K-8 Student Achievement and Achievement Gaps on Michigan's 2020-21 Benchmark and Summative Assessments

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DISCLAIMER

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Executive Summary

OVERVIEW & PURPOSE

In order to understand student learning and progress toward educational goals during the pandemic, the Michigan legislature mandated new data collection and reporting requirements for local school districts beginning in the 2020-21 school year (2020 PA 149, 2021 PA 48). The Education Policy Innovation Collaborative (EPIC) prepared this report in collaboration with the Michigan Department of Education (MDE), the Center for Educational Performance and Information (CEPI), the Michigan Data Hub (MDH), and the Michigan Education Data Center (MEDC). It is the second in a series of reports that will be delivered to the governor and the senate and house standing committees responsible for education legislation in the Michigan legislature to provide insight into Michigan students' progress toward learning goals during the COVID-19 pandemic.

The first report, which was released in August 2021, provided a summary of K-8 students' performance in the fall and spring of the 2020-21 school year, as measured by math and reading benchmark assessments. We found that students across the state missed critical opportunities to learn during the 2020-21 school year; regardless of assessment vendor, subject, or grade level, a substantial set of students scored "significantly behind grade level" on both the fall and spring assessments. Further, across all subjects and grades, the rate of learning appeared to be slower than in a typical pre-pandemic school year. The purpose of this second report is to assess how progress toward learning goals during the 2020-21 school year differed across student groups and district types.

RESEARCH QUESTIONS & STUDY OVERVIEW

To expand on the analyses in our first report and gain a deeper understanding of assessment outcomes for Michigan students in 2020-21, we explore each of the following research questions:

- How did performance on fall and spring benchmark assessments differ across subgroups of students with different demographic and academic characteristics?
- How did assessment performance differ across districts that offered fully in-person, hybrid, or remote instruction all year, as well as those that offered different modalities in the fall than in the spring?

- Did pre-existing achievement gaps between subgroups of students worsen over the course of the school year? Did new achievement gaps emerge?
- How did students' trajectories toward grade-level proficiency on the M-STEP assessment compare to the trajectories of similar students before the pandemic?

In addition to the benchmark assessment results we presented in our first report, we incorporate additional data (detailed in Table I) about student performance on end-of-year state summative assessments, student demographic and academic subgroups, and the mode in which districts provided instruction to students throughout the 2020-21 school year to help us address these questions.

Table I. Data Sources

Type	Source	Additional Details
Benchmark Assessments (Fall & Spring 2020-21)	NWEA: MAP Growth	Math & Reading (K-8)
	Curriculum Associates: i-Ready	Math & Reading (K-8)
	Renaissance Learning: Star 360	Math (1-8), Reading (K-8), Literacy (K-3)
	DRC: Smarter Balanced ICA	Math & ELA (3-8)
	MDE K-2 Benchmark	Math & Early Literacy (K-2)
Summative Assessments	M-STEP	Math & ELA (3-7) End-of-Year 2017, 2019, 2021
Student Characteristics	MDE/CEPI administrative datasets and district-provided aggregate datasets	Gender, race/ethnicity, economically disadvantaged status, special education status, prior M-STEP performance
District Mode of Instruction	Reconfirmed COVID-19 Learning Plan Monthly Questionnaire	District-reported instructional modality (fully in-person, hybrid, and/or fully remote) for each month of 2020-21

Assessment administration and participation looked very different in 2020-21 than ever before. New policies and legislation gave districts the flexibility to continue delivering instruction and meet student needs during the pandemic. Districts were able to choose which benchmark assessment they would administer and were not required to administer the end-of-year M-STEP to remote students. This means that the data from both types of assessments are somewhat limited, but in different ways. There are fewer districts represented in the benchmark assessment data than in the M-STEP data (629 and 825 districts, respectively). However, within participating districts, test-taking rates were higher for benchmark assessments than for the M-STEP. By considering both data sources, as well as differences in the characteristics of

students represented in each source and the general population of Michigan students, we can start to build a more complete picture of student learning outcomes for the 2020-21 school year.

KEY FINDINGS

In our previous report, we showed that, on average, students made less than normal progress toward learning goals in 2020-21, as measured and defined by the different assessments included in the study. After examining these patterns across subgroups and data sources, we find that this same pattern generally holds regardless of student and district characteristics, but that there are substantial disparities in the extent to which different subgroups were affected.

Black, Latino/a/x, and Economically Disadvantaged Students Were More Likely to Start and End the Year "Significantly Behind Grade Level"

As we showed in our first report, 27% of 4th-grade students who took the NWEA MAP Growth Math assessment were considered "significantly behind grade level" in the fall, increasing to 33% in the spring. Our subgroup analyses reveal that these percentages were much higher for Black students (49% in the fall and 66% in the spring) and Latino/a/x students (35% in the fall and 43% in the spring) than for White students (21% in the fall and 24% in the spring) and Asian students (9% in the fall and 10% in the spring). These patterns are generally consistent across grade levels, subjects, and assessment providers. We find similar disparities between students who are economically disadvantaged; in NWEA districts, these gaps tend to be largest for the highest-achieving and lowest-achieving students (based on their prior M-STEP proficiency levels from 2019).

Many Pre-Existing Achievement Gaps Grew Wider over the Course of the School Year

Across nearly all grade levels and subjects, gaps in the percentages of students who are "significantly behind grade level," as well as gaps in average test scores grew over the course of the school year for Black and Latino/a/x students (compared to White students) and for economically disadvantaged students (compared to students who are not economically disadvantaged). In most cases, test score gaps between special education students and general education students increased as well.

Students Were Less Likely to Maintain or Improve upon Their M-STEP Math and ELA Proficiency Levels from 2019 to 2021, Compared to Similar Students who Took These Assessments in 2017 and 2019

Of students who previously scored "Not Proficient" in mathematics on the 3rd grade M-STEP, only 9% scored in a higher proficiency level as 5th graders in 2021 (compared to 18% of students in the "pre-pandemic cohort" who scored "Not Proficient" as 3rd graders in 2017 and took the 5th grade assessment in 2019). Similarly, students whose 3rd grade scores on the 2019 M-STEP were in the "Partially Proficient," "Proficient," or "Advanced" levels were less likely than similar students in the pre-pandemic cohort to reach a higher level and more likely to score in a lower level as 5th graders in 2021. We find similar patterns across grade levels as well as for ELA, however, the differences between the pandemic and pre-pandemic cohorts are smaller for ELA than they are for mathematics.

Math and Reading Achievement Growth During the Pandemic Consistently Lagged Pre-Pandemic Growth Rates, Particularly for Female, Black, and Economically Disadvantaged Students

Multiple regression analyses examining yearly individual student growth on the math and ELA M-STEPs from 2019 to 2021 (during the pandemic) relative to pre-pandemic growth from 2017 to 2019 show that students experienced significantly lower achievement growth during the pandemic than in the two years prior. Specifically, mathematics growth among students in the pandemic cohort was roughly two-tenths of a standard deviation behind students in the pre-pandemic cohort, while ELA growth trailed by a bit less than a tenth of a standard deviation. While not large, these effect sizes are quite substantial and suggest that Michigan students made slower gains during the pandemic than in the years prior. These lags in achievement growth were greater for female, Black, and economically disadvantaged students.

Districts that Offered In-Person Instruction All Year Fared Better than Those that Were Remote

In-person districts typically started and ended the year with higher average test scores than students in districts that were remote all year or switched between remote and hybrid. While average scores increased from fall to spring regardless of a district's mode of instruction, these increases were consistently larger for districts that offered in-person instruction all year than for those that were remote all year or switched

between remote and hybrid. As a result, gaps between the average scores for these groups became wider over the course of the year. Districts that switched between in-person and hybrid or remote modalities generally started the year with slightly higher scores than those that were in-person all year, but these gaps shrunk or in some cases reversed over the course of the year. Results from multiple regression analyses confirm these findings; districts that offered an additional month of remote schooling had nearly a percentage point more students scoring "significantly behind grade level" on math assessments by spring 2021. Similarly, an additional month of in-person schooling was associated with one-half a percentage point fewer students scoring "significantly behind grade level" on reading assessments. Multiple regression analyses confirm these results, suggesting that districts that offered only remote instruction throughout the 2020-21 school year experienced a reduction in math achievement growth that was twice as large as that for in-person districts.

Unique Challenges with Test Administration and Participation in 2020-21 Resulted in Imperfect and Incomplete Data

Students who participated in either the benchmark or M-STEP assessments were more likely to be White and less likely to be economically disadvantaged or eligible for special education or English learner services, compared to the overall population of Michigan students. These differences are particularly stark in the 2021 M-STEP data. This is partly because most remote students were not tested. Although many remote students did participate in benchmark assessment testing, patterns in the data suggest that some of them (particularly those in younger grade levels) may have had assistance from their caregivers at home while taking the test, making it difficult to discern their true skill level from these assessments.

Section One: Introduction

As the COVID-19 pandemic took hold in March 2020, Michigan's schools—like most others across the country—were forced to close their doors and transition to remote instruction for the remainder of the school year. While many Michigan school districts gave students the option to return to learn in person for the 2020-21 school year, an estimated 47 to 64% of students across the state started the year in a fully remote format. By the end of the school year, 22 to 42% of Michigan K-12 students were still learning remotely (Hopkins, Kilbride, & Strunk, 2021). Whether enrolled remotely or in-person full- or part-time, students experienced challenging learning conditions during the 2020-21 school year. As many across the state and country have noted, this past school year was unprecedented in the level of disruption faced by many, if not most, K-12 students.

There is mounting evidence that students across the country and around the world missed important opportunities to learn during the pandemic. Early estimates of unfinished learning from state and national assessments suggest that students experienced much lower learning gains in 2020-21 relative to previous years. This is particularly the case for students without sufficient access to parent or teacher supports (Kuhfeld, Soland, et al. 2020) and for low-income, Black, and Hispanic or Latino/a/x students (Azevedo et al. 2020; Baisley et al. 2021; Gross & Lake, 2021; Dorn et al. 2020a, b; Kogan & Lavertu, 2021; Kuhfeld & Tarasawa, 2020) and for those learning remotely (Gross & Lake, 2021; Kogan & Lavertu, 2021; Sass & Goldring, 2021).

To understand student learning and progress toward educational goals during the pandemic, the Michigan legislature mandated new data collection and reporting requirements for local school districts during the 2020-21 (2020 PA 149) and 2021-22 school years (2021 PA 48). This report is the second in a series that will be given to the Michigan governor and the House and Senate standing committees responsible for education legislation to provide insight into Michigan students' progress toward learning goals for the 2020-21 and 2021-22 school years. The Education Policy Innovation Collaborative (EPIC) at Michigan State University prepared this report in collaboration with the Michigan Department of Education (MDE), the Center for

Educational Performance and Information (CEPI), the Michigan Data Hub (MDH), and the Michigan Education Data Center (MEDC) at the University of Michigan as a summary of the student academic growth across this 2020-21 school year.

MICHIGAN'S BENCHMARK ASSESSMENT LEGISLATION

On August 20, 2020, Michigan Governor Gretchen Whitmer signed a series of three "Return to Learn" bills intended to provide districts with flexibility to adapt their programs as necessary to safely provide instruction during the pandemic (2020 PA 147, 2020 PA 148, 2020 PA 149). For the 2020-21 school year only, the state legislature waived many instructional requirements, including minimum numbers of days and hours and what learning activities count toward the attendance and enrollment calculations used to determine their state aid allocations. Along with this increased flexibility, the "Return to Learn" legislation outlined a new set of requirements for the 2020-21 school year to ensure that districts continued to adequately meet students' needs without the same instructional requirements in place.

As a condition for receiving state aid for the year, the legislation required each district to develop an extended COVID-19 learning plan describing how it would deliver instruction and establishing educational goals for the 2020-21 school year. These educational goals were to include increased student achievement or growth as measured using one or more benchmark assessments, overall and for all subgroups of students. Districts were required to assure that they would select and administer appropriate benchmark assessments to all K-8 students at the beginning and end of the school year to determine whether students made meaningful progress toward mastery of state standards in reading and mathematics.

The "Return to Learn" legislation provided districts the option to choose one of four state-approved benchmark assessments or one or more benchmark assessments that contain progress monitoring and enhanced diagnostics in reading and/or progress monitoring in mathematics. Alternately or in addition, districts were allowed to choose a locally developed benchmark assessment that meets the same requirements. While the legislation prohibited the use of these data for accountability purposes, districts that elected to use an approved provider's benchmark assessment were required to compile and report their results through the MDH network for use in a statewide aggregate report for the governor and the House and Senate standing committees responsible for education legislation in the Michigan legislature.

To continue tracking academic progress, the Michigan legislature again passed legislation in summer 2021 that required districts to administer benchmark assessments throughout the 2021-22 school year (2021 PA 48). The new legislation provided districts with the same flexibility to choose one of four state-approved benchmark assessments, a local benchmark assessment, or one or more benchmark assessments that contain progress monitoring and enhanced diagnostics in reading and/or progress monitoring in mathematics. Similar to requirements for the 2020-21 school year, benchmark assessments must be administered to all K-8 students in both fall 2021 and spring 2022.

PURPOSE OF THIS REPORT

MDE, CEPI, and MDH have worked with two university research partners—EPIC at Michigan State University and MEDC at the University of Michigan—for more than a year to compile the benchmark assessment data districts provided under the "Return to Learn" legislation and prepare for a second round of data collection during the 2021-22 school year. The first legislatively mandated report in this series, which was released in August 2021, found that students across the state missed critical opportunities to learn during the 2020-21 school year; regardless of assessment vendor, subject, or grade level, a substantial set of students scored "significantly behind grade level" on both the fall and spring assessments. Further, across all subjects and grades, Michigan students did not make normal progress towards learning goals as measured and defined by all four approved assessment vendors. While learning as measured by the benchmark assessments did occur over the 2020-21 school year, the rate of learning appeared to be slower than in a typical pre-pandemic school year.

The primary purpose of this second report, which will be delivered to the governor and the House and Senate standing committees responsible for education legislation (see Sections 104.12 and 104.16 of MCL 388.1704 as amended by 2020 PA 149 and 2021 PA 48), is to assess how progress toward learning goals during the 2020-21 school year differed across student groups and district types (including by instructional modality offered). Specifically, this analysis will use benchmark assessment data as well as data from the Michigan Student Test of Educational Progress (M-STEP) to examine differences in performance on benchmark assessments across student subgroups (i.e., race/ethnicity, gender, economically disadvantaged and disability status, and 2019 M-STEP proficiency levels) and across districts using various instructional modalities for all or a subset of the 2020-21 school year (i.e., districts that offered the same instructional modality during both the fall and spring benchmark administration periods—in-person, hybrid, or remote—and districts that switched modalities between administrations).

In the remainder of this report, we first discuss the data and methods we use. Section Three provides results from our analyses and Section Four describes the content of future reports in this series. We conclude with a brief discussion of the implications of our findings for Michigan K-12 education as we progress through the 2021-22 school year.

Section Two: Data and Methods

Each year, millions of K-12 students across the country participate in benchmark assessments and summative end-of-year standardized achievement tests. Benchmark assessments are designed to help educators and administrators track students' progress toward grade-level standards and learning goals, and to provide feedback to help drive future instruction. Summative standardized achievement tests are intended to provide policymakers, stakeholders, and educators with an understanding of student, school, district, and state performance on state-set standards, both as an end-of-year snapshot and for year-over-year growth.

Under Michigan's benchmark assessment legislation, districts must administer either a benchmark assessment from the MDE-approved provider list, an assessment that provides adequate progress monitoring, or a local benchmark assessment to all K-8 students at the beginning and end of both the 2020-21 and 2021-22 school years. Districts that choose an assessment from one of the four approved providers are required to provide aggregate data regarding the results of these assessments through the MDH. The MDH is designed to collect student-level data, and districts were encouraged to submit student-level data rather than aggregating the data themselves. Doing so allows MEDC and EPIC to complete all necessary aggregations in a consistent manner across districts, while still ensuring that state agencies only maintain access to aggregate data, as stipulated in Michigan's benchmark assessment legislation (2020 PA 149 and 2021 PA 48).

In the 2019-20 school year, the United States Department of Education (ED) waived every state in the country from meeting the federal standardized testing requirement outlined in the *Every Student Succeeds Act* for spring 2020 (ESSA, 2015). The ED, however, did not grant similar waivers for the 2020-21 school year and M-STEP testing resumed in spring 2021 after more than a year of disrupted pandemic learning. For the spring 2021 administration of the M-STEP, local school districts were required to offer the assessments in-person, and students who were learning remotely were not required to come into a building to take the test. Many districts effectively chose to

make the M-STEP test optional for students. Overall, roughly 70% of all Michigan students participated in M-STEP testing during the spring 2021 semester.

In this section, we describe the indicators of academic performance from the benchmark and M-STEP assessment data we will use in this report, identify and compare the Michigan school districts that offered each MDE-approved assessment and those that chose to offer their own assessment, and discuss implications of assessment choice and method of providing the data for the population examined in this report. For a full description of the unique characteristics of each MDE-approved benchmark assessment, please see the first report in this series which was released in August 2021.

INDICATORS OF ACADEMIC PERFORMANCE ON BENCHMARK ASSESSMENTS

Below, we provide details about the benchmark assessment data that districts submitted to the MDH, regardless of whether they were ultimately included or excluded from the final analytic sample and explain how those data help measure academic performance.

Definitions of "Significantly Behind Grade Level"

The "Return to Learn" legislation required MDE to identify the number and percentage of students in the state who were "significantly behind grade level" based on their fall and spring benchmark assessment scores from the 2020-21 school year. To provide additional context to the statewide estimates we presented in our first report, this report examines differences in the number and percent of students scoring "significantly behind grade level" across several student subgroups as well as changes in the gaps between subgroups from fall to spring during the 2020-21 school year.

As it would not have been possible to conduct formal standard-setting processes to determine "significantly behind grade level" cut-scores for every assessment provider, grade level, and subject area included in the analysis, MDE and EPIC consulted with each of the assessment providers about the existing metrics, cut scores, and performance levels already established for each assessment. We asked each provider to recommend one of their existing performance standards as the most appropriate proxy for identifying students who are "significantly behind grade level" based on their own expertise with their own assessment. The recommended definitions have substantively different meanings and interpretations across different assessments. For this reason, we analyze data from each provider separately and do not assume

that students who are classified as "significantly behind grade level" using one assessment would receive the same classification using a different assessment.

Table 2.1 provides a summary of the recommended definitions of "significantly behind grade level" for each assessment (detailed descriptions of each definition are available in our first report). In addition, the specific scale score or percentile rank cut scores used to identify students who are "significantly behind grade level" for each assessment provider, subject, and grade level can be found in Appendix Table A.1.

There are a few fundamental differences between these definitions that underscore the importance of analyzing and interpreting the performance data for each assessment separately. For instance, the performance standards for the K-1 NWEA MAP Growth and Renaissance Learning Star 360 assessments are *norm-referenced*, meaning that they are based on how students performed in relation to other students from across the U.S. before the pandemic. The recommended thresholds for NWEA MAP Growth (2nd-8th grade), Curriculum Associates i-Ready, DRC Smarter Balanced ICA, and the K-2 Early Literacy and Mathematics Benchmark Assessments, on the other hand, are *criterion-referenced*, meaning that they are based on how the content knowledge or skill level that a student demonstrates on the assessment compares to standards regarding what students in a particular grade level are expected to know or be able to do.

In addition, the performance standards for NWEA MAP Growth are based on predictions of students' *future* performance on the M-STEP. Thus, for the NWEA MAP Growth assessments, projections based on fall benchmark assessment scores consider the fact that students had not yet received most of their instruction for the year. Therefore, M-STEP projections based on the NWEA MAP Growth scores indicate whether students are *on-track* to reach a particular performance criterion by the end of the year, not necessarily whether they already reached the criterion at the time they were tested. In contrast, the standards for the other assessments are based on students' *current* performance at the time they are tested. These scores reflect what students know at a given point in time when tested, not what they are projected to know by the end of the school year. Moreover, the "significantly behind grade level" definitions for NWEA MAP Growth (2nd-8th grade) and MDE's K-2 Early Literacy and Mathematics Assessments are the only ones that are specific to Michigan, as opposed to thresholds that are used across states.

Table 2.1. Summary of "Significantly Behind Grade Level" Definitions by Assessment Provider and Grade Level					
Assessment	**Grade Range**	**"Significantly Behind Grade Level" Interpretation**	**Norm or criterion-referenced**	**Status when tested or future projection**	**National or Michigan standard**
NWEA **MAP Growth**	K-1	At-risk of learning difficulties and in need of intervention	Norm (30th percentile)	Future	National
	2-8	Projected end-of-year M-STEP score in the "Not Proficient" category	Criterion	Future	Michigan
Curriculum Associates **i-Ready**	K-1	Performing at the "emerging kindergarten" level	Criterion	When tested	National
	2-8	Performing two or more grade levels behind current grade	Criterion	When tested	National
Renaissance Learning **Star 360**	K-8	Performing below grade-level expectations, in need of intervention	Norm (24th percentile)	When tested	National
MDE **K-2s** & DRC **ICAs**	K-2	Significantly behind grade level	Criterion	When tested	Michigan
	3-8	Did not meet standard	Criterion	When tested	National

Notes: NWEA recommended that we use the MAP Growth score thresholds from their Michigan-specific linking study (NWEA, 2020). Curriculum Associates recommended that we use the score ranges from their grade placement tables (Curriculum Associates, 2018). Renaissance Learning's recommendation was to use their existing benchmark for students who are performing below grade-level expectations, based on their percentile ranks relative to the norming sample for the appropriate grade level and subject area (Renaissance Learning, 2021a, b). DRC recommended that we use the lowest of the four achievement level categories established for the Smarter Balanced ICA assessments as a proxy for "significantly behind grade level" for 3rd-8th grade (DRC, 2021).

