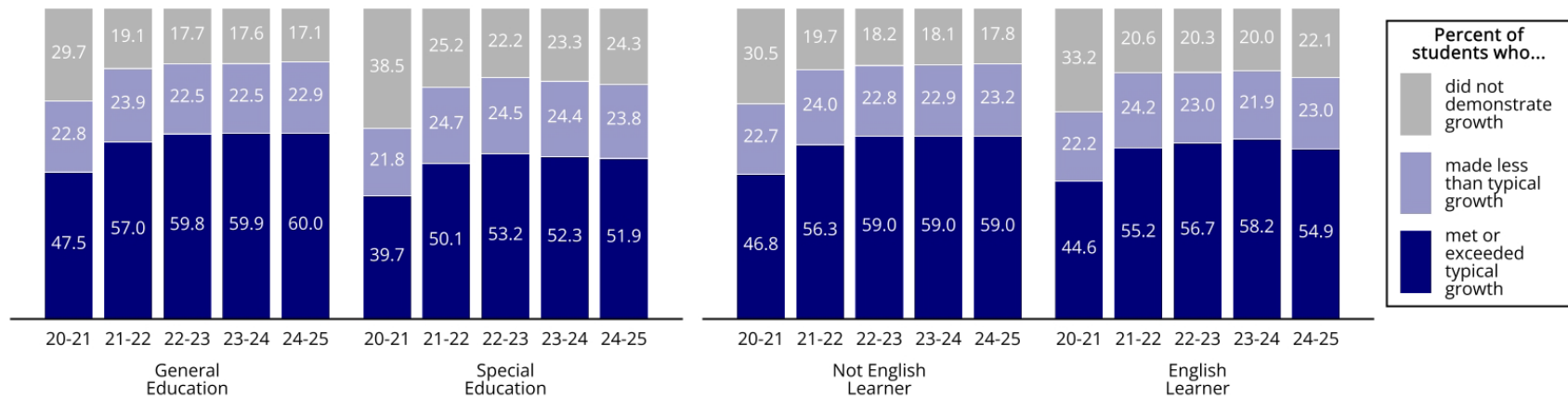
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student's initial achievement on their fall benchmark assessment.

Figure A.6.4. Fall-to-Spring Growth Outcomes by School Year and Student Subgroup (i-Ready)

i-Ready Mathematics

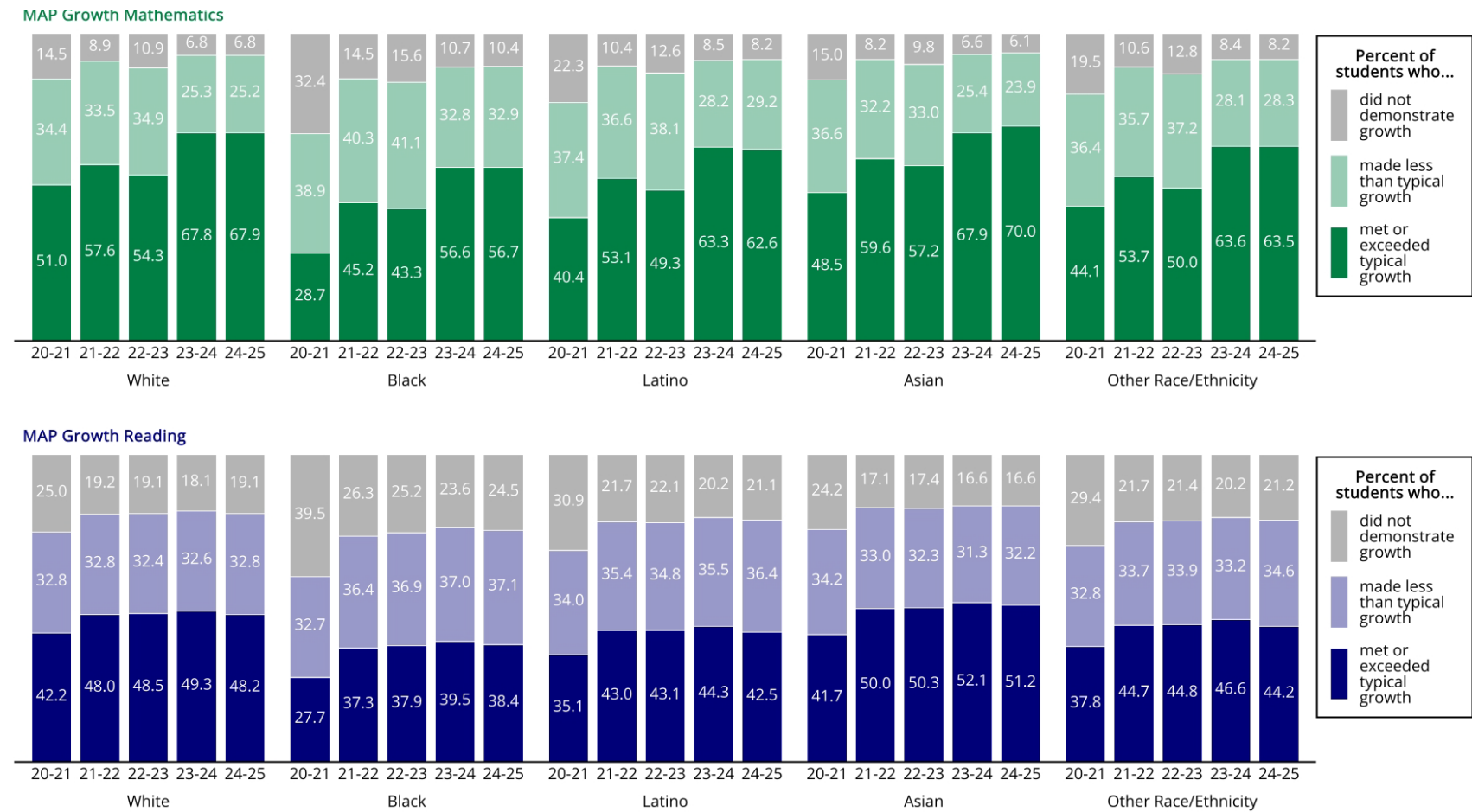


i-Ready Reading



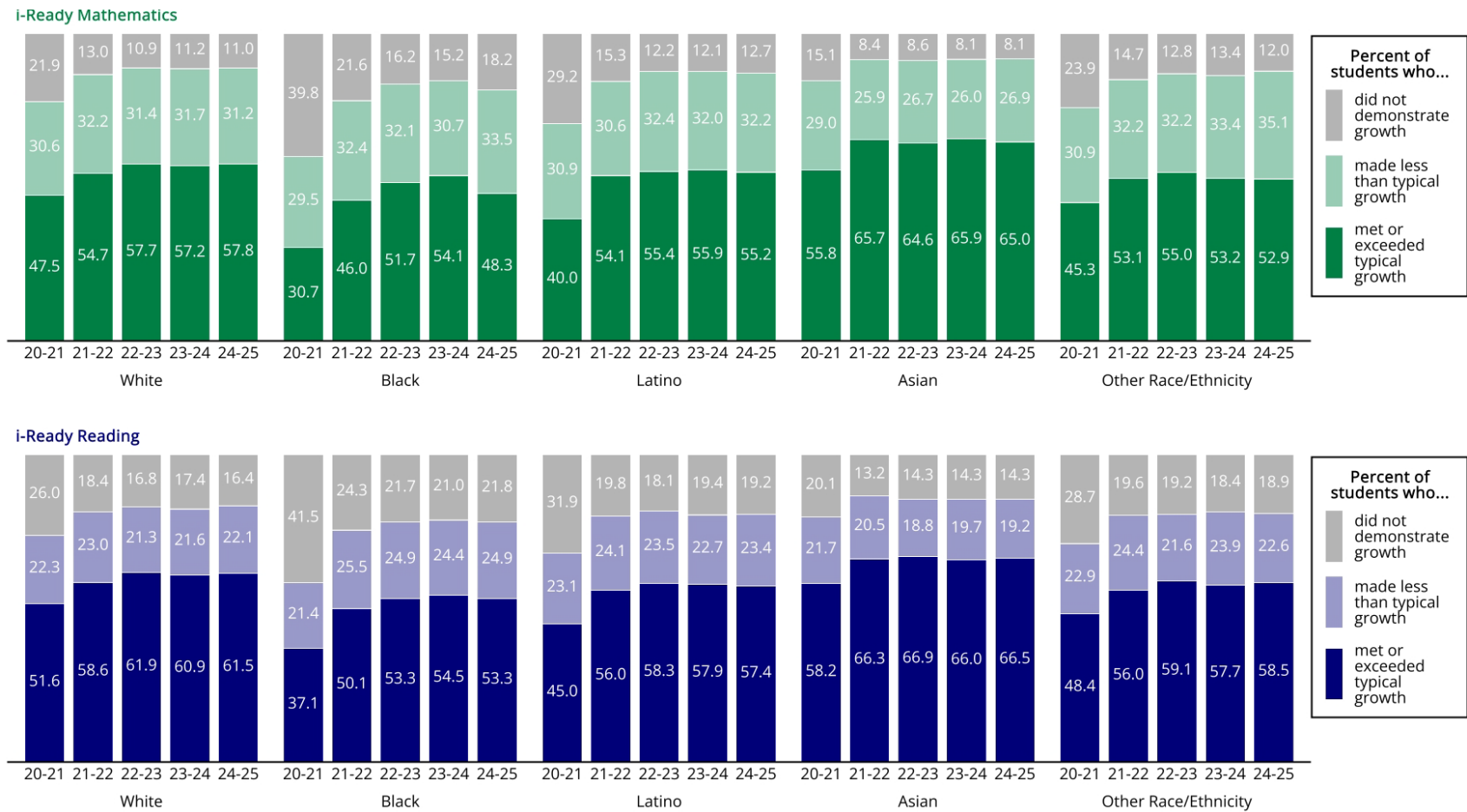
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