Due to these differences, the data from each provider address slightly different questions about how Michigan students performed this year. The NWEA's MAP Growth assessment for 2nd-8th grade answer the questions, "*At the beginning of the school year, how many students were not on-track to score above the "Not proficient" category on the end-of-year M-STEP?*" and "*Did their learning trajectories change from fall to spring?*" Results from the Curriculum Associates i-Ready and Smarter Balanced ICA assessments, on the other hand, address questions such as, "*Are students demonstrating the knowledge and skills that are expected for their grade level?"* and *"Did students who were behind in the fall make progress toward grade-level standards over the course of the year?"* The Star 360 assessments and the K-1 MAP Growth assessments provide additional context, with insight into how Michigan students' performance in 2020-21 compares to how students across the country performed before the pandemic.

Average Scale Scores

We also examine average scale scores among subgroups of students, gaps in average scores between subgroups, and changes in these gaps over the course of the 2020-21 school year. Each benchmark assessment has its own unique scale and scale scores are not comparable across assessments. For example, NWEA's MAP Growth scores range between 100 and 350, while Curriculum Associates' i-Ready scores range between 0 and 800. Therefore, similar to the "significantly behind grade level" measures, we analyze changes in average scale scores and gaps between subgroups separately for each provider. However, because the MAP Growth, i-Ready, Star 360, and ICA benchmark assessments are all scored on vertical scales that are consistent across all grade levels, we are able to compare scores from the same assessment over time.

Overall, across all subgroups, grades, and assessment providers, we would expect to see an increase in average scale scores throughout the school year as students receive more instruction and progress academically. As the results will show, this is indeed true for nearly all student subgroups. When discussing the results that follow, rather than focusing on these common increases, we will instead highlight the few instances where specific subgroups of students saw decreases in average scale scores between the fall and spring semesters.

Subgroup Comparisons

Although we can compare average scale scores or percentages of students who are "significantly behind grade level" across student groups and grades, it is important to note that expectations for "typical growth" over the course of a school year often differ by grade level, subject, and fall achievement levels. For example, 3rd-grade students

who were considered "on or above grade level" on the i-Ready Reading assessment at the beginning of the year typically score about 17 scale score points higher in the spring than they did in the fall, whereas 8th-grade students who were "on or above grade level" in the fall only score about 4 scale score points higher in the spring. Third graders who were considered "two grade levels below" based on their fall i-Ready Reading scores, on the other hand, typically score about 33 points higher in the spring than they did in the fall, compared to a 12-point increase for 8th-grade students who were "two grade levels below" in the fall (e.g., see Curriculum Associates, n.d.; Renaissance Learning, 2021b-d; Thum & Kuhfeld, 2020). We therefore discourage comparisons of fall-to-spring changes in average scale scores or percentages of students who are "significantly behind grade level" across student subgroups with different fall performance levels, across grade levels, or across subject areas. Rather, we examine performance gaps between subgroups in the fall and spring, as well as changes in these gaps over the course of the year. In other words, **we focus on whether the gap between two subgroups widened or narrowed from fall to spring, and not on whether one subgroup "grew" more than another.**

In addition to our comparisons of average scale scores or percentages of students who are "significantly behind grade level" across student demographics, we also compare outcomes across multiple measures of district-level instructional modality decisions throughout the 2020-21 school year. Specifically, we compare benchmark outcomes across districts that offered only in-person, hybrid, or remote instruction during both the fall and spring benchmark administration periods[1] (i.e., "In-Person All Year," "Hybrid All Year," and "Remote All Year," respectively), districts that offered in-person instruction during one administration period and hybrid or remote instruction during the other period (i.e., "In-Person Part-Year"), and districts that offered hybrid instruction during one administration period and remote instruction during the other period (i.e., "Hybrid Part-Year").

It is important to note that district-level instructional modality decisions changed throughout the school year. These changes highlight potential differences in testing environments for some students between the fall and spring assessment periods which may lead to inflated fall scale scores among students who were tested remotely and had access to additional resources (e.g., parental help). While we do not have the ability to identify which students completed benchmark assessments at home or in the classroom, NWEA, Curriculum Associates, and Renaissance Learning collected data on students' testing location for at least a portion of the 2020-21 school year and have reported national findings related to modality of assessment. Renaissance Learning determined that, nationally, about 20% of Star tests from the spring 2021 testing period were completed remotely. NWEA and Curriculum Associates were able to use the information collected regarding testing location to identify an "at-home

advantage" for some early grade-level students. For example, Curriculum Associates estimated that a significantly smaller share of 2nd graders tested outside of school performed two or more grade levels below their peers in fall 2020 compared to historical trends. Similarly, NWEA found that achievement trends between fall 2019 and fall 2020 looked very different between remote and in-person testers; students who tested remotely in the 1st and 2nd grade in fall 2020 showed large increases in their percentile ranks compared to the previous fall, while students tested in-person showed patterns more consistent with students in higher grade levels (Huff, 2020; Kuhfeld, Lewis, et al. 2020; Renaissance Learning, 2021a).

Subgroup Comparisons Using M-STEP Data

Finally, since Michigan resumed M-STEP testing in spring 2021, we are now able to compare student achievement trends on the state's summative assessment before and during the COVID-19 pandemic. To do so, we first calculate the distribution of students across M-STEP proficiency levels for those Michigan students who completed either the M-STEP Mathematics or ELA assessment in both 2017 and 2019 (e.g., students who completed the 3rd-grade M-STEP Mathematics in 2017 and 5th-grade M-STEP Mathematics in 2019). We repeat this calculation for a second cohort of students who completed M-STEP assessments for the same grade-levels and subject in 2019 and 2021 (e.g., students who completed the 3rd-grade M-STEP Mathematics in 2019 and 5th-grade M-STEP Mathematics in 2021). By comparing these distributions, we can see how achievement trends differ across students who completed both assessments before the pandemic and those who were potentially affected by school building closures and other pandemic-related interruptions to schooling over the past two school years. This analysis is repeated for students who initially completed 3rd-, 4th-, or 5th-grade M-STEP assessments in 2017 (or 2019), and we also provide breakdowns for each of the student subgroups examined in the main analysis.

Regression Analysis of Benchmark and M-STEP Data

In addition to descriptive comparisons of scale scores, percentages of students who scored "significantly behind grade level," and M-STEP scores across subgroups, we use multiple regression models to estimate relationships between these same outcome measures and characteristics of Michigan school districts (including the mode in which they provided instruction throughout the 2020-21 school year) or their students. Multiple regression is a statistical technique used to predict an outcome variable using two or more explanatory variables. This technique allows us to estimate the unique relationship between an explanatory variable (e.g., the percentage of students in a district with a specific demographic characteristic or student-level indicators for gender, race/ethnicity, and economically disadvantaged status) and the outcome

variable, when all else is equal between two districts. For each explanatory variable in the model, we estimate a regression coefficient, which tells us how the outcome variable is expected to change if the explanatory variable were to increase by one unit. For example, in a model where scale scores are the outcome variable, a regression coefficient of -0.5 for the number of months that a district offered fully remote instruction indicates that every additional month of remote instruction is associated with a 0.5-point decrease in average scale scores. Coefficients for explanatory variables that are binary indicators are interpreted as the difference between groups that do and do not have a particular characteristic. For instance, in models where we use M-STEP scores as outcomes, we include data from a "pre-pandemic" cohort of students to allow us to compare trends for students before and during the pandemic. We include a binary indicator set equal to 1 for the "pandemic cohort" and 0 for the "pre-pandemic cohort." A coefficient of -5.5 for this pandemic cohort indicator would indicate that, on average, students in the pandemic cohort scored 5.5 points lower than students in the pre-pandemic cohort.

DATA AGGREGATION AND ANALYSIS

Before aggregating the student-level benchmark assessment data provided through the MDH, we restricted the sample to exclude: 1) districts that were not required to report data under Michigan's benchmark assessment legislation (i.e., districts that did not use products from an MDE-approved assessment provider and districts with open dates after the official fall student count date); 2) students who are not in grades K-8; 3) results from assessments in subject areas other than math and ELA; and 4) results from assessments that are not normed for the grade level of the assessed student (i.e., Star Early Literacy assessments taken by students above grade 3 and Star 360 Math assessments taken by students in kindergarten). Additionally, to ensure that comparisons of assessment results from the fall 2020 and spring 2021 semesters reflect changes in student performance as opposed to changes in the populations of students tested, we further restricted the sample to students who participated in comparable benchmark assessments in the same district in both the fall and spring.

We merged benchmark assessment outcomes for the remaining students with data from the Michigan Student Data System (MSDS) fall 2020 General Collection, the 2019 administration of the M-STEP, and district-level 2020-21 instructional modality data for the purpose of identifying student subgroups. The MSDS data include student demographics (race/ethnicity, gender, and economically disadvantaged status) and information about program eligibility and participation (English learner, special education, homeless, military connected, migrant, and foster status). If the students are missing demographic data in the MSDS that identifies whether they are in a

particular subgroup, they are excluded from breakdowns for that subgroup. M-STEP data include prior ELA and math proficiency levels for 5th-8th grade students who participated in these assessments in 2019. MDE and CEPI, in partnership with EPIC, collected instructional modality data during the 2020-21 school year under Michigan's "Return to Learn" legislation. This legislation required districts to respond to the Reconfirmed COVID-19 Learning Plan Monthly Questionnaire between September 2020 and May 2021 and describe the modality through which they planned to deliver instruction each month (e.g., in-person, hybrid, or remote). Finally, we constructed binary indicators to identify students as "significantly behind grade level" in each subject and time period based on the definition and cut scores each assessment provider recommended.

To construct the aggregate data file used for the analysis, we calculated the counts of non-missing values, sums, and averages of these "significantly behind grade level" indicators across all students in the same subgroup, district, and grade level who completed an assessment from the same provider. The resulting data file provides the total number of students tested, total number of students classified as "significantly behind grade level," and percent of tested students classified as "significantly behind grade level." At the same time, we calculated the average and standard deviation of scale scores across all students in the same subgroup, district, and grade level who completed an assessment from the same provider. We then combined the resulting district-level aggregate dataset with data from individual districts that prepared their own aggregate data files in a compatible format in lieu of submitting student level data through the MDH. The results we present in this report are further aggregated to the state level. To prevent identification of any individual students from very small subgroups, we suppress results for any cells that represent fewer than ten students.

Analytic Sample

Under Michigan's benchmark assessment legislation, school districts serving K-8 students throughout the school year are expected to submit benchmark assessment data in some form. For this analysis, CEPI identified districts of interest as those with open dates before the official fall student count date for the fall 2020 semester (October 7th, 2020), that remained open as of June 1st, 2021, and that served students in at least one grade level within the K-8 range. The analysis that follows represents 629 of the 848 Michigan school districts that meet all these criteria. The remaining 219 districts could not be included for reasons described in the earlier report (see Section 3, pages 18-19) and are summarized in Table 2.2. The included districts teach 79% of the population of K-8 students in Michigan.

We are able to include only a subset of students enrolled in these 629 districts in our analysis. To ensure that our analysis captures changes in students' performance from fall to spring rather than changes in test participation rates, students are only included in the analysis if they were tested in both the fall and the spring using an assessment from the same provider for the same content area and grade level. In total, 58,386 students could not be included because their districts only provided data from one assessment (fall or spring) for them. Because the legislation requires us to conduct the analysis using district-level aggregate data rather than student-level data, we further restricted the analytic sample to students whose fall and spring tests were administered by the same district. This ensures that differences between aggregate measures from the fall and spring represent changes in performance across a consistent set of students, and do not capture changes in average performance due to student mobility between districts. We omitted from the analysis 3,367 students who were tested in different districts in the fall and spring.

Table 2.2. Michigan K-8 District and Student Coverage by Analytic Sample Exclusion

Exclusions	*N* Districts	% Districts	*N* Students	% Students
All Districts	848	100.0	967,066	100.0
GEMS/MARS only	120	14.2	92,901	9.6
Planned not to report	18	2.1	2,509	0.3
No data authorization	13	1.5	7,590	0.8
Signed authorization, no data	43	5.1	23,988	2.5
Subtotal	654	77.1	840,078	86.8
Insufficient aggregate data	19	2.2	70,044	7.2
Technical issue with file format	1	0.1	412	<0.1
Insufficient student-level data	5	0.6	3,071	0.3
Enrollment for Sample Districts	629	74.2	766,551	79.3
No student data submitted	0	0	113,979	11.8
Data for only one assessment	0	0	58,386	6.0
Tested in multiple districts	0	0	3,367	0.3
Analytic Sample	629	74.2	590,819	61.1

Notes: Districts are classified based on the data submitted to MDH and provided to EPIC by 3 p.m. on August 16th, 2021. Sources: Benchmark assessment data submitted by districts directly to the Michigan Data Hub, survey responses from districts that chose to use local benchmark assessments (submitted through GEMS/MARS), summary data from MDH regarding which districts provided authorization for EPIC to access their benchmark assessment data, and district responses to an initial survey from MDH about the assessments they intended to use and data they intended to report to fulfill requirements of the "Return to Learn" legislation.

After completing the exclusions listed above, we include 629 total districts and 590,819 students (61% of all Michigan K-8 students) in the final analytic sample for this report.

This group of districts includes 519 using NWEA's MAP Growth, 45 using Curriculum Associates' i-Ready assessments, 64 using Renaissance Learning's Star 360 assessments, and 23 using DRC's ICA and MDE's K-2s. Twenty-two districts administered assessments from two different providers. The exact student count for each subgroup analysis varies because students with incomplete demographic information in the MSDS are excluded from breakdowns if they are missing data for the specific demographic characteristic being examined.

To understand how students in benchmark districts compare to the full population of Michigan K-8 students, Tables 3.2 through 3.5 in our first report present average characteristics for four different groups of students: the full population of Michigan K-8 students, all K-8 students in a benchmark assessment district, all K-8 students in a benchmark assessment district that participated in testing, and all students included in either the mathematics or reading/ELA analytic samples. Student characteristics for all four groups are reported separately by assessment provider.

As discussed in our first report, the districts using NWEA's MAP Growth assessments are largely representative of the state, however, the students within those districts with comparable benchmark assessment data from the fall and spring were less likely to be economically disadvantaged, Black, or receiving special education services (an IEP or a 504 plan) than those who did not have comparable assessment data. Districts using the other three assessment providers, on the other hand, are quite different, in terms of student composition, from the state as a whole. Districts that used the i-Ready assessments represent a larger share of Black students, while Star 360 and Smarter Balanced ICA districts tend to have far more White students and fewer economically disadvantaged students. These differences are particularly important to keep in mind when comparing results from one provider to historical data for the state of Michigan or a nationally representative sample.

Research exploring trends in academic achievement over the past two years makes clear that the effects of the COVID-19 pandemic on students varied across student populations and the pandemic has had a greater and more negative effect on the achievement and achievement growth of economically disadvantaged, Black, and Hispanic or Latino/a/x students, as well as English learners (e.g., Amplify Education, 2021; Dorn et al., 2020a, b; Kogan & Lavertu, 2021; Pier et al., 2021; Sass & Goldring, 2021). Given that these specific student populations are underrepresented in the analytic samples for some of the benchmark assessment providers, it is likely that our results overstate any academic growth observed throughout the 2020-21 school year. Similarly, given that the students who took the M-STEP in spring 2021 were unrepresentative of the overall population of students in Michigan in many of the same ways as the benchmark assessment sample (see EPIC, 2021), our analysis of

growth on the M-STEP between 2019 and 2021 may overestimate student performance across the state and within subgroups.

Testing Rates by Student Subgroup

Table 2.3.1 through Table 2.3.5 present grade-subgroup-specific enrollment counts and benchmark testing participation rates by race/ethnicity and gender, economically disadvantaged and special education status, as well as 2019 M-STEP proficiency levels. Enrollment counts and participation rates for each student subgroup and grade level are reported separately by assessment provider. Note, the denominator in each testing rate is based on grade-specific aggregate enrollment counts across all districts offering a particular benchmark assessment for that grade level (e.g., a district can be a MAP Growth district for some grade levels but not for others if the district chose to offer different benchmark assessments for different grade levels). Additionally, grade-specific enrollment counts and participation rates for each student subgroup were relatively consistent across our reading and mathematics samples, therefore, figures for the reading sample are presented below and the remaining results can be found in Appendix Tables A.2 through A.16. Finally, for each of the testing rate tables provided below, as well as all the results tables that follow in the next section and the Appendix, we suppress outcomes for any student subgroup-grade combination in which less than 10 students participated in benchmark testing.

As seen in Table 2.3.1, testing rates varied by race/ethnicity, grade, and assessment provider. Averaging across grade levels, between 83 and 89% of each racial/ethnic subgroup in MAP Growth districts participated in benchmark testing, with the highest rates among White and Asian students. These averages, however, mask certain patterns that are unique to specific subgroups and grade levels. For instance, Black kindergarteners have higher testing rates compared to White kindergarteners across all vendors with enrollment counts large enough to report. Similarly, 8th-grade Asian students in districts offering i-Ready or Star 360 assessments exhibited testing rates that are well below both the average testing rate for that subgroup as well as 8th graders from other racial/ethnic subgroups. In general, participation rates for all racial/ethnic subgroups in MAP Growth districts were higher in early grade levels, especially among Black students, while testing rates in middle school grade levels were slightly lower. Compared to MAP Growth districts, testing rates were lower among students in i-Ready, Star 360, and ICA/K-2 districts, however, the early- and late-grade level trends observed in MAP Growth districts also hold for districts offering a benchmark assessment from one of the other three providers.

Table 2.3.1. Percent of Enrolled Students Included in Reading Analytic Sample by Race/Ethnicity, Grade, and Assessment Provider

Grade	Subgroup	MAP Growth		i-Ready		Star 360		ICA/K-2	
		Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested
K	White	31,192	81.0	6,006	72.4	5,509	62.7	1,282	84.5
	Black	5,782	81.9	3,887	85.5	323	78.0	<10	---
	Latino/a/x	3,329	80.6	1,076	85.1	589	66.9	50	78.0
	Asian	1,045	74.5	784	87.8	108	66.7	<10	---
	Other	2,664	79.1	575	76.5	344	74.1	54	88.9
1st	White	31,814	91.0	5,657	91.1	4,963	72.1	947	92.8
	Black	7,402	88.9	4,813	86.4	312	79.8	<10	---
	Latino/a/x	3,827	92.4	1,187	94.0	553	66.7	31	83.9
	Asian	1,208	93.4	777	96.5	74	85.1	<10	---
	Other	2,817	89.6	543	89.1	364	84.1	50	76.0
2nd	White	32,826	91.3	5,836	88.4	5,384	80.8	895	92.3
	Black	8,803	84.6	5,068	87.0	333	84.7	<10	---
	Latino/a/x	4,204	82.8	1,229	92.4	580	76.9	33	90.9
	Asian	1,250	90.1	875	97.5	95	94.7	<10	---
	Other	3,019	87.4	502	92.4	430	86.3	48	87.5
3rd	White	34,445	92.8	5,988	89.4	5,576	83.3	524	85.3
	Black	9,425	85.4	4,779	86.3	310	88.4	<10	---
	Latino/a/x	4,392	86.3	1,263	93.0	576	81.3	12	91.7
	Asian	1,530	92.2	819	94.9	100	94.0	<10	---
	Other	3,090	86.5	515	88.3	425	90.6	44	84.1
4th	White	34,944	92.8	6,113	88.5	5,651	83.6	478	93.7
	Black	9,383	86.7	4,989	84.9	390	88.7	<10	---
	Latino/a/x	4,148	88.2	1,315	92.9	568	81.5	16	75.0
	Asian	1,529	91.4	789	96.1	84	86.9	<10	---
	Other	3,063	87.2	475	88.8	416	92.1	38	92.1
5th	White	35,586	92.2	6,153	88.6	5,633	82.5	513	89.1
	Black	9,824	86.2	4,893	84.2	392	93.4	<10	---
	Latino/a/x	4,734	83.5	1,279	93.0	644	82.9	13	92.3
	Asian	1,528	92.0	741	96.6	102	94.1	<10	---
	Other	3,216	88.3	500	87.4	419	85.0	47	80.9
6th	White	37,863	89.0	5,470	86.5	5,565	76.0	584	91.8
	Black	10,078	79.5	4,686	73.3	457	74.0	<10	---
	Latino/a/x	4,884	81.7	1,113	81.2	653	74.0	27	92.6
	Asian	1,567	91.1	734	86.8	113	86.7	<10	---
	Other	3,297	82.5	426	75.4	417	87.5	37	75.7
7th	White	39,504	87.6	5,576	78.5	6,205	71.1	626	82.4
	Black	10,061	77.1	4,429	70.2	510	77.8	<10	---
	Latino/a/x	5,169	79.3	1,158	75.6	698	67.2	40	82.5
	Asian	1,784	92.0	698	51.1	123	81.3	<10	---
	Other	3,342	79.6	433	64.7	443	82.6	30	80.0
8th	White	41,139	85.7	5,770	80.0	6,642	69.0	638	75.4
	Black	10,308	74.7	4,487	73.6	506	64.2	<10	---
	Latino/a/x	5,209	77.9	1,304	78.5	725	65.2	31	80.6
	Asian	1,935	89.5	728	49.6	133	56.4	<10	---
	Other	3,339	77.1	393	62.8	413	74.8	48	50.0

Notes: Additional information for this table can be found in Report Note 2 at the end of this report.

Table 2.3.2. Percent of Enrolled Students Included in Reading Analytic Sample by Gender, Grade, and Assessment Provider

Grade	Subgroup	MAP Growth		i-Ready		Star 360		ICA/K-2	
		Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested
K	Female	21,269	81.5	5,972	79.8	3,304	65.7	673	88.1
	Male	22,743	80.2	6,356	77.9	3,569	63.2	727	81.3
1st	Female	22,982	91.2	6,356	90.2	3,074	73.2	496	91.5
	Male	24,086	90.3	6,621	89.6	3,192	72.5	539	91.5
2nd	Female	24,638	89.5	6,554	89.8	3,389	80.4	479	91.0
	Male	25,464	88.8	6,956	88.3	3,433	82.0	504	93.1
3rd	Female	25,680	90.6	6,445	89.5	3,383	84.0	277	84.1
	Male	27,202	90.5	6,919	88.4	3,604	83.9	311	86.5
4th	Female	25,731	91.4	6,691	88.6	3,419	84.6	254	92.5
	Male	27,336	90.6	6,990	87.5	3,690	84.0	286	93.7
5th	Female	26,768	90.5	6,689	88.3	3,525	83.6	284	87.7
	Male	28,120	89.7	6,877	87.4	3,665	83.3	296	88.5
6th	Female	28,388	86.9	5,921	81.4	3,484	76.3	311	92.6
	Male	29,301	86.0	6,508	80.1	3,721	76.8	344	89.8
7th	Female	29,319	85.5	6,027	73.7	3,847	72.5	337	82.5
	Male	30,541	84.1	6,267	72.8	4,132	71.5	366	82.0
8th	Female	29,987	83.6	6,190	76.6	4,121	68.9	352	75.9
	Male	31,943	82.2	6,492	74.1	4,298	68.2	370	71.9

Notes: The "Enrolled" columns represent the total number of male or female students in each grade level who were enrolled in districts that offered a particular benchmark assessment. The "% Tested" columns represent the percentage of students from each subgroup-grade-assessment provider combination with valid reading/ELA benchmark assessment scores and included in the reading/ELA analytic sample. Source: Male and female students were identified using student demographic data in the MSDS. Enrollment data is from CEPI's, Student Count Report.

As Table 2.3.2 shows, testing rates do not differ substantially by gender. However, discrepancies in testing rates by economically disadvantaged and special education status were more pronounced (Table 2.3.3 and Table 2.3.4). Across nearly all grade levels and assessment providers, testing participation rates among students identified as economically disadvantaged or eligible for special education services were all lower compared to their respective counterparts. Overall, for all grade levels and assessment providers, approximately 80 to 94% of more advantaged students participated in benchmark testing compared to only 70 to 82% of economically disadvantaged students. Seventy-seven to 90% of general education students participated in testing relative to 66 to 73% of special education students. Since districts were not required to use the same benchmark assessment for all students (e.g., some districts used different benchmark assessments for different grade levels), it is possible that participation rates among special education students are low because district used other specialized, locally developed, or otherwise more appropriate benchmark assessments for special education students.

Table 2.3.3. Percent of Enrolled Students Included in Reading Analytic Sample by Economically Disadvantaged, Grade, and Assessment Provider

Grade	Subgroup	MAP Growth		i-Ready		Star 360		ICA/K-2	
		Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested
K	Not ED	19,802	83.8	5,095	76.3	3,579	61.1	793	93.1
	ED	24,210	78.4	7,233	80.5	3,294	68.0	607	73.5
1st	Not ED	20,415	95.3	5,011	93.1	3,058	76.0	602	96.8
	ED	26,653	87.3	7,966	87.8	3,208	69.8	433	84.1
2nd	Not ED	21,087	95.8	5,187	91.2	3,300	86.4	570	96.8
	ED	29,015	84.3	8,323	87.6	3,522	76.3	413	85.5
3rd	Not ED	23,108	97.0	5,267	90.9	3,489	87.8	367	89.4
	ED	29,774	85.5	8,097	87.6	3,498	80.1	221	78.7
4th	Not ED	23,976	97.6	5,385	90.5	3,542	88.1	360	97.2
	ED	29,091	85.6	8,296	86.5	3,567	80.5	180	85.0
5th	Not ED	24,364	97.6	5,413	90.9	3,600	88.7	386	91.7
	ED	30,524	84.2	8,153	85.8	3,590	78.2	194	80.9
6th	Not ED	26,385	95.6	4,875	89.7	3,606	78.9	445	94.4
	ED	31,304	78.7	7,554	74.9	3,599	74.2	210	84.3
7th	Not ED	28,611	94.2	5,141	76.1	4,041	74.9	461	86.3
	ED	31,249	76.2	7,153	71.1	3,938	69.0	242	74.4
8th	Not ED	30,302	92.0	5,420	76.9	4,408	72.5	490	76.3
	ED	31,628	74.2	7,262	74.1	4,011	64.2	232	68.5

Notes: "ED" and "Not ED" represent students who were or were not economically disadvantaged, respectively. The "Enrolled" columns represent the total number students who were or were not economically disadvantaged in each grade level who were enrolled in districts that offered a particular benchmark assessment. The "% Tested" columns represent the percentage of students from each subgroup-grade-assessment provider combination with valid reading/ELA benchmark assessment scores and included in the reading/ELA analytic sample. Source: Economically disadvantaged students were identified using student demographic data in the MSDS. Enrollment data is from CEPI's, Student Count Report.

Table 2.3.4. Percent of Enrolled Students Included in Reading Analytic Sample by Special Education, Grade, and Assessment Provider

Grade	Subgroup	MAP Growth		i-Ready		Star 360		ICA/K-2	
		Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested
K	Gen. Ed.	37,644	84.6	10,728	83.0	5,777	67.6	1,217	87.8
	Spec. Ed.	6,368	58.3	1,600	50.6	1,096	47.7	183	62.8
1st	Gen. Ed.	40,231	93.6	11,360	92.7	5,332	74.6	901	94.7
	Spec. Ed.	6,837	74.1	1,617	70.1	934	62.7	134	70.1
2nd	Gen. Ed.	42,513	92.5	11,597	92.6	5,808	84.1	861	96.4
	Spec. Ed.	7,589	70.4	1,913	67.0	1,014	64.5	122	61.5
3rd	Gen. Ed.	44,918	93.5	11,387	92.5	5,911	86.8	491	89.8
	Spec. Ed.	7,964	73.6	1,977	68.4	1,076	68.3	97	62.9
4th	Gen. Ed.	44,978	93.5	11,607	90.6	5,979	86.7	469	94.9
	Spec. Ed.	8,089	77.3	2,074	74.2	1,130	71.5	71	81.7
5th	Gen. Ed.	46,702	92.3	11,530	90.2	6,098	85.9	499	90.0
	Spec. Ed.	8,186	77.7	2,036	74.6	1,092	69.8	81	76.5
6th	Gen. Ed.	49,736	88.1	10,631	82.4	6,200	78.0	563	93.4
	Spec. Ed.	7,953	75.9	1,798	70.5	1,005	67.4	92	77.2
7th	Gen. Ed.	51,772	86.4	10,528	74.4	6,941	72.8	618	83.5
	Spec. Ed.	8,088	74.2	1,766	65.7	1,038	66.4	85	72.9
8th	Gen. Ed.	53,839	84.6	10,891	76.6	7,372	69.3	644	76.1
	Spec. Ed.	8,091	71.6	1,791	67.6	1,047	63.0	78	55.1

Notes: "Gen. Ed." and "Spec. Ed." represents general and special education students, respectively. The "Enrolled" columns represent the total number general and special education students in each grade level who were enrolled in districts that offered a particular benchmark assessment. The "% Tested" columns represent the percentage of students from each subgroup-grade-assessment provider combination with valid reading benchmark assessment scores and included in the reading/ELA analytic sample. Source: Special education students were identified using student demographic data in the MSDS. Enrollment data is from CEPI's, Student Count Report.

Table 2.3.5 shows testing rates by grade and 2019 M-STEP proficiency level. As seen in the table, within grade level, testing participation rates for MAP Growth and ICA/K-2 districts typically increased with each M-STEP proficiency level. For example, among 5th graders in MAP Growth districts, 88% of students who scored "Not Proficient" on the 2019 M-STEP ELA assessment participated in benchmark testing in both semesters of the 2020-21 school year. At the same time, almost 94% of 5th graders who scored "Advanced" on the 2019 M-STEP ELA assessment participated in benchmark testing. Participation rates for students in i-Ready and Star 360 district were less consistent across grade levels and M-STEP proficiency levels. For students in these districts, benchmark participation rates were often highest among students who scored "Not Proficient" on the 2019 M-STEP assessment. For some grade levels, however, benchmark participation rates in i-Ready and Star 360 districts mirror the trends seen in MAP Growth and ICA/K-2 districts.

Table 2.3.5. Percent of Enrolled Students Included in Reading Analytic Sample by 2019 M-STEP Proficiency, Grade, and Assessment Provider

Grade	Subgroup	MAP Growth		i-Ready		Star 360		ICA/K-2	
		Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested	Enrolled	% Tested
5th	Not Proficient	14,973	88.4	4,791	91.3	1,526	82.7	71	87.3
	Partially Proficient	12,825	91.3	2,740	88.5	1,744	82.7	126	88.9
	Proficient	11,774	92.5	2,377	87.2	1,746	85.5	142	89.4
	Advanced	11,667	93.7	2,464	90.5	1,799	85.9	205	90.2
6th	Not Proficient	17,553	83.4	4,734	81.9	1,893	74.5	100	89.0
	Partially Proficient	11,327	87.4	2,059	80.5	1,442	76.8	159	93.1
	Proficient	11,820	89.1	2,079	82.8	1,584	78.3	187	91.4
	Advanced	13,166	92.1	2,429	84.6	1,839	79.9	184	94.0
7th	Not Proficient	17,763	80.0	4,287	76.8	2,017	73.6	134	83.6
	Partially Proficient	12,222	85.4	2,204	72.5	1,641	71.8	153	83.0
	Proficient	15,903	88.9	2,855	75.7	2,391	72.3	215	82.3
	Advanced	9,905	92.1	1,758	73.2	1,450	72.2	158	86.7
8th	Not Proficient	17,786	77.3	4,283	79.4	2,065	68.8	152	76.3
	Partially Proficient	15,540	85.0	2,830	76.7	2,123	72.2	185	75.7
	Proficient	16,485	88.1	2,926	75.2	2,589	68.3	238	73.5
	Advanced	7,962	90.0	1,480	74.1	1,138	69.5	116	77.6

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" represent the four proficiency levels from Michigan's summative M-STEP assessment. The "Enrolled" columns represent the total number students in each grade level who scored in a particular proficiency level on the 2019 M-STEP ELA assessment and were enrolled in districts that offered a particular benchmark assessment. The "% Tested" columns represent the percentage of students from each subgroup-grade-assessment provider combination with valid reading benchmark assessment scores and included in the reading/ELA analytic sample. Source: M-STEP data is provided by MDE. Enrollment data is from CEPI's, Student Count Report.

Finally, Table 2.3.6 shows testing rates for the pre-pandemic and pandemic cohorts used to compare M-STEP Mathematics and ELA outcomes across student subgroups. For each percentage in this table, the numerator counts the number of students from a cohort with valid M-STEP proficiency data in mathematics or ELA for each grade and year (e.g., students who were in 3rd grade in 2017 and 5th grade in 2019, for the pre-pandemic cohort), while the denominator counts the total number of students from a cohort enrolled in both grades and years (i.e., students who did not progress exactly two grade levels over this period because they skipped or repeated a grade level are not counted as part of the cohort). As seen in the table, testing rates across cohorts are considerably different. Overall, more than 95% of students across all grade levels in the pre-pandemic cohort participated in the M-STEP (and received valid scores) in both 2017 and 2019. These rates did not vary substantially across subgroups, except for special education students, some of whom take Michigan's alternative state

assessment (MI-Access) instead of the M-STEP. In contrast, only 67 to 71% of students in the pandemic cohort had valid M-STEP outcomes in both 2019 and 2021. These differences are expected since local school districts were only able to administer the 2021 M-STEP assessments in-person, and students who were learning remotely were not required to come into a building to take the test.[3] Notably, disparities in M-STEP testing rates across certain subgroups were far more pronounced than disparities for the same groups in the benchmark assessment data. Specifically, 75 to 80% of White students in the pandemic cohort participated in M-STEP testing both years, compared to only 42 to 45% of Black students. Additionally, disparities in M-STEP participation rates between economically disadvantaged students (58 to 65%) and students who were not economically disadvantaged (76 to 80%) were also larger than the discrepancies in benchmark participation for these groups.

Table 2.3.6. Percent of Students with Valid M-STEP Proficiency Data Over a 2-Year Period by Cohort and Subgroup

	Pre-Pandemic Cohorts (2017-2019)			Pandemic Cohorts (2019-2021)		
	3rd-5th	4th-6th	5th-7th	3rd-5th	4th-6th	5th-7th
All students enrolled both years	95.9	95.4	95.3	71.3	68.3	66.5
White	96.5	96.2	96.1	80.4	77.0	74.5
Black	94.1	93.0	92.5	45.2	42.8	42.1
Latino/a/x	95.1	94.9	95.0	63.9	61.0	59.1
Asian	96.3	96.2	96.6	67.9	64.3	64.0
Other Race/Ethnicity	95.9	94.1	94.5	69.2	65.6	62.4
Female	96.8	96.3	96.2	71.8	68.6	66.5
Male	95.1	94.6	94.5	70.9	67.9	66.6
Economically disadvantaged	94.6	93.8	93.5	64.5	60.6	58.4
Not economically disadvantaged	97.4	97.2	97.2	80.4	78.1	76.3
Special education	82.5	80.2	79.7	61.1	57.9	55.6
Not special education	98.3	98.0	98.0	73.2	70.1	68.4

Notes: The percentages listed within each row represent the share of enrolled students from a particular grade and year combination with valid M-STEP Mathematics or ELA proficiency data. Students in the pre-pandemic cohorts had valid M-STEP Mathematics or ELA data in both 2017 and 2019. Students in the pandemic cohort had valid M-STEP Mathematics or ELA data in both 2019 and 2021. Across both cohorts, the columns represent the three different pairs of grade levels students were required to have valid M-STEP scores to be included in the analysis (e.g., 3rd grade in 2017 and 5th grade in 2019 for students in the pre-pandemic cohort). Source: M-STEP data is provided by MDE. Enrollment data is from CEPI's, Student Count Report.

Section Three: Results

In this section, we present multiple sets of results that summarize outcomes on both the Michigan benchmark assessments administered throughout the 2020-21 school year and M-STEP testing completed in spring 2021. First, we show fall and spring counts of the number and percentage of Michigan students who are "significantly behind grade level" on benchmark assessments, as well as distributions of scale scores, by student demographic characteristics, district-level instructional modality, and 2019 M-STEP proficiency levels. Next, we compare proficiency trends on the state's M-STEP summative assessment before and during the COVID-19 pandemic. Finally, using a regression framework, we analyze both benchmark and M-STEP assessment outcomes by student demographic characteristics to gain a deeper understanding of subgroup-specific performance throughout the pandemic. In addition, the regression models tell us the relationship between instructional modality (remote, hybrid, or in-person) and growth on benchmark assessment or M-STEP outcomes over the 2020-21 school year.

To interpret the following results that discuss benchmark assessment outcomes, it is important to note that the definition of "significantly behind grade level" differs substantively across assessment providers. Similarly, each benchmark assessment has its own unique scale and scale scores are not comparable across assessments. We therefore analyze data from each provider separately and do not assume that "significantly behind grade level" classifications or average scale scores for one assessment translate to other assessments.

BENCHMARK ASSESSMENT OUTCOMES BY STUDENT AND DISTRICT CHARACTERISTICS

The results in this section show fall and spring counts of the number and percentage of Michigan students who are "significantly behind grade level" on benchmark assessments, as well as average scale scores, across student demographic characteristics (race/ethnicity, gender, economically disadvantaged, and special

education status), district-level instructional modality, and 2019 M-STEP proficiency levels. In the Appendix, we also provide fall and spring counts of the number and percentage of Michigan students who are "significantly behind grade level" and average scale scores by English learner, foster, homeless, migrant, and military status (see Appendix Tables A.35 through A.114). We do not include analyses of these subgroups in the main text of the report because for many of the assessment providers, we have too few students to enable comparisons for these groups of students.

Within each table, we provide multiple measures to help interpret results and show changes throughout the school year for each student subgroup and grade level combination. Specifically, tables that provide fall and spring counts of the number and percentage of Michigan students who are "significantly behind grade level" on benchmark assessments also show gaps between each student subgroup and a specific reference category (e.g., White students are compared to other racial/ethnic subgroups). For tables that summarize average scale scores for each student subgroup, we also provide the standard deviation of each subgroup and grade level mean to help understand the variation in test scores within the subgroup, as well as gaps in average scale scores between each student subgroup and a specific reference category.

How to interpret "significantly behind grade level" gap tables in this report:
In these tables, gaps in the percentages of students who are "significantly behind grade level" will be *positive* when the percentage for a subgroup (e.g., Black students) is larger than the percentage for the reference group (for the race/ethnicity comparisons, that group is White students). If a subgroup has a smaller percentage of students who are "significantly behind grade level" than the reference group, the gap will be *negative* (for instance, these percentages are often lower for Asian students than they are for White students. Thus, there are negative gaps in each semester, indicating that smaller percentages of Asian students are "significantly behind grade level" than White students at each point in time). In the table, we use parentheses to denote gaps that are negative.

When assessing the change in a gap between subgroups, we consider both the direction of the gap and whether the gap has grown or shrunk from fall to spring. In the table, we use plus and minus signs to convey information about the direction of the change in the achievement gap between two groups over the 2020-21 school year. A plus (+) sign indicates that a gap *increased* in magnitude from fall to spring and a minus (-) sign indicates that a gap *decreased* in magnitude. We use parentheses to indicate the direction of the gap relative to the reference group. That is, changes in negative gaps are shown in parentheses, along with a plus or minus sign to indicate whether the gap became larger or smaller in magnitude. For example, a value of "+5.5"

would indicate that the subgroup gap is positive (e.g., that the percentages of Black students who were "significantly behind grade level" were *higher* than the percentages of White students who were "significantly behind grade level" in both the fall and spring) and grew by 5.5 percentage points from fall to spring, while "-5.5" indicates that the gap is positive and shrunk by 5.5 percentage points. "(+5.5)" indicates that the gap is negative (e.g., that the percentages of Asian students who were "significantly behind grade level" were *lower* than the percentages of White students who were "significantly behind grade level" in both the fall and spring) and grew by 5.5 percentage points (e.g., the percentages for the subgroup and reference group moved farther apart from each other), and "(-5.5)" indicates that the gap is negative and shrunk by 5.5 percentage points (e.g., the subgroup percentages moved closer together). In rare cases, the direction of a gap may be different in the fall than in the spring; we label these gaps with the letter "R," indicating that the gap reversed in direction.

How to interpret scale score gap tables in this report:

These tables are interpreted differently than the tables showing the proportions of students who score "significantly behind grade level," as the gaps in scale scores will be *negative* when a subgroup (e.g., Black students) scores lower, on average, than the reference group (again, for the race/ethnicity comparisons, that group is White students). Gaps will be *positive* when a subgroup scores higher than the reference group. For instance, Asian students generally score higher, on average, than do White students on the benchmark assessments. Thus, there are positive gaps in each semester, indicating that Asian students score higher, on average, than White students at each point in time. We use the same notation as in the "significantly behind grade level" gap tables to indicate the direction of each gap and whether they became larger or smaller in magnitude from fall to spring. For example, if economically disadvantaged students scored 6.0 points lower, on average, than students who are not economically disadvantaged in the fall, and they scored 10.0 points lower, on average, in the spring, the fall and spring gaps would be denoted as "(6.0)" and "(10.0)", respectively. The fall-to-spring change in this gap would be denoted as "(+4.0)," using parentheses to indicate that both the fall and spring gaps were negative, and a plus sign to indicate that the magnitude of the gap increased (from 6.0 to 10.0).

We also provide standard deviations for the fall and spring average scale scores. Standard deviations are a measure of spread and provide information about how much scores varied across students within a particular subgroup. In other words, a smaller standard deviation indicates that students typically scored close to the group average, while a larger standard deviation indicates that many students scored far above or far below the group average. Additionally, large changes in standard deviations from fall to spring could indicate irregularities in students' testing environments (e.g., due to remote testing in the fall but not the spring). In these cases, changes in average scores should be interpreted with caution.

Standard deviations are also helpful for judging the size of an achievement gap. For instance, if the gap in average scores for two groups of students is about 10% of the size of the standard deviation for the reference group, this tells us that the average score for the focal group is at about the 46th percentile of students in the reference group; similarly, if the gap is about half as large as the reference group's standard deviation, the average score for the focal group is at about the 31st percentile, and if the gap is about the same size as this standard deviation, the average score for the focal group is at about the 16th percentile. We can also use this method to compare gaps in average benchmark assessment scores to pre-pandemic achievement gaps found in other studies or using other assessments. For instance, on the 2019 M-STEP, gaps in average scores of Black and White students were about 75 to 87% of the size of the standard deviation for White students in ELA and 90 to 99% of a standard deviation in math, depending on the grade level. Latino/a/x-White gaps were about 39 to 43% of a standard deviation in ELA and 45 to 50% in math, and gaps between students who are and are not economically disadvantaged were 72 to 81% and 80 to 89% of a standard deviation in ELA and math, respectively. After accounting for changes in demographics from year to year, Matheny et al. (2021) found that from 2009 to 2018, the national Black-White gap widened by about 0.2% of a standard deviation on average each year, while the gap between students who are and are not economically disadvantaged widened by about 0.5% of a standard deviation, and the Latino/a/x-White gap narrowed by about 0.5% of a standard deviation.

All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some numbers may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables.

Race/Ethnicity

Table 3.1.1 through Table 3.1.12 show racial/ethnic differences in mathematics and reading benchmark assessment outcomes across the NWEA MAP Growth, Curriculum Associates i-Ready, and Renaissance Learning Star 360 assessments.