Figure A.6.5. Fall-to-Spring Growth Outcomes by School Year and Student Race/Ethnicity (MAP Growth)



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

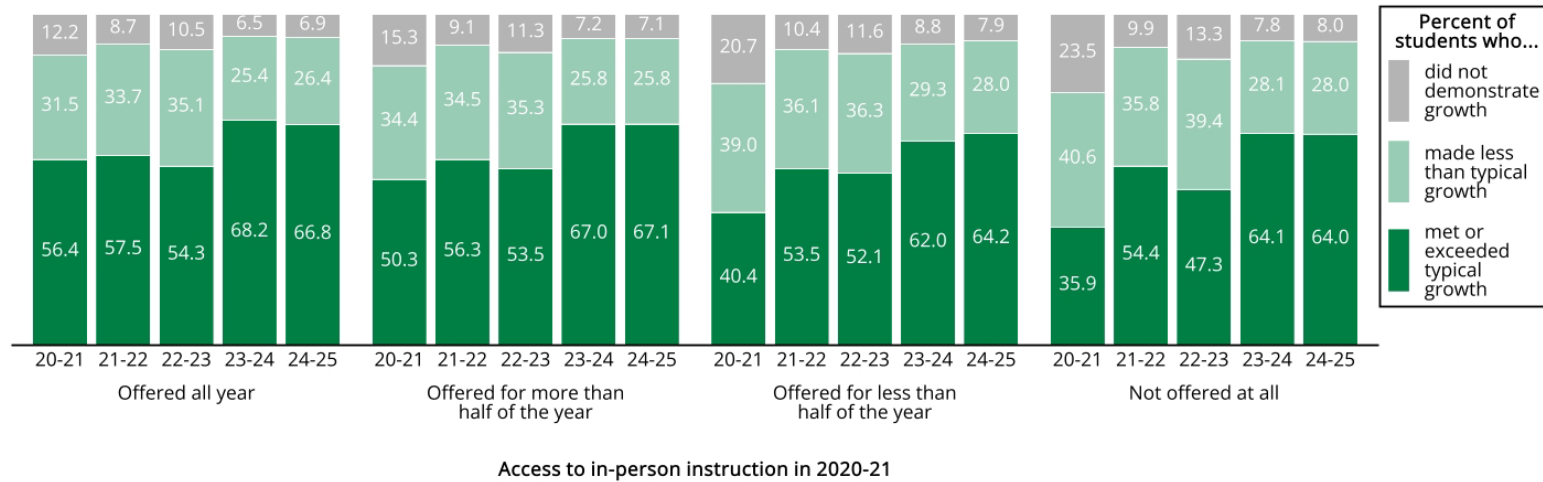
Figure A.6.6. Fall-to-Spring Growth Outcomes by School Year and Student Race/Ethnicity (i-Ready)