As mentioned in Section Two, the tables that summarize mathematics and reading differences among students in Smarter Balanced ICA and K-2 districts are often missing information for some subgroups, as we suppress outcomes for any student subgroup-grade combination with fewer than 10 students who participated in benchmark testing. In these cases, we refrain from drawing conclusions with those data as it is difficult to compare outcomes for a subset of students within a particular

student demographic characteristic. Appendix Tables A.17 and A.18 show the corresponding results for students who took the Smarter Balanced ICA and K-2 assessments; however, we do not interpret these tables because so few of the students in these districts are non-White.

Within each table, we report outcomes separately for White, Black, Latino/a/x, and Asian students. Due to the low number of students identified as American Indian or Alaskan Native and Native Hawaiian or Pacific Islander, we combined these groups with students identified as two or more races, to create a single "Other" category for the purposes of this report. Again, White students are the reference category for all outcome gaps (e.g., we estimate gaps between Black students and White students, gaps between Latino/a/x students and White students, gaps between Asian students and White students, and gaps between American Indian or Alaskan Native, Native Hawaiian or Pacific Islander, and multiracial students and White students).

As seen in Table 3.1.1 and Table 3.1.2, there are clear differences across each racial/ethnic subgroup in the percentage of students who scored "significantly behind grade level" on the NWEA MAP Growth Math and ELA assessments at the beginning and end of the 2020-21 school year. As a reminder, NWEA's definition of "significantly behind grade level" equates to students whose are projected to score "Not Proficient" on the MSTEP Mathematics or ELA assessments at the end of the school year.

For all grade levels and both subjects, lower percentages of White and Asian students in NWEA MAP Growth districts both started and ended the school year "significantly behind grade level," while greater percentages of Black, Latino/a/x, and Other race/ethnicity students scored "significantly behind grade level" in both time periods. For example, among 3rd graders in NWEA MAP Growth districts, almost 30% of White students scored "significantly behind grade level" on the mathematics assessment in both the fall and spring semesters. A smaller share of Asian students scored "significantly behind grade level" in mathematics during the same time periods (11% and 16% in the fall and spring, respectively). At the same time, roughly half of 3rd-grade Black (56%) and Latino/a/x students (46%) scored "significantly behind grade level" in fall, increasing to almost three-quarters of Black students (72%) and more than half of Latino/a/x students (52%) scoring "significantly behind grade level" in the spring semester. This suggests that 72% of Black and 52% of Latino/a/x students who took the 3rd-grade NWEA MAP Growth Math assessment were predicted to score "Not Proficient" on the M-STEP by the end of 2021.

Gaps in the percentage of students who scored "significantly behind grade level" between White students and other racial/ethnic subgroups also grew over the course of the year in both mathematics and reading. In particular, between the fall and spring semester, the Black-White mathematics gap for 3rd graders in MAP Growth districts

increased by 16 percentage points and Black students ended the year 43 percentage points more likely to score "significantly behind grade level" on the mathematics assessment compared to White students. The only subgroup of students that did not consistently follow this pattern were Asian students; in some cases, the gaps in the percentage of students who scored "significantly behind grade level" on the MAP Growth Math or Reading assessments between Asian and White students decreased over the course of the 2020-21 school year. When the Asian-White gaps did grow, they did so by relatively small amounts.

For students who took the Curriculum Associates i-Ready assessments (Table 3.1.3 and Table 3.1.4), mathematics and reading achievement at each grade level improved for all racial/ethnic subgroups over the course of the school year, and a smaller percentage of students in each subgroup scored "significantly behind grade level" in the spring semester compared to the fall. This is to be expected, given that the "significantly behind grade level" definition for the Curriculum Associates i-Ready assessment is based on a student's knowledge at a given point in time and students should have learned more in the period between the fall and spring assessments. In other words, we would expect fewer students to be "two or more grade levels behind"—the i-Ready definition for "significantly behind grade level"—in the spring than in the fall.

Importantly, 1st- through 8th-grade Black and Latino/a/x students' improvement throughout the school year reduced the Black-White and Latino/a/x-White mathematics gaps and the Latino/a/x-White reading gap by 1 to 7 percentage points across each grade level. For example, in fall of 2020, 47% of 5th-grade Latino/a/x students who took the Curriculum Associates i-Ready Mathematics assessment scored "significantly behind grade level," relative to 26% of 5th-grade White students who took the assessment. Thus, 21% more Latino/a/x than White students were "significantly behind grade level" according to the 5th-grade Curriculum Associates i-Ready Mathematics assessment. By the spring assessment, 11% fewer Latino/a/x tested "significantly behind grade level," whereas 9% fewer White students scored the same way. Thus, the Latino/a/x-White mathematics gap shrunk by 2 percentage points throughout the school year.

We do not find the same results for students who took the Renaissance Learning Star 360 Math assessment; while students in most subgroups were less likely to be "significantly behind grade level" in the spring than in the fall, in some grade levels *more* Black (four grade levels), Latino/a/x (five grade levels), and Asian students (three grade levels) scored "significantly behind grade level" in the spring than in the fall. These results are shown in Table 3.1.5 and Table 3.1.6. Moreover, the Black-White and Latino/a/x-White achievement gaps generally widened over the course of the year

in K-7th grade. Reading and literacy achievement gaps also increased between White and Black, Latino/a/x, and other groups in many grades.

Table 3.1.7 through Table 3.1.12 show fall and spring average mathematics and reading scale scores for all five racial/ethnic groups, as well as the change over time for each group, and score gaps for non-White groups relative to White students in the fall, spring, and the change over the year. Appendix Tables A.19 and A.20 show these results for students who took the Smarter Balanced ICA and K-2 Assessments (again, we do not interpret these tables because so few of the students in these districts are non-White).

As expected, the average mathematics and reading scale scores for all five racial/ethnic subgroups increased between the fall and spring semester. Across all grade levels, subjects, and assessment providers, Asian students both started and ended the year with the highest average scale scores. Excluding kindergarten, Black students in NWEA MAP Growth, Curriculum Associates i-Ready, and Renaissance Learning Star 360 districts consistently had the lowest average scale scores in both mathematics and reading in the fall and spring semesters. Average scale scores for White, Latino/a/x, and Other students in mathematics and reading fall between the average scores for Black and Asian students. Differences in average scale scores between White students and Latino/a/x or Other students are somewhat smaller than those between White and Black or Asian students, which is consistent with previous trends in M-STEP scores. The largest gaps between White and Black or Asian students, particularly those in the spring, are roughly equal to the standard deviations associated with White students.

Across both subjects and all grade levels, the gaps in average scale scores between White and Black, Latino/a/x, and Other students in NWEA MAP Growth and Renaissance Learning i-Ready districts grew consistently between the fall and spring semesters. These gaps became wider because, in both subjects, the increases in average scores for White students were larger than the increases for other racial/ethnic subgroups. Conversely, increases in Asian students' reading scale scores on both the NWEA MAP Growth and Curriculum Associates i-Ready assessments and mathematics scale scores on the Curriculum Associates i-Ready assessments were larger than the increases for White students. Since Asian students across most grade levels started the year with higher average scale scores than White students, this meant that the Asian-White average reading score gaps on both the NWEA MAP Growth and Curriculum Associates i-Ready assessments also increased over time, with Asian students ending the year farther ahead of White students, on average, than they were at the beginning of the year. The exception to this rule is for Asian-White gaps in average mathematics scale scores for elementary students in NWEA MAP Growth districts. These gaps generally decreased, as increases in average scores for White

students were smaller than those for Asian students. Again, even though average mathematics and reading scale score gaps between White students and other racial/ethnic subgroups in NWEA MAP Growth and Curriculum Associates i-Ready districts widened throughout 2020-21 school year, all the aforementioned gap changes varied in size, relative to the standard deviation for White students. These changes were largest for Black-White gaps, particularly in lower grade levels.

Finally, for Renaissance Learning Star 360 districts, Black-White mathematics and reading gaps across multiple grade levels were both large in the fall semester and increased dramatically through the spring.

Table 3.1.1. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Mathematics Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to White Students)		
			Fall	Spring	Change	Fall	Spring	Change
	White	26,598	9.2	17.4	+8.2			
	Black	5,005	16.6	34.4	+17.8	7.4	17.0	+9.6
K	Latino/a/x	2,736	18.0	29.6	+11.7	8.8	12.2	+3.4
	Asian	820	7.4	11.1	+3.7	(1.7)	(6.3)	(+4.6)
	Other	2,214	11.4	22.1	+10.7	2.3	4.7	+2.4
	White	29,312	19.9	20.5	+0.6			
	Black	6,754	33.2	51.2	+18.0	13.3	30.7	+17.3
1st	Latino/a/x	3,692	27.1	35.9	+8.8	7.2	15.4	+8.2
	Asian	1,141	7.5	10.0	+2.5	(12.4)	(10.5)	(-1.9)
	Other	2,600	24.7	30.4	+5.7	4.9	9.9	+5.0
	White	31,356	22.3	24.7	+2.4			
	Black	7,695	43.0	64.0	+21.0	20.7	39.3	+18.6
2nd	Latino/a/x	3,777	34.6	46.5	+11.9	12.3	21.8	+9.5
	Asian	1,340	8.1	13.1	+5.0	(14.2)	(11.6)	(-2.6)
	Other	2,871	27.8	36.0	+8.2	5.5	11.3	+5.7
	White	32,599	28.9	28.9	0.0			
	Black	8,201	55.9	71.5	+15.6	27.0	42.6	+15.6
3rd	Latino/a/x	3,835	45.6	52.4	+6.8	16.7	23.5	+6.8
	Asian	1,446	11.0	15.8	+4.8	(17.9)	(13.2)	(-4.8)
	Other	27,81	36.8	42.6	+5.8	7.9	13.7	+5.8
	White	32,822	20.5	23.5	+3.0			
	Black	8,113	49.3	65.8	+16.5	28.8	42.3	+13.5
4th	Latino/a/x	3,700	35.0	43.1	+8.1	14.5	19.6	+5.1
	Asian	1,437	8.6	10.2	+1.6	(11.9)	(13.3)	(+1.4)
	Other	2,764	28.2	35.9	+7.7	7.7	12.4	+4.7
	White	33,269	30.6	36.8	+6.1			
	Black	8,545	63.1	78.1	+15.0	32.5	41.3	+8.8
5th	Latino/a/x	4,026	46.9	58.6	+11.7	16.3	21.8	+5.5
	Asian	1,456	11.1	17.5	+6.4	(19.5)	(19.2)	(-0.3)
	Other	2,898	41.7	51.5	+9.8	11.1	14.8	+3.7
	White	33,883	26.9	32.1	+5.2			
6th	Black	8,224	60.1	72.0	+11.8	33.3	39.9	+6.6
	Latino/a/x	4,038	44.9	53.1	+8.2	18.0	21.0	+3.0

	Asian	1,426	11.1	13.5	+2.4	(15.8)	(18.6)	(+2.8)
	Other	2,764	38.8	46.4	+7.6	11.9	14.3	+2.4
	White	34,637	28.7	33.0	+4.3			
	Black	7,933	61.8	69.9	+8.1	33.1	36.9	+3.8
7th	Latino/a/x	4,111	45.6	52.7	+7.1	16.9	19.8	+2.9
	Asian	1,573	10.4	12.9	+2.5	(18.3)	(20.1)	(+1.8)
	Other	2,683	38.7	44.5	+5.8	10.0	11.5	+1.5
	White	34,224	21.0	27.4	+6.3			
	Black	7,911	49.3	60.5	+11.2	28.2	33.1	+4.9
8th	Latino/a/x	4,032	34.8	45.3	+10.5	13.7	17.9	+4.2
	Asian	1,460	9.0	10.9	+1.9	(12.1)	(16.5)	(+4.4)
	Other	2,539	29.8	38.6	+8.8	8.8	11.3	+2.5

Notes: Additional information for this table can be found in Report Note 4 at the end of this report.

Table 3.1.2. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Reading Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to White Students)		
			Fall	Spring	Change	Fall	Spring	Change
	White	25,266	6.0	20.2	+14.2			
	Black	4,738	8.9	34.4	+25.5	2.9	14.2	+11.3
K	Latino/a/x	2,684	11.5	33.5	+22.0	5.5	13.3	+7.8
	Asian	779	6.7	16.8	+10.1	0.7	(3.4)	R
	Other	2,106	6.1	25.2	+19.0	0.1	5.0	+4.8
	White	28,939	20.6	23.7	+3.1			
	Black	6,581	31.2	50.2	+18.9	10.6	26.4	+15.8
1st	Latino/a/x	3,535	28.3	38.2	+10.0	7.7	14.5	+6.9
	Asian	1,128	9.3	12.7	+3.4	(11.3)	(11.0)	(-0.3)
	Other	2,524	25.0	30.4	+5.3	4.4	6.7	+2.2
	White	29,968	27.6	26.4	-1.2			
	Black	7,443	41.1	56.1	+15.0	13.5	29.7	+16.2
2nd	Latino/a/x	3,480	38.6	44.5	+5.9	11.0	18.1	+7.1
	Asian	1,126	12.2	14.7	+2.5	(15.5)	(11.7)	(-3.7)
	Other	2,639	31.9	35.2	+3.3	4.2	8.8	+4.6
	White	31,963	24.5	26.9	+2.4			
	Black	8,047	43.8	60.4	+16.7	19.2	33.5	+14.3
3rd	Latino/a/x	3,790	38.4	45.8	+7.4	13.8	18.9	+5.0
	Asian	1,410	11.1	16.7	+5.7	(13.5)	(10.2)	(-3.3)
	Other	2673	28.7	36.7	+8.0	4.2	9.8	+5.6
	White	32,433	23.7	29.1	+5.4			
	Black	8,131	47.5	63.0	+15.5	23.8	33.9	+10.1
4th	Latino/a/x	3,660	35.8	45.2	+9.4	12.2	16.1	+4.0
	Asian	1,397	13.0	17.5	+4.6	(10.7)	(11.5)	(+0.8)
	Other	2,671	29.4	37.0	+7.6	5.7	7.9	+2.2
	White	32,795	23.8	29.7	+5.9			
	Black	8,466	48.9	62.1	+13.2	25.1	32.4	+7.3
5th	Latino/a/x	3,953	36.9	45.6	+8.7	13.1	15.9	+2.8
	Asian	1,406	11.5	17.1	+5.6	(12.2)	(12.6)	(+0.3)
	Other	2,841	29.1	37.8	+8.7	5.3	8.1	+2.8
	White	33,714	21.9	28.8	+6.9			
	Black	8,012	47.1	58.8	+11.7	25.2	30.0	+4.8
6th	Latino/a/x	3,992	34.6	43.7	+9.1	12.7	15.0	+2.2
	Asian	1,427	10.9	13.9	+2.9	(11.0)	(14.9)	(+3.9)
	Other	2,721	28.3	37.7	+9.4	6.4	8.9	+2.5
	White	34,595	21.9	28.2	+6.3			
	Black	7,754	45.0	54.8	+9.8	23.1	26.5	+3.5
7th	Latino/a/x	4,100	34.6	42.0	+7.3	12.7	13.7	+1.0
	Asian	1,641	10.8	14.5	+3.7	(11.2)	(13.7)	(+2.6)
	Other	2,659	27.1	35.6	+8.5	5.1	7.4	+2.2
	White	35,268	18.3	26.0	+7.7			
	Black	7,704	36.4	47.9	+11.5	18.1	22.0	+3.9
8th	Latino/a/x	4,057	27.7	36.9	+9.2	9.4	11.0	+1.5
	Asian	1,731	8.4	10.4	+2.0	(9.9)	(15.6)	(+5.6)
	Other	2,576	23.0	32.1	+9.1	4.7	6.2	+1.5

Notes: Additional information for this table can be found in Report Note 4 at the end of this report.

Table 3.1.3. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Math Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to White Students)		
			Fall	Spring	Change	Fall	Spring	Change
	White	4,238	54.8	21.0	-33.7			
	Black	3,307	65.3	44.1	-21.2	10.5	23.0	+12.5
K	Latino/a/x	900	67.2	37.9	-29.3	12.5	16.8	+4.4
	Asian	691	42.1	16.5	-25.6	(12.7)	(4.5)	(-8.1)
	Other	446	60.5	31.8	-28.7	5.8	10.8	+5.0
	White	5,246	8.6	2.8	-5.8			
	Black	4,119	21.8	12.2	-9.6	13.2	9.4	-3.8
1st	Latino/a/x	1,078	19.3	8.1	-11.2	10.7	5.3	-5.5
	Asian	747	7.8	1.6	-6.2	(0.8)	(1.2)	(+0.4)
	Other	499	16.8	4.6	-12.2	8.3	1.8	-6.5
	White	5,284	20.4	6.8	-13.6			
	Black	4,375	49.7	36.1	-13.6	29.4	29.3	-0.0
2nd	Latino/a/x	1,138	42.3	22.1	-20.1	21.9	15.4	-6.5
	Asian	851	14.7	4.8	-9.9	(5.7)	(1.9)	(-3.7)
	Other	463	31.3	11.7	-19.7	11.0	4.9	-6.0
	White	5,481	25.8	11.0	-14.8			
	Black	4,137	61.9	46.5	-15.4	36.1	35.5	-0.6
3rd	Latino/a/x	1,172	45.2	25.9	-19.3	19.4	14.9	-4.5
	Asian	779	14.8	3.9	-10.9	(11.1)	(7.2)	(-3.9)
	Other	474	32.5	16.0	-16.5	6.7	5.0	-1.7
	White	5,649	27.0	13.8	-13.2			
	Black	4,267	66.7	53.6	-13.1	39.7	39.8	+0.0
4th	Latino/a/x	1,227	48.4	31.9	-16.5	21.4	18.1	-3.3
	Asian	762	13.6	6.6	-7.1	(13.3)	(7.3)	(-6.1)
	Other	431	35.0	24.6	-10.4	8.0	10.8	+2.7
	White	5,886	25.8	16.7	-9.1			
	Black	4,154	67.4	57.6	-9.8	41.6	40.8	-0.8
5th	Latino/a/x	1,186	47.1	36.4	-10.7	21.3	19.7	-1.6
	Asian	711	14.5	8.3	-6.2	(11.3)	(8.4)	(-2.9)
	Other	463	32.8	22.0	-10.8	7.0	5.3	-1.7
	White	5,177	30.1	21.6	-8.4			
	Black	3,559	72.5	62.2	-10.3	42.5	40.6	-1.9
6th	Latino/a/x	947	51.4	40.8	-10.7	21.4	19.1	-2.2
	Asian	634	12.6	8.4	-4.3	(17.4)	(13.3)	(-4.2)
	Other	349	35.5	28.7	-6.9	5.5	7.0	+1.5
	White	4,824	31.7	25.4	-6.3			
	Black	3,261	72.1	65.3	-6.8	40.5	40.0	-0.5
7th	Latino/a/x	915	54.1	41.0	-13.1	22.4	15.6	-6.8
	Asian	358	21.5	16.8	-4.7	(10.2)	(8.6)	(-1.6)
	Other	304	36.5	28.9	-7.6	4.8	3.6	-1.2
	White	4,728	35.0	31.3	-3.7			
	Black	3,347	73.3	67.0	-6.3	38.3	35.7	-2.6
8th	Latino/a/x	1,043	56.7	46.1	-10.5	21.6	14.8	-6.8
	Asian	335	31.0	21.2	-9.9	(4.0)	(10.1)	(+6.1)
	Other	245	46.9	37.1	-9.8	11.9	5.8	-6.1

Notes: Additional information for this table can be found in Report Note 4 at the end of this report.

Table 3.1.4. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Reading Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to White Students)		
			Fall	Spring	Change	Fall	Spring	Change
	White	4,348	46.2	11.7	-34.5			
	Black	3,323	53.5	28.3	-25.2	7.4	16.6	+9.2
K	Latino/a/x	916	56.8	26.6	-30.1	10.6	14.9	+4.3
	Asian	688	33.4	9.6	-23.8	(12.8)	(2.1)	(-10.6)
	Other	440	47.7	20.2	-27.5	1.5	8.5	+7.0
	White	5,156	3.4	1.4	-2.1			
	Black	4,158	14.1	6.7	-7.4	10.6	5.3	-5.3
1st	Latino/a/x	1,116	13.5	4.9	-8.6	10.1	3.6	-6.5
	Asian	750	4.8	0.9	-3.9	1.4	(0.4)	R
	Other	484	8.9	2.9	-6.0	5.5	1.5	-3.9
	White	5,160	21.0	6.8	-14.2			
	Black	4,411	47.4	36.3	-11.1	26.4	29.5	+3.1
2nd	Latino/a/x	1,135	42.4	22.6	-19.7	21.4	15.9	-5.5
	Asian	853	12.3	4.9	-7.4	(8.7)	(1.8)	(-6.8)
	Other	464	25.6	9.9	-15.7	4.7	3.2	-1.5
	White	5,352	27.0	14.0	-13.0			
	Black	4,124	57.9	48.5	-9.4	30.9	34.5	+3.6
3rd	Latino/a/x	1,174	49.1	32.2	-17.0	22.1	18.2	-3.9
	Asian	777	17.1	8.4	-8.8	(9.9)	(5.6)	(-4.3)
	Other	455	28.1	17.4	-10.8	1.1	3.4	+2.3
	White	5,412	21.4	14.1	-7.3			
	Black	4,236	53.4	45.1	-8.3	32.0	31.1	-1.0
4th	Latino/a/x	1,222	43.4	30.0	-13.4	22.0	15.9	-6.1
	Asian	758	14.9	9.4	-5.5	(6.5)	(4.7)	(-1.8)
	Other	422	29.4	19.9	-9.5	8.0	5.8	-2.1
	White	5,454	33.0	23.6	-9.4			
	Black	4,120	69.1	60.9	-8.2	36.1	37.3	+1.2
5th	Latino/a/x	1,189	58.8	46.3	-12.4	25.8	22.7	-3.1
	Asian	716	26.1	18.0	-8.1	(6.9)	(5.6)	(-1.3)
	Other	437	42.6	30.9	-11.7	9.6	7.3	-2.3
	White	4,732	36.3	30.0	-6.3			
	Black	3,436	71.4	66.5	-4.9	35.1	36.5	+1.4
6th	Latino/a/x	904	57.9	50.7	-7.2	21.6	20.7	-0.9
	Asian	637	24.2	17.6	-6.6	(12.1)	(12.4)	(+0.3)
	Other	321	44.5	38.6	-5.9	8.3	8.6	+0.4
	White	4,379	38.0	33.2	-4.8			
	Black	3,107	71.5	65.4	-6.1	33.5	32.2	-1.3
7th	Latino/a/x	876	60.3	49.5	-10.7	22.3	16.4	-5.9
	Asian	357	28.3	23.2	-5.0	(9.7)	(9.9)	(+0.2)
	Other	280	42.5	35.0	-7.5	4.5	1.8	-2.7
	White	4,617	37.8	32.7	-5.1			
	Black	3,303	68.8	62.8	-6.0	31.0	30.0	-0.9
8th	Latino/a/x	1,023	58.6	47.8	-10.8	20.8	15.1	-5.7
	Asian	361	33.8	28.0	-5.8	(4.0)	(4.7)	(+0.7)
	Other	247	43.7	40.9	-2.8	5.9	8.2	+2.2

Notes: Additional information for this table can be found in Report Note 4 at the end of this report.

Table 3.1.5. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Math Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to White Students)		
			Fall	Spring	Change	Fall	Spring	Change
	White	3,249	15.3	10.9	-4.4			
	Black	219	19.6	17.4	-2.3	4.3	6.5	+2.1
1st	Latino/a/x	310	14.2	14.5	+0.3	(1.1)	3.7	R
	Asian	68	11.8	13.2	+1.5	(3.5)	2.4	R
	Other	246	16.7	10.2	-6.5	1.4	(0.7)	R
	White	4,041	27.3	15.0	-12.3			
	Black	285	32.6	31.6	-1.1	5.3	16.5	+11.2
2nd	Latino/a/x	387	33.3	23.8	-9.6	6.0	8.7	+2.7
	Asian	88	23.9	18.2	-5.7	(3.5)	3.1	R
	Other	351	30.5	19.4	-11.1	3.1	4.3	+1.2
	White	4,266	19.6	18.2	-1.4			
	Black	259	37.1	40.2	+3.1	17.5	22.0	+4.5
3rd	Latino/a/x	403	29.0	31.8	+2.7	9.4	13.6	+4.1
	Asian	93	15.1	17.2	+2.2	(4.5)	(1.0)	(-3.6)
	Other	357	28.0	25.8	-2.2	8.4	7.6	-0.8
	White	4,277	21.8	17.9	-4.0			
	Black	335	35.2	36.4	+1.2	13.4	18.6	+5.1
4th	Latino/a/x	404	29.0	26.2	-2.7	7.1	8.4	+1.2
	Asian	72	18.1	18.1	0.0	(3.8)	0.2	R
	Other	345	27.2	24.9	-2.3	5.4	7.1	+1.6
	White	4,328	22.8	20.3	-2.5			
	Black	354	41.5	42.9	+1.4	18.7	22.6	+3.9
5th	Latino/a/x	461	35.6	32.8	-2.8	12.8	12.4	-0.3
	Asian	93	19.4	16.1	-3.2	(3.4)	(4.2)	(+0.8)
	Other	336	33.6	27.7	-6.0	10.8	7.4	-3.5
	White	3,980	26.7	28.4	+1.7			
	Black	341	45.2	48.4	+3.2	18.5	20.0	+1.6
6th	Latino/a/x	431	37.6	41.5	+3.9	10.9	13.2	+2.3
	Asian	94	13.8	11.7	-2.1	(12.9)	(16.7)	(+3.8)
	Other	349	33.8	36.7	+2.9	7.1	8.3	+1.2
	White	4,056	26.9	24.5	-2.3			
	Black	354	42.4	38.7	-3.7	15.5	14.2	-1.3
7th	Latino/a/x	413	37.0	39.5	+2.4	10.2	14.9	+4.8
	Asian	90	14.4	6.7	-7.8	(12.4)	(17.9)	(+5.4)
	Other	322	38.8	35.4	-3.4	11.9	10.9	-1.1
	White	4,163	24.4	26.2	+1.8			
	Black	281	39.5	39.1	-0.4	15.1	12.9	-2.2
8th	Latino/a/x	388	38.4	38.9	+0.5	14.0	12.7	-1.3
	Asian	71	5.6	8.5	+2.8	(18.8)	(17.8)	(-1.0)
	Other	265	35.8	32.1	-3.8	11.4	5.8	-5.6

Notes: Additional information for this table can be found in Report Note 4 at the end of this report.

Table 3.1.6. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Reading and Literacy Assessments by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to White Students)		
			Fall	Spring	Change	Fall	Spring	Change
	White	3,454	21.3	15.0	-6.3			
	Black	252	31.7	30.2	-1.6	10.4	15.1	+4.7
K	Latino/a/x	394	37.6	27.9	-9.6	16.2	12.9	-3.3
	Asian	72	25.0	12.5	-12.5	3.7	(2.5)	R
	Other	255	24.7	17.3	-7.5	3.4	2.2	-1.1
	White	3,577	28.2	15.9	-12.4			
	Black	249	36.9	28.9	-8.0	8.7	13.1	+4.4
1st	Latino/a/x	369	40.1	25.2	-14.9	11.9	9.4	-2.5
	Asian	63	25.4	11.1	-14.3	(2.8)	(4.7)	(+1.9)
	Other	306	26.8	16.0	-10.8	(1.4)	0.2	R
	White	4,349	35.0	20.8	-14.2			
	Black	282	30.1	26.6	-3.5	(4.9)	5.8	R
2nd	Latino/a/x	446	37.9	29.6	-8.3	2.9	8.8	+5.9
	Asian	90	18.9	17.8	-1.1	(16.1)	(3.0)	(-13.1)
	Other	371	33.7	26.4	-7.3	(1.3)	5.6	R
	White	4,643	29.5	19.5	-10.1			
	Black	274	40.1	38.3	-1.8	10.6	18.8	+8.2
3rd	Latino/a/x	468	41.2	35.9	-5.3	11.7	16.4	+4.7
	Asian	94	24.5	20.2	-4.3	(5.1)	0.7	R
	Other	385	33.2	27.8	-5.5	3.7	8.3	+4.6
	White	4,727	24.5	18.8	-5.7			
	Black	346	33.8	35.5	+1.7	9.3	16.7	+7.4
4th	Latino/a/x	463	39.1	31.7	-7.3	14.6	12.9	-1.6
	Asian	73	16.4	15.1	-1.4	(8.1)	(3.8)	(-4.3)
	Other	383	27.4	20.6	-6.8	2.9	1.8	-1.1
	White	4,649	25.9	23.7	-2.3			
	Black	366	40.4	41.0	+0.5	14.5	17.3	+2.8
5th	Latino/a/x	534	45.1	44.8	-0.4	19.2	21.1	+1.9
	Asian	96	30.2	26.0	-4.2	4.3	2.4	-1.9
	Other	356	32.6	31.7	-0.8	6.6	8.1	+1.4
	White	4,231	31.0	31.8	+0.8			
	Black	338	54.1	50.3	-3.8	23.1	18.5	-4.6
6th	Latino/a/x	483	47.4	48.2	+0.8	16.4	16.5	+0.0
	Asian	98	23.5	14.3	-9.2	(7.5)	(17.5)	(+10.0)
	Other	365	36.7	38.6	+1.9	5.7	6.8	+1.1
	White	4,409	29.6	30.7	+1.1			
	Black	397	45.3	47.6	+2.3	15.8	16.9	+1.2
7th	Latino/a/x	469	45.4	45.2	-0.2	15.9	14.5	-1.3
	Asian	100	31.0	29.0	-2.0	1.4	(1.7)	R
	Other	366	39.6	38.5	-1.1	10.1	7.9	-2.2
	White	4,586	31.4	36.0	+4.7			
	Black	325	49.8	49.2	-0.6	18.5	13.2	-5.3
8th	Latino/a/x	473	47.1	52.0	+4.9	15.8	16.0	+0.2
	Asian	75	18.7	21.3	+2.7	(12.7)	(14.7)	(+2.0)
	Other	309	38.2	40.5	+2.3	6.8	4.4	-2.4

Notes: Additional information for this table can be found in Report Note 4 at the end of this report.

Table 3.1.7. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to White Students)		
			Fall		Spring		Change	Fall	Spring	Change
	White	26,598	149.1	*14.3*	162.5	*14.0*	+13.4			
	Black	5,005	148.8	*19.1*	158.2	*18.0*	+9.4	(0.3)	(4.3)	(+3.9)
K	Latino/a/x	2,736	146.1	*16.2*	158.0	*14.9*	+11.9	(3.0)	(4.5)	(+1.5)
	Asian	820	158.5	*18.7*	171.0	*18.2*	+12.5	9.4	8.5	-0.9
	Other	2,214	148.2	*15.1*	161.0	*14.9*	+12.9	(1.0)	(1.5)	(+0.5)
	White	29,312	164.3	*14.4*	179.1	*14.2*	+14.7			
	Black	6,754	161.9	*18.0*	169.4	*17.4*	+7.4	(2.4)	(9.7)	(+7.3)
1st	Latino/a/x	3,692	164.1	*18.1*	174.4	*16.3*	+10.3	(0.3)	(4.7)	(+4.4)
	Asian	1,141	175.7	*17.7*	189.1	*17.2*	+13.4	11.3	10.0	-1.3
	Other	2,600	163.5	*15.7*	176.1	*15.6*	+12.6	(0.9)	(3.0)	(+2.2)
	White	31,356	176.6	*13.7*	190.5	*13.5*	+13.9			
	Black	7,695	170.5	*15.6*	177.6	*15.6*	+7.0	(6.1)	(12.9)	(+6.8)
2nd	Latino/a/x	3,777	172.9	*14.7*	183.5	*14.5*	+10.5	(3.7)	(7.0)	(+3.3)
	Asian	1,340	187.6	*15.9*	198.4	*15.7*	+10.8	11.0	7.9	-3.1
	Other	2,871	175.1	*15.1*	187.1	*15.1*	+12.0	(1.5)	(3.4)	(+1.9)
	White	32,599	188.1	*13.1*	200.6	*13.8*	+12.5			
	Black	8,201	179.8	*14.2*	185.8	*15.1*	+5.9	(8.2)	(14.8)	(+6.6)
3rd	Latino/a/x	3,835	182.9	*13.7*	192.7	*15.0*	+9.8	(5.1)	(7.9)	(+2.7)
	Asian	1,446	200.0	*15.5*	209.4	*15.2*	+9.4	12.0	8.9	-3.1
	Other	2,781	185.7	*14.3*	196.1	*15.5*	+10.4	(2.3)	(4.5)	(+2.2)
	White	32,822	199.1	*13.1*	210.0	*14.9*	+10.9			
	Black	8,113	189.3	*14.0*	194.0	*15.3*	+4.6	(9.8)	(16.1)	(+6.3)
4th	Latino/a/x	3,700	194.0	*13.0*	202.7	*15.3*	+8.7	(5.1)	(7.4)	(+2.2)
	Asian	1,437	211.4	*16.8*	220.6	*17.6*	+9.2	12.3	10.6	-1.7
	Other	2,764	197.0	*14.4*	205.7	*16.5*	+8.6	(2.1)	(4.4)	(+2.3)
	White	33,269	208.4	*14.4*	217.3	*16.6*	+8.9			
	Black	8,545	197.3	*14.3*	200.7	*15.7*	+3.4	(11.1)	(16.6)	(+5.5)
5th	Latino/a/x	4,026	202.9	*14.1*	209.3	*16.3*	+6.4	(5.6)	(8.0)	(+2.4)
	Asian	1,456	222.2	*17.2*	230.6	*19.8*	+8.3	13.8	13.3	-0.6
	Other	2,898	205.3	*15.2*	212.4	*17.4*	+7.0	(3.1)	(4.9)	(+1.8)
	White	33,883	213.7	*14.3*	220.5	*16.1*	+6.8			
	Black	8,224	202.6	*14.1*	205.5	*15.8*	+2.9	(11.2)	(15.1)	(+3.9)
6th	Latino/a/x	4,038	207.6	*14.2*	212.8	*16.0*	+5.2	(6.1)	(7.8)	(+1.6)
	Asian	1,426	226.9	*17.8*	234.4	*18.9*	+7.6	13.1	13.9	+0.8
	Other	2,764	210.2	*15.1*	215.6	*17.2*	+5.4	(3.6)	(5.0)	(+1.4)
	White	34,637	220.5	*15.5*	225.9	*17.3*	+5.4			
	Black	7,933	208.8	*15.0*	211.2	*16.8*	+2.4	(11.7)	(14.7)	(+2.9)
7th	Latino/a/x	4,111	214.1	*15.4*	217.9	*17.2*	+3.8	(6.4)	(8.0)	(+1.6)
	Asian	1,573	236.0	*19.3*	242.2	*20.9*	+6.2	15.5	16.3	+0.8
	Other	2,683	217.1	*16.6*	221.4	*18.4*	+4.3	(3.4)	(4.5)	(+1.1)
	White	34,224	226.3	*16.7*	230.1	*18.4*	+3.8			
	Black	7,911	214.1	*16.3*	216.0	*17.9*	+1.9	(12.2)	(14.1)	(+1.9)
8th	Latino/a/x	4,032	220.0	*16.5*	222.3	*17.9*	+2.3	(6.3)	(7.9)	(+1.5)
	Asian	1,460	242.1	*19.7*	246.9	*21.9*	+4.8	15.8	16.7	+1.0
	Other	2,539	222.6	*17.8*	225.8	*19.6*	+3.2	(3.7)	(4.3)	(+0.6)

Notes: Additional information for this table can be found in Report Note 5 at the end of this report.

Table 3.1.8. Average Scale Scores on NWEA's MAP Growth Reading Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to White Students)		
			Fall		Spring		Change	Fall	Spring	Change
	White	25,266	145.5	*14.4*	157.9	*14.2*	+12.4			
	Black	4,738	147.6	*18.7*	155.2	*17.3*	+7.6	2.1	(2.7)	R
K	Latino/a/x	2,684	143.5	*15.2*	153.4	*14.4*	+9.8	(2.0)	(4.5)	(+2.6)
	Asian	779	152.3	*17.7*	164.5	*17.5*	+12.2	6.8	6.6	-0.3
	Other	2,106	145.4	*15.2*	156.8	*14.7*	+11.4	(0.1)	(1.1)	(+1.0)
	White	28,939	160.7	*15.2*	173.7	*14.8*	+13.0			
	Black	6,581	159.4	*18.5*	165.2	*17.5*	+5.8	(1.3)	(8.5)	(+7.2)
1st	Latino/a/x	3,535	160.0	*18.5*	169.5	*16.8*	+9.5	(0.6)	(4.2)	(+3.6)
	Asian	1,128	169.5	*16.3*	181.4	*15.9*	+11.9	8.9	7.7	-1.1
	Other	2,524	160.5	*17.0*	171.8	*15.8*	+11.3	(0.1)	(1.9)	(+1.8)
	White	29,968	174.8	*16.9*	187.1	*15.6*	+12.3			
	Black	7,443	169.4	*17.3*	175.4	*16.6*	+6.0	(5.4)	(11.7)	(+6.3)
2nd	Latino/a/x	3,480	170.0	*16.3*	180.0	*16.2*	+10.0	(4.8)	(7.1)	(+2.3)
	Asian	1,126	185.0	*17.5*	193.8	*16.0*	+8.8	10.3	6.7	-3.5
	Other	2,639	173.0	*17.4*	183.8	*16.8*	+10.8	(1.8)	(3.3)	(+1.5)
	White	31,963	189.8	*16.8*	198.7	*15.7*	+8.9			
	Black	8,047	181.2	*17.6*	185.3	*17.2*	+4.0	(8.6)	(13.4)	(+4.8)
3rd	Latino/a/x	3,790	183.6	*17.1*	191.0	*16.6*	+7.4	(6.3)	(7.7)	(+1.4)
	Asian	1,410	198.8	*15.6*	204.8	*15.0*	+6.0	9.0	6.1	-2.9
	Other	2,673	188.2	*17.7*	194.9	*17.2*	+6.7	(1.7)	(3.8)	(+2.1)
	White	32,433	200.0	*15.5*	206.0	*15.0*	+6.1			
	Black	8,131	190.0	*16.6*	192.8	*16.8*	+2.8	(10.0)	(13.2)	(+3.2)
4th	Latino/a/x	3,660	194.6	*15.6*	199.8	*15.6*	+5.2	(5.4)	(6.3)	(+0.9)
	Asian	1,397	206.9	*15.4*	211.9	*14.9*	+5.0	6.9	5.9	-1.0
	Other	2,671	198.0	*16.4*	203.2	*16.3*	+5.2	(1.9)	(2.8)	(+0.9)
	White	32,795	206.6	*15.1*	210.7	*15.2*	+4.1			
	Black	8,466	196.5	*16.1*	198.3	*16.6*	+1.8	(10.1)	(12.4)	(+2.3)
5th	Latino/a/x	3,953	201.1	*15.6*	204.6	*15.8*	+3.5	(5.5)	(6.1)	(+0.6)
	Asian	1,406	214.5	*14.4*	217.8	*15.5*	+3.3	7.9	7.2	-0.7
	Other	2,841	204.6	*15.4*	207.8	*15.5*	+3.2	(2.0)	(2.9)	(+0.9)
	White	33,714	212.5	*14.8*	215.0	*15.1*	+2.5			
	Black	8,012	202.6	*15.7*	203.6	*16.1*	+1.1	(10.0)	(11.4)	(+1.5)
6th	Latino/a/x	3,992	207.0	*15.2*	209.3	*15.4*	+2.3	(5.5)	(5.8)	(+0.3)
	Asian	1,427	219.6	*14.6*	222.4	*14.9*	+2.8	7.1	7.4	+0.3
	Other	2,721	209.8	*15.4*	211.8	*15.9*	+2.0	(2.7)	(3.2)	(+0.6)
	White	34,595	216.5	*15.2*	218.3	*15.5*	+1.8			
	Black	7,754	207.3	*15.9*	208.2	*16.6*	+0.9	(9.2)	(10.1)	(+1.0)
7th	Latino/a/x	4,100	211.0	*15.7*	213.0	*15.6*	+1.9	(5.5)	(5.4)	(-0.1)
	Asian	1,641	224.6	*15.4*	226.4	*15.7*	+1.8	8.1	8.1	-0.0
	Other	2,659	214.3	*16.0*	215.7	*16.3*	+1.4	(2.2)	(2.7)	(+0.4)
	White	35,268	220.0	*15.6*	220.8	*16.3*	+0.9			
	Black	7,704	211.3	*16.1*	211.5	*16.9*	+0.2	(8.7)	(9.4)	(+0.7)
8th	Latino/a/x	4,057	215.3	*15.7*	216.1	*16.5*	+0.8	(4.7)	(4.8)	(+0.1)
	Asian	1,731	229.0	*14.8*	230.4	*14.9*	+1.4	9.0	9.5	+0.5
	Other	2,576	217.7	*16.5*	218.1	*17.1*	+0.3	(2.2)	(2.8)	(+0.5)

Notes: Additional information for this table can be found in Report Note 5 at the end of this report.