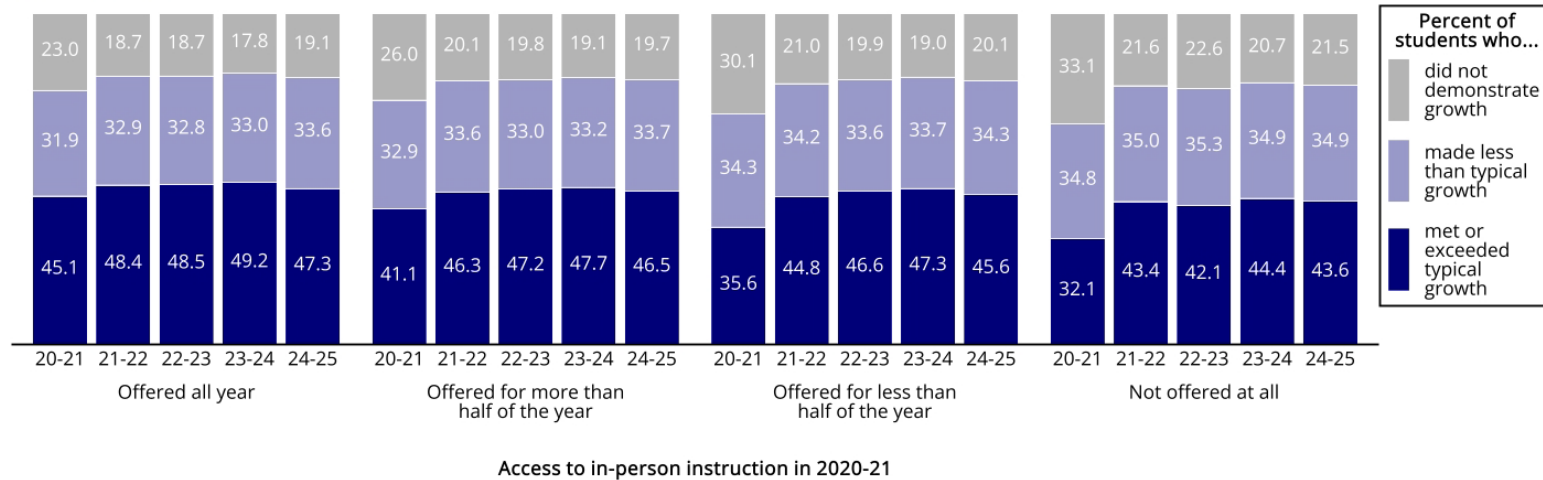
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment.

Figure A.7.1. Fall-to-Spring Growth Outcomes by Access to In-Person Instruction in 2020-21 (MAP Growth)