Table 3.1.9. Average Scale Scores on Curriculum Associates' i-Ready Math Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to White Students)		
			Fall		Spring		Change	Fall	Spring	Change
	White	4,238	359.9	*31.8*	381.8	*28.4*	+22.0			
	Black	3,307	354.4	*40.1*	373.4	*38.7*	+19.0	(5.5)	(8.4)	(+2.9)
K	Latino/a/x	900	350.8	*36.4*	373.7	*34.9*	+22.9	(9.0)	(8.1)	(-0.9)
	Asian	691	372.3	*41.4*	395.9	*36.6*	+23.6	12.4	14.1	+1.7
	Other	446	356.1	*35.6*	376.3	*32.7*	+20.2	(3.8)	(5.5)	(+1.7)
	White	5,246	384.7	*29.5*	409.3	*28.8*	+24.6			
	Black	4,119	373.3	*35.5*	386.6	*36.9*	+13.3	(11.4)	(22.7)	(+11.3)
1st	Latino/a/x	1,078	374.0	*32.4*	395.3	*34.7*	+21.3	(10.7)	(14.0)	(+3.3)
	Asian	747	399.2	*37.4*	424.0	*32.4*	+24.9	14.4	14.7	+0.2
	Other	499	379.9	*33.3*	402.8	*32.4*	+22.9	(4.8)	(6.6)	(+1.7)
	White	5,284	406.0	*27.5*	429.4	*27.7*	+23.5			
	Black	4,375	388.3	*31.5*	399.3	*34.7*	+11.0	(17.7)	(30.2)	(+12.5)
2nd	Latino/a/x	1,138	391.9	*27.9*	408.9	*32.3*	+17.1	(14.1)	(20.5)	(+6.4)
	Asian	851	420.6	*33.5*	443.9	*34.5*	+23.3	14.6	14.5	-0.1
	Other	463	400.8	*30.3*	421.7	*30.7*	+20.9	(5.2)	(7.8)	(+2.6)
	White	5,481	427.2	*27.3*	450.2	*31.5*	+22.9			
	Black	4,137	404.5	*29.8*	415.5	*35.4*	+11.0	(22.7)	(34.7)	(+12.0)
3rd	Latino/a/x	1,172	414.4	*27.6*	432.0	*34.0*	+17.6	(12.8)	(18.1)	(+5.3)
	Asian	779	442.5	*30.7*	469.7	*31.7*	+27.2	15.3	19.6	+4.3
	Other	474	425.0	*28.3*	445.9	*33.2*	+20.9	(2.2)	(4.2)	(+2.0)
	White	5,649	446.3	*29.1*	469.0	*35.3*	+22.7			
	Black	4,267	420.7	*29.3*	430.1	*34.3*	+9.3	(25.6)	(39.0)	(+13.4)
4th	Latino/a/x	1,227	431.6	*29.9*	448.1	*35.6*	+16.5	(14.7)	(20.9)	(+6.2)
	Asian	762	467.4	*34.8*	491.7	*36.2*	+24.3	21.0	22.7	+1.7
	Other	431	439.4	*30.9*	457.7	*36.8*	+18.3	(6.9)	(11.4)	(+4.4)
	White	5,886	463.7	*30.4*	481.6	*35.4*	+17.9			
	Black	4,154	435.0	*29.1*	442.8	*35.7*	+7.8	(28.8)	(38.8)	(+10.1)
5th	Latino/a/x	1,186	447.6	*31.6*	459.9	*37.9*	+12.3	(16.1)	(21.7)	(+5.6)
	Asian	711	485.3	*37.3*	506.1	*38.5*	+20.8	21.6	24.5	+2.9
	Other	463	460.1	*32.8*	474.5	*37.3*	+14.4	(3.6)	(7.1)	(+3.5)
	White	5,177	478.5	*31.3*	490.6	*36.8*	+12.0			
	Black	3,559	447.0	*31.3*	454.7	*37.6*	+7.6	(31.5)	(35.9)	(+4.4)
6th	Latino/a/x	947	462.2	*32.9*	472.9	*38.2*	+10.8	(16.4)	(17.6)	(+1.3)
	Asian	634	508.8	*38.0*	525.1	*40.3*	+16.2	30.3	34.5	+4.2
	Other	349	473.2	*35.5*	481.8	*42.6*	+8.6	(5.3)	(8.7)	(+3.4)
	White	4,824	489.8	*33.4*	499.1	*38.4*	+9.3			
	Black	3,261	459.3	*33.0*	466.1	*40.2*	+6.9	(30.5)	(32.9)	(+2.4)
7th	Latino/a/x	915	473.4	*35.1*	484.5	*42.9*	+11.1	(16.4)	(14.6)	(-1.8)
	Asian	358	508.6	*42.2*	523.3	*44.8*	+14.6	18.9	24.2	+5.3
	Other	304	485.5	*34.5*	493.2	*40.8*	+7.7	(4.3)	(5.9)	(+1.7)
	White	4,728	500.3	*37.0*	506.0	*40.1*	+5.7			
	Black	3,347	468.3	*35.5*	475.2	*42.5*	+6.9	(32.0)	(30.7)	(-1.3)
8th	Latino/a/x	1,043	483.2	*36.8*	494.9	*44.5*	+11.6	(17.1)	(11.1)	(-6.0)
	Asian	335	511.5	*43.8*	525.5	*45.9*	+13.9	11.2	19.5	+8.3
	Other	245	489.9	*40.3*	499.7	*41.9*	+9.7	(10.4)	(6.3)	(-4.1)

Notes: Additional information for this table can be found in Report Note 5 at the end of this report.

Table 3.1.10. Average Scale Scores on Curriculum Associates' i-Ready Reading Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to White Students)		
			Fall		Spring		Change	Fall	Spring	Change
	White	4,348	374.9	*46.9*	407.6	*42.5*	+32.7			
	Black	3,323	375.5	*61.8*	398.0	*56.9*	+22.5	0.7	(9.6)	R
K	Latino/a/x	916	363.7	*50.7*	393.3	*48.1*	+29.6	(11.2)	(14.3)	(+3.2)
	Asian	688	388.6	*57.8*	431.6	*54.4*	+43.0	13.8	24.0	+10.2
	Other	440	375.6	*51.6*	401.3	*49.5*	+25.7	0.8	(6.3)	R
	White	5,156	419.2	*46.4*	456.2	*49.5*	+37.0			
	Black	4,158	401.6	*57.3*	421.0	*57.5*	+19.4	(17.6)	(35.2)	(+17.6)
1st	Latino/a/x	1,116	397.5	*49.9*	428.3	*54.7*	+30.8	(21.7)	(28.0)	(+6.3)
	Asian	750	441.6	*57.4*	480.9	*52.9*	+39.3	22.4	24.6	+2.2
	Other	484	413.8	*51.6*	447.7	*52.2*	+34.0	(5.4)	(8.5)	(+3.1)
	White	5,160	464.5	*52.4*	502.9	*52.6*	+38.4			
	Black	4,411	434.0	*58.2*	449.9	*61.9*	+15.9	(30.6)	(53.1)	(+22.5)
2nd	Latino/a/x	1,135	434.9	*52.3*	464.0	*56.7*	+29.1	(29.7)	(38.9)	(+9.2)
	Asian	853	485.4	*56.0*	520.8	*54.5*	+35.4	20.9	17.8	-3.0
	Other	464	458.7	*55.2*	494.1	*55.3*	+35.4	(5.8)	(8.8)	(+3.0)
	White	5,352	504.0	*53.3*	531.6	*54.6*	+27.6			
	Black	4,124	463.0	*57.7*	478.2	*64.2*	+15.1	(41.0)	(53.4)	(+12.5)
3rd	Latino/a/x	1,174	473.6	*55.5*	499.0	*59.1*	+25.5	(30.4)	(32.6)	(+2.2)
	Asian	777	519.6	*52.7*	549.5	*51.5*	+29.9	15.6	17.8	+2.2
	Other	455	501.8	*52.6*	526.2	*54.3*	+24.4	(2.2)	(5.4)	(+3.2)
	White	5,412	533.4	*54.0*	554.4	*56.5*	+21.0			
	Black	4,236	489.7	*56.6*	501.5	*61.4*	+11.8	(43.7)	(52.9)	(+9.2)
4th	Latino/a/x	1,222	502.0	*55.7*	521.6	*58.7*	+19.7	(31.4)	(32.7)	(+1.3)
	Asian	758	547.4	*56.4*	571.4	*55.7*	+24.0	14.0	17.0	+3.0
	Other	422	523.6	*54.1*	543.2	*58.5*	+19.6	(9.8)	(11.2)	(+1.4)
	White	5,454	556.8	*52.9*	573.2	*55.8*	+16.4			
	Black	4,120	511.0	*55.8*	521.4	*61.9*	+10.4	(45.7)	(51.8)	(+6.0)
5th	Latino/a/x	1,189	526.9	*56.6*	541.8	*61.8*	+14.9	(29.8)	(31.4)	(+1.5)
	Asian	716	568.9	*59.0*	589.9	*58.6*	+21.0	12.1	16.7	+4.6
	Other	437	551.2	*55.1*	565.4	*60.0*	+14.3	(5.6)	(7.7)	(+2.1)
	White	4,732	575.6	*53.1*	585.3	*56.5*	+9.7			
	Black	3,436	529.6	*58.8*	535.9	*64.5*	+6.3	(46.0)	(49.4)	(+3.4)
6th	Latino/a/x	904	549.6	*57.7*	557.0	*64.7*	+7.4	(26.0)	(28.3)	(+2.3)
	Asian	637	593.8	*60.5*	608.5	*58.5*	+14.7	18.1	23.2	+5.0
	Other	321	563.3	*60.9*	572.0	*67.4*	+8.7	(12.3)	(13.3)	(+1.0)
	White	4,379	588.7	*55.8*	596.0	*58.0*	+7.2			
	Black	3,107	545.5	*58.8*	552.0	*65.2*	+6.6	(43.3)	(44.0)	(+0.7)
7th	Latino/a/x	876	560.1	*62.7*	573.1	*65.8*	+13.1	(28.7)	(22.9)	(-5.8)
	Asian	357	598.5	*63.5*	609.7	*62.1*	+11.2	9.7	13.7	+4.0
	Other	280	585.4	*56.2*	592.0	*63.9*	+6.7	(3.4)	(4.0)	(+0.6)
	White	4,617	600.9	*55.6*	607.2	*57.9*	+6.4			
	Black	3,303	559.0	*60.6*	565.2	*66.3*	+6.2	(41.8)	(42.0)	(+0.2)
8th	Latino/a/x	1,023	575.2	*61.2*	587.4	*65.2*	+12.2	(25.7)	(19.8)	(-5.9)
	Asian	361	599.3	*70.7*	614.0	*70.0*	+14.8	(1.6)	6.8	R
	Other	247	589.3	*63.9*	594.1	*67.7*	+4.8	(11.6)	(13.1)	(+1.5)

Notes: Additional information for this table can be found in Report Note 5 at the end of this report.

Table 3.1.11. Average Scale Scores on Renaissance Learning's Star Math Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to White Students)		
			Fall		Spring		Change	Fall	Spring	Change
	White	3,249	300.8	*91.6*	419.0	*91.3*	+118.2			
	Black	219	290.3	*107.1*	390.8	*92.7*	+100.5	(10.6)	(28.2)	(+17.7)
1st	Latino/a/x	310	303.9	*101.5*	412.2	*98.2*	+108.3	3.1	(6.8)	R
	Asian	68	352.8	*119.9*	442.2	*119.7*	+89.4	52.0	23.2	-28.8
	Other	246	301.4	*98.9*	412.2	*88.8*	+110.8	0.6	(6.8)	R
	White	4,041	409.1	*94.1*	524.5	*90.3*	+115.4			
	Black	285	390.9	*111.9*	475.5	*99.4*	+84.6	(18.2)	(49.0)	(+30.8)
2nd	Latino/a/x	387	403.1	*93.4*	502.1	*99.6*	+99.0	(6.0)	(22.4)	(+16.4)
	Asian	88	441.3	*101.7*	548.0	*102.1*	+106.6	32.2	23.4	-8.8
	Other	351	401.1	*99.8*	500.4	*93.4*	+99.3	(8.0)	(24.1)	(+16.1)
	White	4,266	509.8	*86.5*	599.1	*94.4*	+89.3			
	Black	259	464.0	*96.1*	529.9	*107.3*	+65.9	(45.9)	(69.3)	(+23.4)
3rd	Latino/a/x	403	488.8	*87.1*	563.8	*102.6*	+75.0	(21.1)	(35.4)	(+14.3)
	Asian	93	538.2	*114.2*	615.5	*116.8*	+77.3	28.3	16.3	-12.0
	Other	357	495.6	*99.9*	570.0	*101.2*	+74.5	(14.3)	(29.1)	(+14.8)
	White	4,277	587.6	*89.5*	668.3	*99.2*	+80.8			
	Black	335	550.9	*93.3*	602.9	*109.5*	+52.0	(36.7)	(65.5)	(+28.8)
4th	Latino/a/x	404	573.2	*96.5*	638.2	*101.7*	+65.0	(14.4)	(30.1)	(+15.7)
	Asian	72	605.9	*98.2*	688.5	*89.6*	+82.6	18.4	20.2	+1.8
	Other	345	575.9	*96.9*	643.6	*104.5*	+67.7	(11.7)	(24.7)	(+13.0)
	White	4,328	651.3	*96.5*	721.1	*111.5*	+69.8			
	Black	354	596.4	*98.2*	642.4	*102.4*	+46.0	(54.9)	(78.7)	(+23.8)
5th	Latino/a/x	461	618.1	*95.7*	682.6	*101.7*	+64.5	(33.2)	(38.5)	(+5.3)
	Asian	93	679.8	*107.9*	753.2	*111.7*	+73.3	28.5	32.1	+3.5
	Other	336	624.0	*103.8*	688.1	*120.6*	+64.1	(27.3)	(33.0)	(+5.7)
	White	3,980	703.0	*98.8*	736.9	*110.6*	+33.9			
	Black	341	651.3	*105.9*	675.3	*124.4*	+24.0	(51.7)	(61.6)	(+9.9)
6th	Latino/a/x	431	682.6	*99.6*	705.4	*114.8*	+22.8	(20.4)	(31.5)	(+11.1)
	Asian	94	756.0	*85.2*	784.4	*88.2*	+28.4	53.0	47.5	-5.5
	Other	349	683.2	*101.5*	707.8	*117.2*	+24.6	(19.7)	(29.1)	(+9.3)
	White	4,056	738.0	*104.6*	772.5	*113.6*	+34.4			
	Black	354	687.8	*110.5*	717.0	*124.0*	+29.2	(50.3)	(55.5)	(+5.2)
7th	Latino/a/x	413	712.2	*105.0*	733.9	*114.4*	+21.7	(25.8)	(38.6)	(+12.8)
	Asian	90	795.3	*98.3*	843.2	*114.9*	+47.9	57.2	70.7	+13.5
	Other	322	705.1	*116.6*	734.7	*118.6*	+29.6	(32.9)	(37.7)	(+4.8)
	White	4,163	769.8	*105.9*	786.7	*116.6*	+16.9			
	Black	281	721.0	*114.0*	743.1	*114.7*	+22.1	(48.8)	(43.5)	(-5.2)
8th	Latino/a/x	388	737.7	*113.4*	754.4	*119.5*	+16.7	(32.1)	(32.3)	(+0.2)
	Asian	71	819.7	*72.2*	840.0	*79.6*	+20.3	49.9	53.3	+3.4
	Other	265	741.6	*108.2*	769.1	*107.3*	+27.5	(28.2)	(17.5)	(-10.6)

Notes: Additional information for this table can be found in Report Note 5 at the end of this report.

Table 3.1.12. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by Race/Ethnicity

Grade	Race/ Ethnicity	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to White Students)		
			Fall		Spring		Change	Fall	Spring	Change
Star Literacy										
K	White	3,435	547.4	*114.5*	694.8	*106.4*	+147.4			
	Black	252	528.5	*127.4*	652.8	*132.2*	+124.4	(18.9)	(41.9)	(+23.0)
	Latino/a/x	392	507.5	*119.0*	653.7	*121.1*	+146.2	(39.9)	(41.1)	(+1.2)
	Asian	72	565.0	*135.7*	716.9	*107.3*	+151.8	17.6	22.1	+4.5
	Other	254	552.0	*122.6*	688.9	*114.9*	+136.9	4.6	(5.8)	R
1st	White	2,404	630.6	*114.5*	756.9	*90.0*	+126.3			
	Black	198	602.9	*126.5*	728.7	*104.9*	+125.8	(27.7)	(28.2)	(+0.5)
	Latino/a/x	268	600.0	*114.0*	721.7	*105.3*	+121.7	(30.6)	(35.2)	(+4.6)
	Asian	50	664.8	*126.4*	755.7	*108.0*	+90.9	34.2	(1.2)	R
	Other	239	634.6	*126.0*	754.2	*101.0*	+119.6	4.0	(2.7)	R
Star Reading										
2nd	White	4,036	219.8	*157.3*	357.5	*167.1*	+137.7			
	Black	275	230.9	*179.4*	323.4	*163.9*	+92.5	11.1	(34.1)	R
	Latino/a/x	429	203.0	*154.2*	307.2	*151.2*	+104.2	(16.8)	(50.3)	(+33.5)
	Asian	85	265.6	*129.2*	383.7	*154.0*	+118.1	45.7	26.1	-19.6
	Other	356	215.5	*157.1*	328.8	*174.6*	+113.3	(4.3)	(28.7)	(+24.4)
3rd	White	4,605	343.9	*163.4*	469.4	*179.5*	+125.5			
	Black	271	289.1	*153.9*	366.9	*168.3*	+77.8	(54.8)	(102.4)	(+47.6)
	Latino/a/x	465	299.9	*172.5*	392.5	*183.4*	+92.6	(44.0)	(76.9)	(+32.8)
	Asian	91	354.5	*144.1*	479.4	*187.0*	+124.9	10.6	10.1	-0.6
	Other	383	315.5	*162.7*	422.9	*192.4*	+107.3	(28.4)	(46.5)	(+18.1)
4th	White	4,718	465.1	*180.4*	571.4	*207.8*	+106.4			
	Black	345	409.9	*169.9*	472.5	*187.5*	+62.6	(55.2)	(99.0)	(+43.8)
	Latino/a/x	461	408.9	*188.6*	498.8	*204.7*	+89.9	(56.2)	(72.6)	(+16.5)
	Asian	73	478.7	*158.4*	569.9	*165.8*	+91.2	13.7	(1.5)	R
	Other	382	454.9	*193.1*	543.8	*203.7*	+89.0	(10.2)	(27.6)	(+17.4)
5th	White	4,640	566.0	*208.5*	656.8	*232.2*	+90.8			
	Black	365	468.8	*177.8*	541.1	*208.3*	+72.3	(97.1)	(115.7)	(+18.5)
	Latino/a/x	534	487.7	*198.6*	559.0	*227.9*	+71.3	(78.2)	(97.8)	(+19.5)
	Asian	95	562.7	*216.6*	655.3	*212.5*	+92.5	(3.2)	(1.5)	(-1.7)
	Other	355	540.3	*227.0*	626.7	*246.6*	+86.3	(25.6)	(30.1)	(+4.5)
6th	White	4,220	654.3	*237.7*	712.0	*259.3*	+57.7			
	Black	338	529.9	*207.3*	583.7	*231.7*	+53.8	(124.5)	(128.3)	(+3.8)
	Latino/a/x	483	584.1	*235.0*	631.3	*259.8*	+47.2	(70.2)	(80.7)	(+10.5)
	Asian	98	697.2	*238.1*	769.1	*216.5*	+71.9	42.9	57.1	+14.2
	Other	364	627.1	*232.5*	660.9	*240.4*	+33.8	(27.2)	(51.1)	(+23.8)
7th	White	4,398	745.1	*261.6*	788.8	*275.6*	+43.7			
	Black	397	623.8	*239.8*	654.4	*263.1*	+30.6	(121.4)	(134.4)	(+13.1)
	Latino/a/x	469	665.5	*256.4*	708.5	*266.7*	+43.0	(79.7)	(80.3)	(+0.6)
	Asian	100	773.9	*277.1*	821.8	*272.9*	+47.8	28.8	32.9	+4.1
	Other	366	685.1	*251.2*	725.6	*268.4*	+40.6	(60.1)	(63.2)	(+3.1)
8th	White	4,583	826.4	*278.9*	848.0	*294.1*	+21.6			
	Black	325	698.0	*257.7*	736.6	*274.8*	+38.6	(128.4)	(111.4)	(-17.0)
	Latino/a/x	473	740.4	*268.4*	766.2	*286.4*	+25.8	(86.0)	(81.8)	(-4.1)
	Asian	75	875.7	*240.7*	917.2	*256.3*	+41.5	49.3	69.2	+19.9

	Other	309	780.2	*264.7*	807.1	*287.7*	+26.9	(46.1)	(40.9)	(-5.2)

Notes: Additional information for this table can be found in Report Note 5 at the end of this report.

Table 3.1.13. Average Scale Scores on Renaissance Learning's Star Math Assessment by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
1st	Female	2,049	295.2	*90.2*	411.2	*85.3*	+116.0			
	Male	2,043	307.7	*98.1*	422.7	*99.3*	+115.0	12.5	11.5	-1.0
2nd	Female	2,550	403.9	*90.7*	510.3	*90.7*	+106.4			
	Male	2,602	411.4	*100.9*	527.3	*94.6*	+115.9	7.5	16.9	+9.4
3rd	Female	2,617	497.2	*85.0*	582.2	*93.0*	+84.9			
	Male	2,761	513.5	*92.8*	600.3	*102.5*	+86.8	16.3	18.2	+1.9
4th	Female	2,619	576.3	*86.0*	653.2	*96.2*	+76.9			
	Male	2,814	590.7	*95.9*	667.8	*106.5*	+77.2	14.4	14.6	+0.3
5th	Female	2,734	635.0	*93.1*	700.1	*107.5*	+65.0			
	Male	2,838	652.5	*103.5*	722.4	*117.4*	+70.0	17.4	22.4	+4.9
6th	Female	2,505	693.6	*96.6*	726.0	*109.9*	+32.4			
	Male	2,690	701.2	*104.2*	732.0	*116.9*	+30.8	7.5	5.9	-1.6
7th	Female	2,533	731.0	*102.0*	764.8	*109.9*	+33.8			
	Male	2,703	732.0	*112.2*	764.2	*122.9*	+32.2	1.0	(0.6)	R
8th	Female	2,572	762.9	*103.4*	782.7	*111.4*	+19.8			
	Male	2,597	765.0	*112.2*	780.7	*122.1*	+15.7	2.1	(2.0)	R

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.1.14. Average Scale Scores on Renaissance Learning's Star Reading and Literacy Assessments by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
Star Literacy										
K	Female	2,162	545.7	*115.0*	691.8	*108.2*	+146.1			
	Male	2,243	541.1	*119.2*	685.8	*113.6*	+144.7	(4.6)	(6.0)	(+1.4)
1st	Female	1,564	632.1	*114.7*	755.4	*90.6*	+123.2			
	Male	1,595	622.3	*118.6*	748.6	*97.5*	+126.3	(9.8)	(6.8)	(-3.0)
Star Reading										
2nd	Female	2,555	226.7	*159.8*	358.0	*166.3*	+131.3			
	Male	2,626	212.5	*156.1*	342.2	*167.7*	+129.8	(14.2)	(15.7)	(+1.5)
3rd	Female	2,825	340.8	*161.1*	459.8	*176.0*	+119.1			
	Male	2,990	331.8	*167.1*	451.5	*189.1*	+119.7	(9.0)	(8.3)	(-0.7)
4th	Female	2,890	464.1	*177.7*	561.9	*204.2*	+97.8			
	Male	3,089	450.5	*185.9*	555.0	*211.2*	+104.5	(13.6)	(7.0)	(-6.6)
5th	Female	2,944	555.3	*200.4*	641.4	*224.4*	+86.0			
	Male	3,045	547.8	*217.8*	637.1	*243.3*	+89.3	(7.5)	(4.3)	(-3.3)
6th	Female	2,652	644.5	*227.9*	706.4	*249.5*	+61.9			
	Male	2,851	634.8	*247.9*	683.8	*266.6*	+49.0	(9.7)	(22.6)	(+12.9)
7th	Female	2,786	746.0	*253.4*	786.2	*267.2*	+40.2			
	Male	2,945	708.7	*269.5*	753.5	*284.8*	+44.8	(37.3)	(32.6)	(-4.7)
8th	Female	2,838	826.2	*266.7*	856.1	*279.4*	+29.9			
	Male	2,928	794.8	*289.0*	812.1	*306.3*	+17.3	(31.3)	(44.0)	(+12.6)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.1.15. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 Math Assessments by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Female	791	492.2	*26.8*	541.1	*34.6*	+48.9			
	Male	798	494.5	*30.6*	542.7	*35.6*	+48.2	2.3	1.6	-0.7
1st	Female	517	490.7	*25.8*	531.7	*32.8*	+41.0			
	Male	566	496.7	*27.8*	536.6	*33.0*	+40.0	6.0	5.0	-1.0
2nd	Female	506	492.3	*28.0*	539.6	*28.8*	+47.3			
	Male	555	496.3	*33.5*	540.2	*31.6*	+43.9	4.0	0.6	-3.4
Smarter Balanced ICA										
3rd	Female	252	2350.8	*65.3*	2411.9	*76.0*	+61.1			
	Male	298	2355.9	*66.7*	2411.5	*68.8*	+55.6	5.2	(0.4)	R
4th	Female	261	2402.4	*72.2*	2456.6	*77.2*	+54.3			
	Male	302	2406.3	*75.9*	2465.6	*78.0*	+59.3	3.9	9.0	+5.1
5th	Female	267	2477.2	*72.1*	2514.3	*86.4*	+37.1			
	Male	295	2481.1	*79.2*	2521.5	*91.8*	+40.4	3.9	7.2	+3.3
6th	Female	286	2474.5	*69.3*	2526.6	*84.3*	+52.0			
	Male	300	2488.2	*74.5*	2525.6	*94.0*	+37.5	13.6	(0.9)	R
7th	Female	280	2515.0	*87.3*	2544.8	*108.5*	+29.8			
	Male	319	2524.4	*93.6*	2549.8	*104.6*	+25.4	9.4	5.0	-4.4
8th	Female	287	2517.4	*88.1*	2547.0	*112.4*	+29.6			
	Male	273	2507.5	*90.1*	2538.5	*113.2*	+31.0	(9.9)	(8.5)	(-1.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.1.16. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 ELA Assessments by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Female	593	494.3	*24.6*	534.4	*27.4*	+40.1			
	Male	591	492.6	*26.0*	531.1	*28.9*	+38.5	(1.7)	(3.3)	(+1.6)
1st	Female	454	501.8	*27.1*	538.2	*28.4*	+36.4			
	Male	493	499.5	*29.5*	533.5	*27.6*	+34.1	(2.3)	(4.7)	(+2.3)
2nd	Female	436	495.6	*29.0*	526.3	*29.7*	+30.8			
	Male	469	491.6	*29.0*	520.2	*28.8*	+28.5	(3.9)	(6.2)	(+2.2)
Smarter Balanced ICA										
3rd	Female	233	2375.3	*80.1*	2427.5	*82.5*	+52.1			
	Male	269	2364.6	*77.2*	2409.6	*83.5*	+44.9	(10.7)	(17.9)	(+7.2)
4th	Female	235	2438.3	*73.3*	2476.3	*84.2*	+38.0			
	Male	268	2412.6	*74.5*	2442.1	*90.8*	+29.5	(25.7)	(34.2)	(+8.5)
5th	Female	249	2506.7	*81.9*	2540.0	*91.6*	+33.3			
	Male	262	2489.5	*89.5*	2525.2	*92.4*	+35.7	(17.2)	(14.8)	(-2.4)
6th	Female	288	2554.1	*87.9*	2590.4	*85.3*	+36.2			
	Male	309	2528.7	*90.8*	2557.1	*102.5*	+28.4	(25.5)	(33.3)	(+7.8)
7th	Female	278	2574.8	*90.7*	2604.7	*107.2*	+29.9			
	Male	300	2542.1	*87.2*	2566.4	*103.7*	+24.3	(32.8)	(38.3)	(+5.6)
8th	Female	267	2599.7	*95.6*	2610.3	*112.8*	+10.5			
	Male	266	2562.1	*91.9*	2569.8	*104.9*	+7.7	(37.7)	(40.5)	(+2.8)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Gender

Table 3.2.1 through Table 3.2.16 summarize differences in benchmark assessment outcomes by gender. For these tables, we report outcomes separately for female students and male students and calculate outcome gaps using female students as the reference category.

Among districts that offered the MAP Growth assessments (Table 3.2.1 and Table 3.2.2), male students typically performed better in mathematics (except in K-1) while female students fared better in reading. A higher percentage of female students in 2nd-7th grade both started and ended the school year "significantly behind grade level" on the NWEA MAP Growth Mathematics assessment (approximately 25-40% and 35-50% in the fall and spring, respectively). Conversely, a greater percentage of male students across the same levels started and ended the school year "significantly behind grade level" in reading (approximately 30-33% and 35-40% in the fall and spring, respectively). The male-female student achievement gaps in mathematics became larger over the course of the year, while the male-female student reading achievement gap became smaller. The main exception is in middle school reading, where the male-female achievement gap grew over the year.

For Curriculum Associates i-Ready, Renaissance Learning Star 360, and Smarter Balanced ICA and K-2 districts (Table 3.2.3 through Table 3.2.8), the gender-subject relationships seen in NWEA MAP Growth districts were less pronounced. In general, more female students began the school year "significantly behind grade level" in mathematics, but the proportion of female students who were "significantly behind grade level" decreased over the year, effectively shrinking the gender achievement gaps by spring. Across assessment providers, consistently more male students scored "significantly behind grade level" in reading in the beginning of the year. In i-Ready districts, the proportion of female students "significantly behind grade level" decreased over the year, increasing the achievement gaps such that female students were even less likely than male students to be "significantly behind grade level" by the end of the year. There was no consistent pattern in gap changes in Renaissance Learning Star 360 or DRC Smarter Balanced ICA districts.

Table 3.2.9 through Table 3.2.16 show average scale scores by gender. Male students in NWEA MAP growth districts both began and ended the year with slightly higher average scores in mathematics (all grade levels except grade eight), while female students began and ended the year with higher average scores in reading across all grade levels. Similarly, for districts offering assessments from one of the other assessment providers, male students in K-6 grade levels typically ended the year with

higher scores in mathematics, and female students across all grade levels ended the year with higher scores in reading.

Overall, the male-female average scale score gaps for all assessment providers were relatively small, as were the changes in these gaps over time in most grades and subjects, relative to the standard deviations associated with female students (the reference group) for each grade level.

Table 3.2.1. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Mathematics Assessment by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Female	18,203	9.7	20.4	+10.7			
	Male	19,170	12.0	21.0	+9.0	2.3	0.6	-1.6
1st	Female	21,330	22.0	27.3	+5.3			
	Male	22,169	23.0	26.4	+3.5	1.0	(0.9)	R
2nd	Female	23,177	27.0	35.1	+8.1			
	Male	23,862	26.2	31.4	+5.2	(0.8)	(3.8)	(+2.9)
3rd	Female	23,753	36.4	40.6	+4.2			
	Male	25,109	33.1	36.1	+3.0	(3.3)	(4.5)	(+1.2)
4th	Female	23,811	27.3	34.2	+6.8			
	Male	25,025	25.7	30.6	+4.9	(1.7)	(3.6)	(+1.9)
5th	Female	24,603	38.7	48.0	+9.3			
	Male	25,591	36.4	43.8	+7.4	(2.3)	(4.2)	(+1.9)
6th	Female	24,927	34.8	41.6	+6.8			
	Male	25,408	33.1	39.5	+6.4	(1.7)	(2.1)	(+0.4)
7th	Female	25,204	35.1	41.0	+5.9			
	Male	25,733	35.3	39.7	+4.4	0.1	(1.3)	R
8th	Female	24,572	25.6	33.6	+8.0			
	Male	25,594	27.7	34.6	+6.9	2.1	1.0	-1.1

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.2. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Reading Assessment by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Female	17,327	5.6	21.1	+15.5			
	Male	18,246	8.0	25.5	+17.4	2.5	4.4	+1.9
1st	Female	20,961	20.4	27.1	+6.7			
	Male	21,746	25.2	31.1	+5.8	4.8	4.0	-0.8
2nd	Female	22,043	28.0	30.8	+2.8			
	Male	22,613	33.1	35.1	+2.0	5.2	4.3	-0.8
3rd	Female	23,257	26.2	31.7	+5.5			
	Male	24,626	31.1	36.8	+5.7	4.9	5.1	+0.2
4th	Female	23,522	25.4	33.6	+8.2			
	Male	24,770	31.7	38.5	+6.8	6.3	4.9	-1.4
5th	Female	24,230	25.7	33.6	+8.0			
	Male	25,231	32.3	39.5	+7.1	6.7	5.8	-0.8
6th	Female	24,672	24.0	31.3	+7.3			
	Male	25,194	30.0	38.3	+8.3	6.0	7.0	+1.0
7th	Female	25,061	22.6	28.9	+6.3			
	Male	25,688	30.1	37.7	+7.6	7.4	8.7	+1.3
8th	Female	25,072	17.5	24.8	+7.3			
	Male	26,264	25.6	34.8	+9.1	8.1	9.9	+1.8

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.3. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Math Assessment by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Female	4,683	59.4	30.1	-29.3			
	Male	4,899	58.4	31.4	-27.0	(1.0)	1.3	R
1st	Female	5,741	13.7	6.3	-7.4			
	Male	5,948	15.3	6.9	-8.4	1.6	0.6	-1.1
2nd	Female	5,902	32.5	18.3	-14.1			
	Male	6,209	33.6	19.3	-14.3	1.1	1.0	-0.1
3rd	Female	5,853	39.8	24.0	-15.7			
	Male	6,190	39.5	24.7	-14.8	(0.2)	0.7	R
4th	Female	6,058	43.7	29.4	-14.3			
	Male	6,278	41.0	29.3	-11.8	(2.6)	(0.1)	(-2.5)
5th	Female	6,136	41.3	31.0	-10.3			
	Male	6,264	41.5	33.0	-8.5	0.2	2.0	+1.8
6th	Female	5,125	44.9	34.3	-10.6			
	Male	5,541	45.6	38.2	-7.4	0.7	3.9	+3.2
7th	Female	4,784	45.7	38.1	-7.5			
	Male	4,878	48.8	42.1	-6.7	3.1	3.9	+0.8
8th	Female	4,817	47.2	41.5	-5.8			
	Male	4,881	54.2	48.5	-5.7	6.9	7.1	+0.1

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.4. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Reading Assessment by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Female	4,764	48.3	17.2	-31.1			
	Male	4,951	49.4	20.8	-28.6	1.1	3.6	+2.4
1st	Female	5,734	7.7	3.1	-4.6			
	Male	5,930	9.3	4.1	-5.1	1.6	1.1	-0.5
2nd	Female	5,884	31.2	17.6	-13.5			
	Male	6,139	33.3	20.5	-12.8	2.1	2.8	+0.7
3rd	Female	5,767	35.4	24.6	-10.8			
	Male	6,115	43.0	30.3	-12.8	7.6	5.7	-2.0
4th	Female	5,931	32.4	24.0	-8.3			
	Male	6,119	37.0	28.9	-8.2	4.7	4.9	+0.2
5th	Female	5,906	45.0	35.4	-9.6			
	Male	6,010	50.9	41.9	-9.0	5.9	6.5	+0.6
6th	Female	4,818	46.1	39.3	-6.8			
	Male	5,212	53.2	48.1	-5.1	7.1	8.8	+1.7
7th	Female	4,439	46.8	40.8	-6.1			
	Male	4,560	56.0	50.2	-5.8	9.2	9.4	+0.2
8th	Female	4,740	45.5	38.2	-7.3			
	Male	4,811	55.9	51.2	-4.6	10.3	13.1	+2.7

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.5. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Math Assessment by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
1st	Female	2,049	15.7	10.6	-5.1			
	Male	2,043	15.3	12.4	-2.9	(0.4)	1.8	R
2nd	Female	2,550	28.7	18.4	-10.4			
	Male	2,602	27.7	15.6	-12.2	(1.0)	(2.8)	(+1.8)
3rd	Female	2,617	22.7	22.4	-0.3			
	Male	2,761	20.6	19.2	-1.4	(2.1)	(3.1)	(+1.0)
4th	Female	2,619	25.2	21.3	-3.9			
	Male	2,814	21.8	18.9	-2.9	(3.4)	(2.4)	(-1.0)
5th	Female	2,734	27.4	25.0	-2.4			
	Male	2,838	24.0	21.4	-2.6	(3.4)	(3.6)	(+0.2)
6th	Female	2,505	31.2	31.9	+0.7			
	Male	2,690	27.1	30.2	+3.1	(4.1)	(1.7)	(-2.4)
7th	Female	2,533	28.8	26.0	-2.8			
	Male	2,703	29.6	28.0	-1.7	0.8	2.0	+1.1
8th	Female	2,572	26.9	28.5	+1.6			
	Male	2,597	26.3	27.3	+1.0	(0.6)	(1.2)	(+0.6)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.6. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Reading and Literacy Assessments by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
Star Literacy								
K	Female	2,171	22.1	15.8	-6.3			
	Male	2,256	25.1	18.4	-6.7	3.0	2.5	-0.5
1st	Female	2,251	27.6	15.4	-12.2			
	Male	2,313	31.4	19.1	-12.3	3.8	3.7	-0.1
Star Reading								
2nd	Female	2,724	32.7	19.9	-12.8			
	Male	2,814	36.5	24.3	-12.3	3.8	4.3	+0.5
3rd	Female	2,841	29.0	19.8	-9.2			
	Male	3,023	33.1	24.5	-8.6	4.1	4.7	+0.6
4th	Female	2,894	24.2	20.5	-3.7			
	Male	3,098	28.2	21.2	-7.0	4.0	0.6	-3.3
5th	Female	2,947	27.5	26.3	-1.2			
	Male	3,054	30.5	27.9	-2.6	3.0	1.6	-1.4
6th	Female	2,659	32.0	31.7	-0.2			
	Male	2,856	36.1	37.1	+1.0	4.1	5.3	+1.2
7th	Female	2,788	29.0	30.2	+1.2			
	Male	2,954	36.0	36.6	+0.6	7.0	6.4	-0.6
8th	Female	2,839	30.3	35.0	+4.7			
	Male	2,930	37.4	41.1	+3.8	7.0	6.1	-1.0

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.7. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA & MDE's K-2 Math Assessments by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments								
K	Female	791	3.3	0.0	-3.3			
	Male	798	3.9	0.0	-3.9	0.6	0.0	-0.6
1st	Female	517	1.2	0.0	-1.2			
	Male	566	0.9	0.2	-0.7	(0.3)	0.2	R
2nd	Female	506	2.6	0.2	-2.4			
	Male	555	3.1	0.2	-2.9	0.5	(0.0)	R
Smarter Balanced ICA								
3rd	Female	252	63.5	28.6	-34.9			
	Male	298	63.1	30.5	-32.6	(0.4)	2.0	R
4th	Female	261	51.0	23.4	-27.6			
	Male	302	44.7	21.9	-22.8	(6.3)	(1.5)	(-4.7)
5th	Female	267	36.0	16.9	-19.1			
	Male	295	33.2	20.7	-12.5	(2.7)	3.8	R
6th	Female	286	46.9	21.7	-25.2			
	Male	300	39.3	23.0	-16.3	(7.5)	1.3	R
7th	Female	280	31.8	25.4	-6.4			
	Male	319	30.7	24.8	-6.0	(1.1)	(0.6)	(-0.5)
8th	Female	287	41.1	36.6	-4.5			
	Male	273	48.0	37.0	-11.0	6.9	0.4	-6.5

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.8. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA & MDE's K-2 ELA Assessments by Gender

Grade	Gender	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Female Students)		
			Fall	Spring	Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments								
K	Female	593	0.7	0.0	-0.7			
	Male	591	1.7	0.0	-1.7	1.0	0.0	-1.0
1st	Female	454	0.2	0.0	-0.2			
	Male	493	1.2	0.0	-1.2	1.0	0.0	-1.0
2nd	Female	436	0.5	0.0	-0.5			
	Male	469	0.9	0.0	-0.9	0.4	0.0	-0.4
Smarter Balanced ICA								
3rd	Female	233	46.4	24.0	-22.3			
	Male	269	52.4	30.1	-22.3	6.1	6.1	+0.0
4th	Female	235	39.6	20.0	-19.6			
	Male	268	50.7	38.1	-12.7	11.2	18.1	+6.9
5th	Female	249	18.5	12.9	-5.6			
	Male	262	29.0	14.9	-14.1	10.5	2.0	-8.5
6th	Female	288	12.5	6.9	-5.6			
	Male	309	21.4	15.2	-6.1	8.9	8.3	-0.6
7th	Female	278	15.1	9.7	-5.4			
	Male	300	22.3	18.0	-4.3	7.2	8.3	+1.1
8th	Female	267	11.6	13.9	2.2			
	Male	266	19.2	21.4	2.3	7.6	7.6	+0.0

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.9. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Female	18,203	148.9	*14.8*	161.3	*14.1*	+12.4			
	Male	19,170	149.1	*15.9*	162.1	*15.7*	+13.0	0.3	0.8	+0.5
1st	Female	21,330	163.8	*14.8*	176.5	*14.7*	+12.7			
	Male	22,169	164.6	*16.4*	178.0	*16.4*	+13.4	0.7	1.5	+0.7
2nd	Female	23,177	175.0	*13.8*	187.1	*14.4*	+12.1			
	Male	23,862	176.1	*15.2*	188.6	*15.6*	+12.5	1.1	1.5	+0.4
3rd	Female	23,753	185.8	*13.3*	196.6	*14.7*	+10.8			
	Male	25,109	187.1	*14.6*	198.3	*16.1*	+11.2	1.3	1.7	+0.4
4th	Female	23,811	196.6	*13.2*	205.8	*15.6*	+9.3			
	Male	25,025	198.1	*14.9*	207.9	*17.3*	+9.7	1.5	2.0	+0.5
5th	Female	24,603	205.6	*14.3*	213.1	*17.0*	+7.4			
	Male	25,591	206.9	*16.2*	214.7	*18.8*	+7.8	1.3	1.6	+0.4
6th	Female	24,927	211.2	*14.3*	217.1	*16.5*	+5.9			
	Male	25,408	212.0	*16.0*	218.1	*18.2*	+6.0	0.8	1.0	+0.1
7th	Female	25,204	218.3	*15.6*	222.9	*17.7*	+4.6			
	Male	25,733	218.5	*17.3*	223.5	*19.3*	+4.9	0.2	0.5	+0.3
8th	Female	24,572	224.4	*16.8*	227.6	*18.5*	+3.2			
	Male	25,594	223.9	*18.4*	227.5	*20.3*	+3.6	(0.5)	(0.1)	(-0.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.10. Average Scale Scores on NWEA's MAP Growth Reading Assessment by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Female	17,327	146.4	*15.2*	157.9	*14.4*	+11.5			
	Male	18,246	145.2	*15.4*	156.7	*15.3*	+11.5	(1.2)	(1.2)	(+0.1)
1st	Female	20,961	161.3	*15.8*	172.9	*15.4*	+11.5			
	Male	21,746	159.9	*16.6*	171.4	*16.3*	+11.5	(1.4)	(1.5)	(+0.1)
2nd	Female	22,043	174.7	*17.0*	185.6	*16.3*	+10.9			
	Male	22,613	172.7	*17.4*	183.6	*16.8*	+10.9	(2.0)	(2.0)	(-0.0)
3rd	Female	23,257	189.3	*17.0*	196.8	*16.5*	+7.5			
	Male	24,626	186.9	*17.7*	194.8	*17.4*	+8.0	(2.4)	(2.0)	(-0.5)
4th	Female	23,522	199.1	*15.4*	204.3	*15.5*	+5.2			
	Male	24,770	196.8	*16.9*	202.4	*16.9*	+5.6	(2.3)	(1.9)	(-0.4)
5th	Female	24,230	205.9	*15.0*	209.3	*15.4*	+3.5			
	Male	25,231	203.3	*16.5*	206.9	*17.0*	+3.6	(2.6)	(2.5)	(-0.1)
6th	Female	24,672	211.8	*14.8*	214.2	*15.2*	+2.4			
	Male	25,194	209.3	*16.1*	211.4	*16.6*	+2.1	(2.5)	(2.8)	(+0.3)
7th	Female	25,061	216.5	*15.0*	218.4	*15.4*	+1.8			
	Male	25,688	213.2	*16.5*	214.7	*16.9*	+1.5	(3.3)	(3.7)	(+0.4)
8th	Female	25,072	220.5	*15.1*	221.5	*15.7*	+1.0			
	Male	26,264	216.6	*16.9*	217.1	*17.7*	+0.5	(3.9)	(4.4)	(+0.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.11. Average Scale Scores on Curriculum Associates' i-Ready Math Assessment by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Female	4,683	358.1	*36.2*	378.8	*33.4*	+20.7			
	Male	4,899	357.6	*36.8*	379.0	*35.1*	+21.4	(0.6)	0.1	R
1st	Female	5,741	380.3	*32.6*	399.6	*33.6*	+19.3			
	Male	5,948	380.6	*34.3*	401.8	*36.0*	+21.2	0.3	2.2	+2.0
2nd	Female	5,902	398.9	*29.6*	416.7	*33.2*	+17.8			
	Male	6,209	399.3	*32.8*	418.0	*36.6*	+18.7	0.5	1.3	+0.9
3rd	Female	5,853	418.6	*29.1*	436.7	*35.6*	+18.1			
	Male	6,190	419.5	*32.5*	438.4	*39.4*	+18.9	0.9	1.7	+0.8
4th	Female	6,058	436.1	*31.0*	453.2	*38.4*	+17.1			
	Male	6,278	438.0	*34.4*	455.7	*42.1*	+17.7	2.0	2.5	+0.6
5th	Female	6,136	453.1	*32.3*	467.6	*39.1*	+14.5			
	Male	6,264	454.2	*35.9*	467.7	*42.9*	+13.6	1.0	0.2	-0.9
6th	Female	5,125	468.4	*34.6*	480.2	*40.4*	+11.8			
	Male	5,541	468.0	*38.1*	477.5	*44.3*	+9.5	(0.4)	(2.7)	(+2.3)
7th	Female	4,784	479.6	*34.9*	489.3	*41.0*	+9.7			
	Male	4,878	477.5	*39.0*	485.3	*44.8*	+7.9	(2.1)	(3.9)	(+1.8)
8th	Female	4,817	490.6	*38.2*	498.5	*42.7*	+8.0			
	Male	4,881	484.5	*41.1*	490.9	*45.4*	+6.3	(6.0)	(7.6)	(+1.6)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.12. Average Scale Scores on Curriculum Associates' i-Ready Reading Assessment by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Female	4,764	376.3	*53.7*	406.1	*49.3*	+29.8			
	Male	4,951	373.8	*54.2*	402.8	*51.3*	+28.9	(2.5)	(3.3)	(+0.8)
1st	Female	5,734	413.2	*52.6*	443.7	*55.9*	+30.6			
	Male	5,930	411.0	*53.6*	440.8	*57.2*	+29.8	(2.2)	(2.9)	(+0.8)
2nd	Female	5,884	453.5	*56.6*	483.0	*60.6*	+29.6			
	Male	6,139	450.2	*58.4*	478.5	*64.6*	+28.3	(3.3)	(4.5)	(+1.2)
3rd	Female	5,767	492.3	*56.8*	514.5	*61.2*	+22.3			
	Male	6,115	483.4	*60.2*	507.3	*66.2*	+23.9	(8.8)	(7.2)	(-1.6)
4th	Female	5,931	519.2	*57.1*	536.9	*61.2*	+17.7			
	Male	6,119	511.7	*61.1*	529.5	*66.2*	+17.8	(7.5)	(7.4)	(-0.1)
5th	Female	5,906	542.9	*56.3*	557.3	*61.2*	+14.5			
	Male	6,010	534.2	*61.2*	548.5	*66.3*	+14.3	(8.7)	(8.9)	(+0.2)
6th	Female	4,818	564.0	*56.7*	573.6	*61.0*	+9.7			
	Male	5,212	553.0	*63.6*	560.6	*68.6*	+7.6	(11.0)	(13.0)	(+2.0)
7th	Female	4,439	578.8	*57.3*	587.1	*60.3*	+8.4			
	Male	4,560	564.0	*64.4*	571.1	*68.6*	+7.1	(14.7)	(16.0)	(+1.3)
8th	Female	4,740	591.8	*57.3*	600.1	*60.3*	+8.3			
	Male	4,811	574.8	*65.0*	581.0	*68.8*	+6.1	(17.0)	(19.2)	(+2.2)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.13. Average Scale Scores on Renaissance Learning's Star Math Assessment by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
1st	Female	2,049	295.2	*90.2*	411.2	*85.3*	+116.0			
	Male	2,043	307.7	*98.1*	422.7	*99.3*	+115.0	12.5	11.5	-1.0
2nd	Female	2,550	403.9	*90.7*	510.3	*90.7*	+106.4			
	Male	2,602	411.4	*100.9*	527.3	*94.6*	+115.9	7.5	16.9	+9.4
3rd	Female	2,617	497.2	*85.0*	582.2	*93.0*	+84.9			
	Male	2,761	513.5	*92.8*	600.3	*102.5*	+86.8	16.3	18.2	+1.9
4th	Female	2,619	576.3	*86.0*	653.2	*96.2*	+76.9			
	Male	2,814	590.7	*95.9*	667.8	*106.5*	+77.2	14.4	14.6	+0.3
5th	Female	2,734	635.0	*93.1*	700.1	*107.5*	+65.0			
	Male	2,838	652.5	*103.5*	722.4	*117.4*	+70.0	17.4	22.4	+4.9
6th	Female	2,505	693.6	*96.6*	726.0	*109.9*	+32.4			
	Male	2,690	701.2	*104.2*	732.0	*116.9*	+30.8	7.5	5.9	-1.6
7th	Female	2,533	731.0	*102.0*	764.8	*109.9*	+33.8			
	Male	2,703	732.0	*112.2*	764.2	*122.9*	+32.2	1.0	(0.6)	R
8th	Female	2,572	762.9	*103.4*	782.7	*111.4*	+19.8			
	Male	2,597	765.0	*112.2*	780.7	*122.1*	+15.7	2.1	(2.0)	R