MAP Growth Mathematics



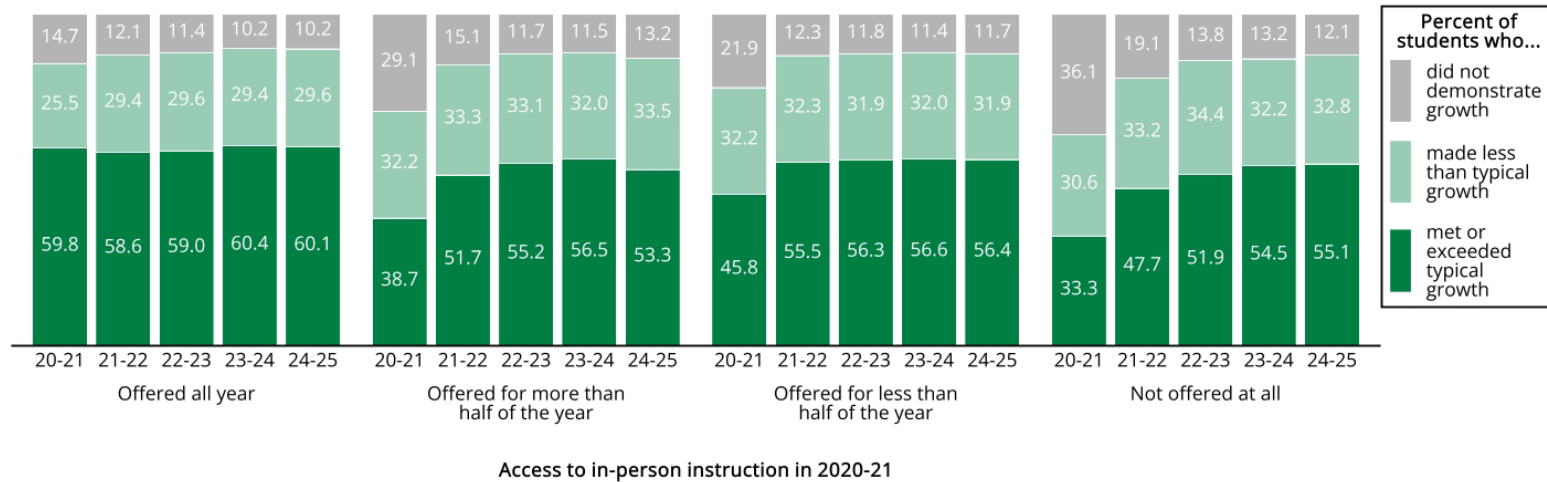
MAP Growth Reading



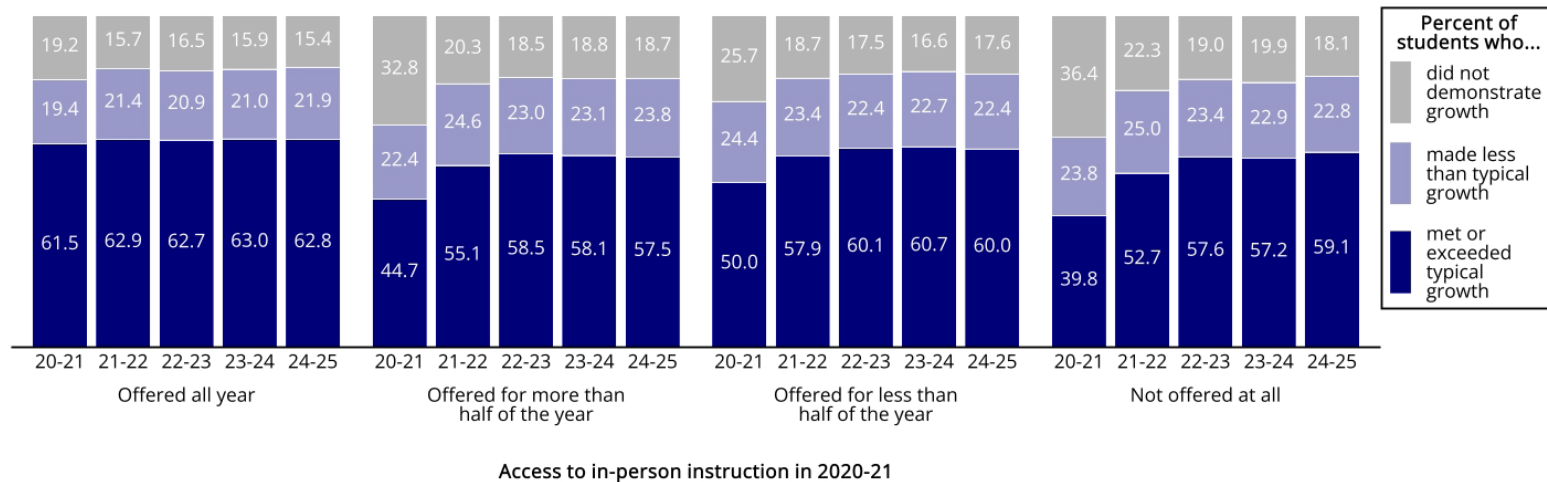
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student's initial achievement on their fall benchmark assessment. Modality categories are based on the mode(s) of instruction (in-person, hybrid, and/or remote) that each district reported offering in each month of the 2020-21 school year.

Figure A.7.2. Fall-to-Spring Growth Outcomes by Access to In-Person Instruction in 2020-21 (i-Ready)

i-Ready Mathematics

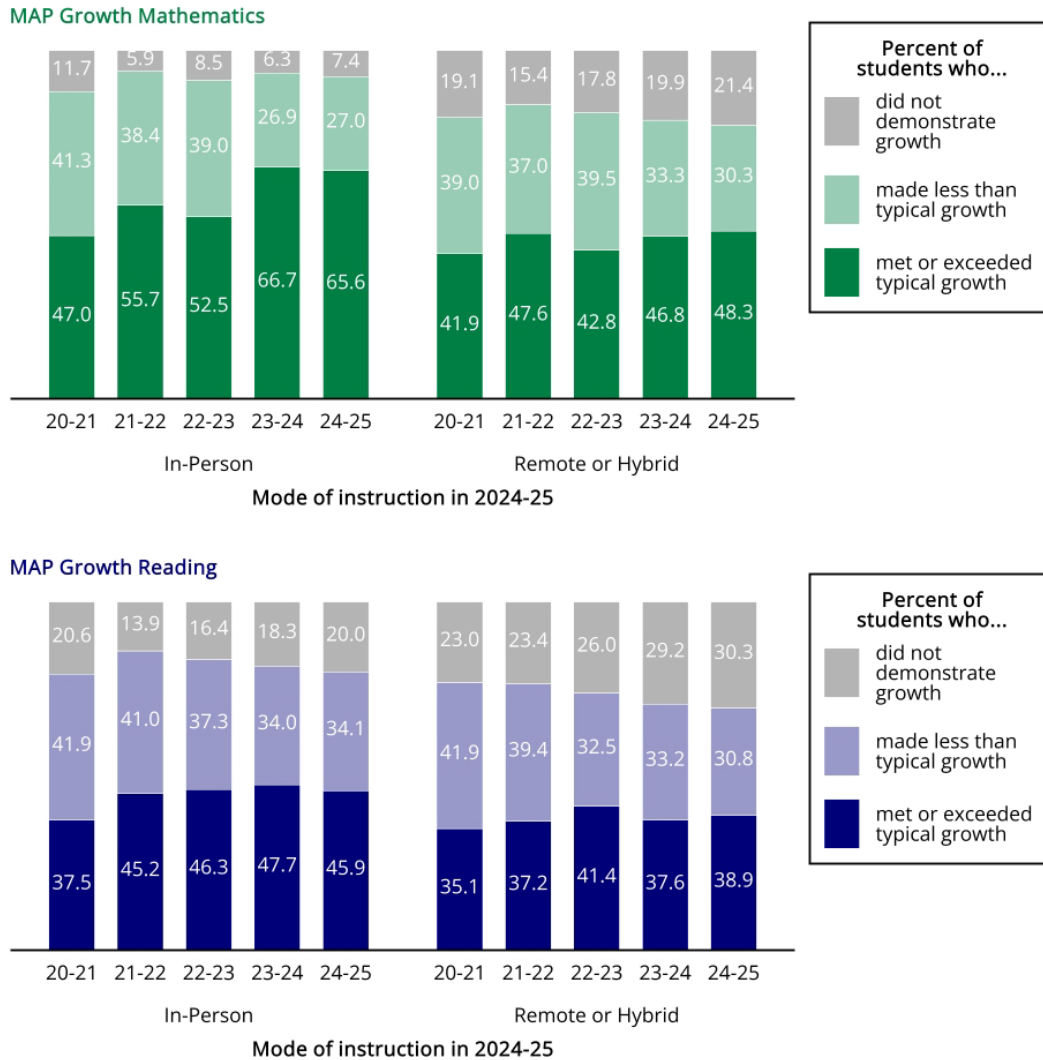


i-Ready Reading



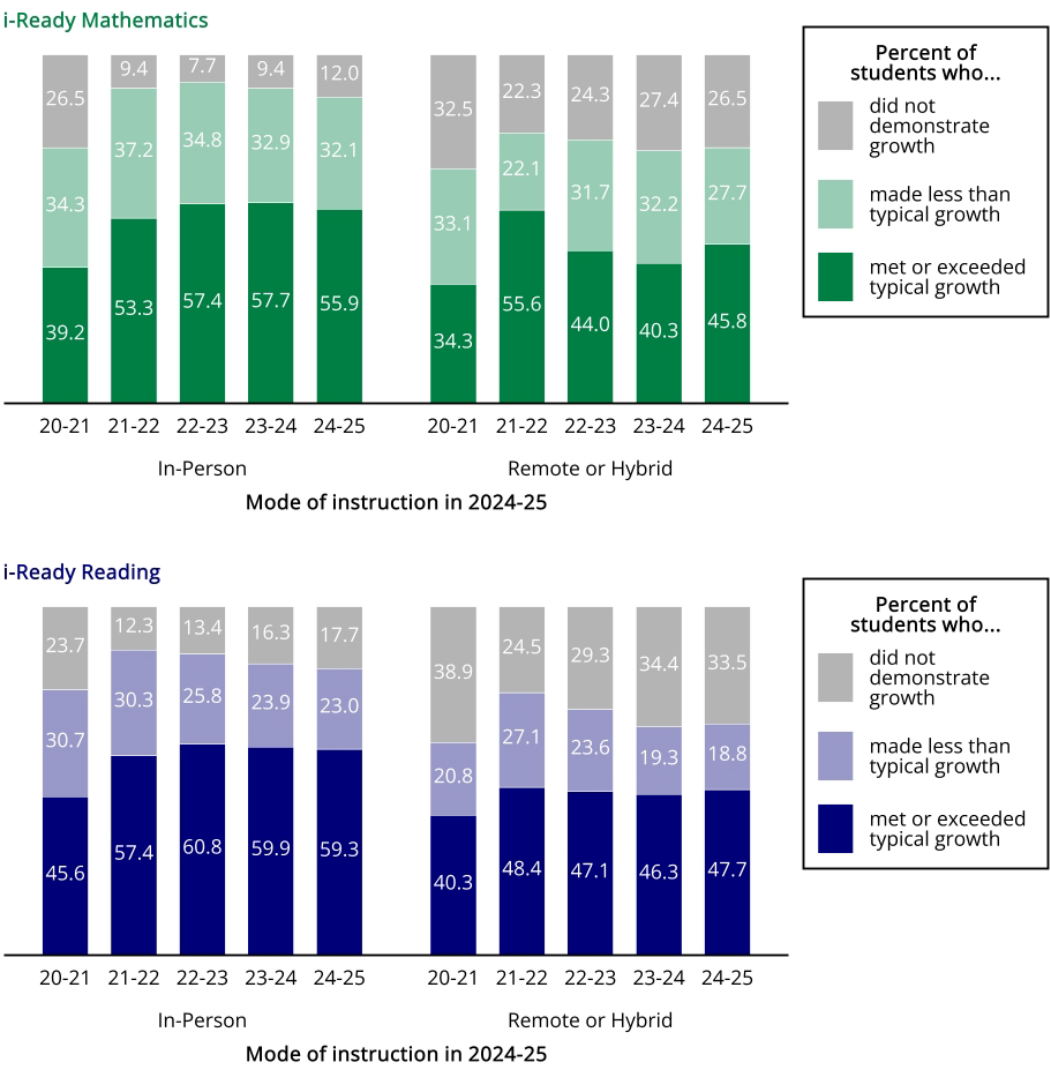
Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment. Modality categories are based on the mode(s) of instruction (in-person, hybrid, and/or remote) that each district reported offering in each month of the 2020-21 school year.

Figure A.7.3. Fall-to-Spring Growth Outcomes by School Year and Mode of Instruction in 2024-25 (MAP Growth)



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for "typical growth" are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student's initial achievement on their fall benchmark assessment. Modality categories reflect the primary mode in which a student received instruction in 2024-25.

Figure A.7.4. Fall-to-Spring Growth Outcomes by School Year and Mode of Instruction in 2024-25 (i-Ready)



Notes: The percentages for each school year include only students with benchmark assessment scores in both the fall and spring of that year. Thresholds for “typical growth” are based on pre-pandemic norms from each assessment provider, and vary depending on the subject area, grade level, and a student’s initial achievement on their fall benchmark assessment. Modality categories reflect the primary mode in which a student received instruction in 2024-25.