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.14. Average Scale Scores on Renaissance Learning's Star Reading and Literacy Assessments by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
Star Literacy										
K	Female	2,162	545.7	*115.0*	691.8	*108.2*	+146.1			
	Male	2,243	541.1	*119.2*	685.8	*113.6*	+144.7	(4.6)	(6.0)	(+1.4)
1st	Female	1,564	632.1	*114.7*	755.4	*90.6*	+123.2			
	Male	1,595	622.3	*118.6*	748.6	*97.5*	+126.3	(9.8)	(6.8)	(-3.0)
Star Reading										
2nd	Female	2,555	226.7	*159.8*	358.0	*166.3*	+131.3			
	Male	2,626	212.5	*156.1*	342.2	*167.7*	+129.8	(14.2)	(15.7)	(+1.5)
3rd	Female	2,825	340.8	*161.1*	459.8	*176.0*	+119.1			
	Male	2,990	331.8	*167.1*	451.5	*189.1*	+119.7	(9.0)	(8.3)	(-0.7)
4th	Female	2,890	464.1	*177.7*	561.9	*204.2*	+97.8			
	Male	3,089	450.5	*185.9*	555.0	*211.2*	+104.5	(13.6)	(7.0)	(-6.6)
5th	Female	2,944	555.3	*200.4*	641.4	*224.4*	+86.0			
	Male	3,045	547.8	*217.8*	637.1	*243.3*	+89.3	(7.5)	(4.3)	(-3.3)
6th	Female	2,652	644.5	*227.9*	706.4	*249.5*	+61.9			
	Male	2,851	634.8	*247.9*	683.8	*266.6*	+49.0	(9.7)	(22.6)	(+12.9)
7th	Female	2,786	746.0	*253.4*	786.2	*267.2*	+40.2			
	Male	2,945	708.7	*269.5*	753.5	*284.8*	+44.8	(37.3)	(32.6)	(-4.7)
8th	Female	2,838	826.2	*266.7*	856.1	*279.4*	+29.9			
	Male	2,928	794.8	*289.0*	812.1	*306.3*	+17.3	(31.3)	(44.0)	(+12.6)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.15. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 Math Assessments by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Female	791	492.2	*26.8*	541.1	*34.6*	+48.9			
	Male	798	494.5	*30.6*	542.7	*35.6*	+48.2	2.3	1.6	-0.7
1st	Female	517	490.7	*25.8*	531.7	*32.8*	+41.0			
	Male	566	496.7	*27.8*	536.6	*33.0*	+40.0	6.0	5.0	-1.0
2nd	Female	506	492.3	*28.0*	539.6	*28.8*	+47.3			
	Male	555	496.3	*33.5*	540.2	*31.6*	+43.9	4.0	0.6	-3.4
Smarter Balanced ICA										
3rd	Female	252	2350.8	*65.3*	2411.9	*76.0*	+61.1			
	Male	298	2355.9	*66.7*	2411.5	*68.8*	+55.6	5.2	(0.4)	R
4th	Female	261	2402.4	*72.2*	2456.6	*77.2*	+54.3			
	Male	302	2406.3	*75.9*	2465.6	*78.0*	+59.3	3.9	9.0	+5.1
5th	Female	267	2477.2	*72.1*	2514.3	*86.4*	+37.1			
	Male	295	2481.1	*79.2*	2521.5	*91.8*	+40.4	3.9	7.2	+3.3
6th	Female	286	2474.5	*69.3*	2526.6	*84.3*	+52.0			
	Male	300	2488.2	*74.5*	2525.6	*94.0*	+37.5	13.6	(0.9)	R
7th	Female	280	2515.0	*87.3*	2544.8	*108.5*	+29.8			
	Male	319	2524.4	*93.6*	2549.8	*104.6*	+25.4	9.4	5.0	-4.4
8th	Female	287	2517.4	*88.1*	2547.0	*112.4*	+29.6			
	Male	273	2507.5	*90.1*	2538.5	*113.2*	+31.0	(9.9)	(8.5)	(-1.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.2.16. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 ELA Assessments by Gender

Grade	Gender	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Female Students)		
			Fall		Spring		Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Female	593	494.3	*24.6*	534.4	*27.4*	+40.1			
	Male	591	492.6	*26.0*	531.1	*28.9*	+38.5	(1.7)	(3.3)	(+1.6)
1st	Female	454	501.8	*27.1*	538.2	*28.4*	+36.4			
	Male	493	499.5	*29.5*	533.5	*27.6*	+34.1	(2.3)	(4.7)	(+2.3)
2nd	Female	436	495.6	*29.0*	526.3	*29.7*	+30.8			
	Male	469	491.6	*29.0*	520.2	*28.8*	+28.5	(3.9)	(6.2)	(+2.2)
Smarter Balanced ICA										
3rd	Female	233	2375.3	*80.1*	2427.5	*82.5*	+52.1			
	Male	269	2364.6	*77.2*	2409.6	*83.5*	+44.9	(10.7)	(17.9)	(+7.2)
4th	Female	235	2438.3	*73.3*	2476.3	*84.2*	+38.0			
	Male	268	2412.6	*74.5*	2442.1	*90.8*	+29.5	(25.7)	(34.2)	(+8.5)
5th	Female	249	2506.7	*81.9*	2540.0	*91.6*	+33.3			
	Male	262	2489.5	*89.5*	2525.2	*92.4*	+35.7	(17.2)	(14.8)	(-2.4)
6th	Female	288	2554.1	*87.9*	2590.4	*85.3*	+36.2			
	Male	309	2528.7	*90.8*	2557.1	*102.5*	+28.4	(25.5)	(33.3)	(+7.8)
7th	Female	278	2574.8	*90.7*	2604.7	*107.2*	+29.9			
	Male	300	2542.1	*87.2*	2566.4	*103.7*	+24.3	(32.8)	(38.3)	(+5.6)
8th	Female	267	2599.7	*95.6*	2610.3	*112.8*	+10.5			
	Male	266	2562.1	*91.9*	2569.8	*104.9*	+7.7	(37.7)	(40.5)	(+2.8)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Economically Disadvantaged Status

Table 3.3.1 through Table 3.3.16 summarize differences in benchmark assessment outcomes by economically disadvantaged status. For these tables, we report outcomes separately for students who are and are not economically disadvantaged, and the reference category for each table is students who were not economically disadvantaged.

Table 3.3.1 through Table 3.3.8 show differences in the percentages of students who are "significantly behind grade level" on all four assessments. Regardless of assessment provider or subject, a larger percentage of economically disadvantaged students across nearly all grade levels both started and ended the school year "significantly behind grade level" relative to students who were not economically disadvantaged. The only subgroups that did not follow this pattern were kindergarten (reading) and 1st-grade (mathematics) economically disadvantaged students in districts that offered the K-2 benchmark assessments.

For NWEA MAP Growth districts, increases in the proportion of economically disadvantaged students scoring "significantly behind grade level" in mathematics and reading were larger than for more advantaged students. As a result, the mathematics and reading gaps between economically disadvantaged and not economically disadvantaged students increased for all grade levels in these districts. We find similar changes in Renaissance Learning Star 360 districts between the fall and spring semesters. However, these gaps increased because the share of economically disadvantaged students that were "significantly below grade level" *decreased* between the fall and spring semesters but did so at a *slower* rate compared to more advantaged students, increasing mathematics and reading gaps for all grade levels except 7th-grade mathematics and 1st-grade reading.

Conversely, students in districts that administered the Curriculum Associates i-Ready assessments saw the gaps between students who are and are not economically disadvantaged decrease in both mathematics and reading for all grade levels other than kindergarten. While economically disadvantaged students consistently began and ended the year with more students scoring "significantly behind grade level," decreases in the proportion of economically disadvantaged students scoring at that level for this group were larger compared to decreases among not economically disadvantaged students. This was also generally the case for students who took the Smarter Balanced ICA assessments.

Table 3.3.9 through Table 3.3.16 provide similar analyses for changes in scale score gaps between students who are and are not economically disadvantaged. Across all grades, subjects, and assessment providers, students who are economically

disadvantaged both started and ended the school year with lower average scale scores. Given these differences, there is a consistent gap between economically disadvantaged students and students who are not economically disadvantaged in both mathematics and reading, across all grades, subjects, and assessment providers in the fall semester. Further, these same gaps increased for nearly all grade levels between the fall and spring semester; average scale score increases for more advantaged students were larger than increases for economically disadvantaged students. The exceptions to this pattern are later grade levels for Curriculum Associates i-Ready districts, 1st graders in Star 360 districts, and some middle-grade levels for Smarter Balanced ICA districts.

Table 3.3.1. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Mathematics Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
K	Not ED	17,717	6.1	11.8	+5.7			
	ED	19,656	15.2	28.7	+13.5	9.0	16.9	+7.8
1st	Not ED	19,837	12.8	13.3	+0.5			
	ED	23,662	30.6	38.2	+7.6	17.8	24.9	+7.1
2nd	Not ED	21,805	14.9	16.8	+1.9			
	ED	25,234	36.6	47.4	+10.7	21.7	30.6	+8.8
3rd	Not ED	23,186	19.6	19.9	+0.3			
	ED	25,676	48.3	54.9	+6.6	28.8	35.1	+6.3
4th	Not ED	23,870	13.2	16.1	+2.8			
	ED	24,966	39.1	47.8	+8.7	25.9	31.8	+5.9
5th	Not ED	24,293	21.7	27.6	+5.8			
	ED	25,901	52.4	63.0	+10.6	30.6	35.4	+4.8
6th	Not ED	25,362	19.4	23.8	+4.4			
	ED	24,973	48.7	57.5	+8.8	29.3	33.7	+4.4
7th	Not ED	26,830	21.4	24.9	+3.6			
	ED	24,107	50.6	57.4	+6.9	29.2	32.5	+3.3
8th	Not ED	26,600	15.3	21.2	+5.9			
	ED	23,566	39.5	48.7	+9.2	24.2	27.5	+3.3

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.2. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Reading Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
K	Not ED	16,585	4.2	14.1	+9.9			
	ED	18,988	9.1	31.4	+22.2	5.0	17.3	+12.3
1st	Not ED	19,452	13.6	15.3	+1.7			
	ED	23,255	30.6	40.7	+10.1	17.0	25.4	+8.4
2nd	Not ED	20,192	19.7	18.0	-1.7			
	ED	24,464	39.6	45.3	+5.8	19.8	27.3	+7.4
3rd	Not ED	22,415	16.0	18.7	+2.7			
	ED	25,468	39.9	48.0	+8.1	23.9	29.3	+5.4
4th	Not ED	23,398	16.4	20.7	+4.3			
	ED	24,894	40.1	50.6	+10.5	23.7	29.8	+6.2
5th	Not ED	23,769	16.5	21.5	+5.0			
	ED	25,692	40.7	50.6	+9.9	24.2	29.1	+4.9
6th	Not ED	25,221	15.2	21.1	+5.9			
	ED	24,645	39.1	48.9	+9.8	23.8	27.7	+3.9
7th	Not ED	26,946	15.4	21.0	+5.6			
	ED	23,803	38.9	47.4	+8.5	23.5	26.4	+2.9
8th	Not ED	27,883	13.1	19.6	+6.5			
	ED	23,453	31.9	42.2	+10.3	18.8	22.6	+3.8

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.3. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Math Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
K	Not ED	3,804	48.9	16.4	-32.5			
	ED	5,778	65.5	40.2	-25.3	16.6	23.8	+7.3
1st	Not ED	4,713	6.7	2.4	-4.2			
	ED	6,976	19.8	9.4	-10.4	13.1	7.0	-6.1
2nd	Not ED	4,807	15.0	5.6	-9.4			
	ED	7,304	44.9	27.6	-17.4	30.0	22.0	-8.0
3rd	Not ED	4,851	19.1	7.4	-11.7			
	ED	7,192	53.5	35.8	-17.7	34.4	28.4	-6.0
4th	Not ED	4,997	20.1	10.8	-9.2			
	ED	7,339	57.5	41.9	-15.6	37.4	31.1	-6.4
5th	Not ED	5,215	19.5	12.4	-7.1			
	ED	7,185	57.3	46.2	-11.1	37.8	33.8	-4.0
6th	Not ED	4,588	23.1	15.7	-7.4			
	ED	6,078	62.0	51.9	-10.1	38.9	36.1	-2.7
7th	Not ED	4,276	27.2	20.9	-6.2			
	ED	5,386	63.2	55.4	-7.8	36.0	34.4	-1.6
8th	Not ED	4,171	31.3	26.7	-4.6			
	ED	5,527	65.4	58.8	-6.6	34.2	32.1	-2.0

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.4. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Reading Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
K	Not ED	3,889	39.3	7.8	-31.5			
	ED	5,826	55.3	26.6	-28.7	16.0	18.8	+2.8
1st	Not ED	4,667	3.1	1.5	-1.6			
	ED	6,997	12.1	5.0	-7.1	9.0	3.5	-5.5
2nd	Not ED	4,733	14.8	5.5	-9.3			
	ED	7,290	43.6	27.9	-15.7	28.8	22.4	-6.3
3rd	Not ED	4,790	20.3	10.0	-10.3			
	ED	7,092	52.1	39.3	-12.8	31.8	29.3	-2.5
4th	Not ED	4,874	16.7	10.5	-6.2			
	ED	7,176	47.0	37.3	-9.7	30.3	26.8	-3.5
5th	Not ED	4,923	27.9	18.7	-9.2			
	ED	6,993	62.1	52.8	-9.3	34.3	34.1	-0.2
6th	Not ED	4,372	29.5	23.8	-5.8			
	ED	5,658	65.4	59.4	-6.0	35.9	35.6	-0.2
7th	Not ED	3,912	32.9	27.9	-5.0			
	ED	5,087	65.8	59.1	-6.7	32.9	31.1	-1.7
8th	Not ED	4,170	33.4	28.7	-4.7			
	ED	5,381	64.1	57.2	-6.9	30.7	28.5	-2.2

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.5. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Math Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
1st	Not ED	2,205	10.6	6.2	-4.4			
	ED	1,887	21.1	17.6	-3.5	10.5	11.4	+0.9
2nd	Not ED	2,701	20.6	9.0	-11.6			
	ED	2,451	36.7	25.7	-11.0	16.1	16.7	+0.6
3rd	Not ED	2,892	13.3	11.9	-1.5			
	ED	2,486	31.3	31.1	-0.2	17.9	19.2	+1.3
4th	Not ED	2,908	15.1	11.5	-3.7			
	ED	2,525	33.1	30.0	-3.0	17.9	18.6	+0.6
5th	Not ED	2,990	16.6	13.4	-3.2			
	ED	2,582	36.1	34.4	-1.6	19.4	21.0	+1.6
6th	Not ED	2,747	18.3	19.4	+1.2			
	ED	2,448	41.2	44.0	+2.9	22.9	24.6	+1.7
7th	Not ED	2,847	19.3	17.0	-2.2			
	ED	2,389	41.1	38.9	-2.2	21.8	21.9	+0.1
8th	Not ED	2,922	18.2	19.6	+1.4			
	ED	2,247	37.5	38.8	+1.2	19.3	19.2	-0.2

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.6. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Reading and Literacy Assessments by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
K	Not ED	2,187	16.3	9.6	-6.7			
	ED	2,240	30.8	24.5	-6.3	14.4	14.9	+0.4
1st	Not ED	2,324	22.2	10.2	-12.0			
	ED	2,240	37.2	24.6	-12.6	15.0	14.4	-0.6
2nd	Not ED	2,852	28.5	14.3	-14.2			
	ED	2,686	41.1	30.5	-10.7	12.6	16.1	+3.6
3rd	Not ED	3,063	23.3	14.2	-9.1			
	ED	2,801	39.7	31.0	-8.7	16.5	16.8	+0.4
4th	Not ED	3,119	18.4	12.5	-5.9			
	ED	2,873	34.8	29.9	-4.9	16.4	17.4	+1.1
5th	Not ED	3,192	19.8	17.5	-2.3			
	ED	2,809	39.4	38.0	-1.4	19.6	20.5	+0.9
6th	Not ED	2,845	24.2	23.9	-0.3			
	ED	2,670	44.6	45.8	+1.2	20.4	21.9	+1.5
7th	Not ED	3,025	22.4	23.1	+0.7			
	ED	2,717	43.9	45.0	+1.1	21.5	21.9	+0.4
8th	Not ED	3,195	24.7	27.8	+3.1			
	ED	2,574	45.4	51.0	+5.6	20.7	23.2	+2.5

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.7. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA & MDE's K-2 Math Assessments by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments								
K	Not ED	972	3.3	0.0	-3.3			
	ED	617	4.1	0.0	-4.1	0.8	0.0	-0.8
1st	Not ED	650	1.1	0.0	-1.1			
	ED	433	0.9	0.2	-0.7	(0.2)	0.2	R
2nd	Not ED	611	1.6	0.2	-1.5			
	ED	450	4.4	0.2	-4.2	2.8	0.1	-2.7
Smarter Balanced ICA								
3rd	Not ED	348	54.9	21.3	-33.6			
	ED	202	77.7	44.1	-33.7	22.8	22.8	-0.0
4th	Not ED	378	39.7	16.9	-22.8			
	ED	185	63.8	34.1	-29.7	24.1	17.1	-7.0
5th	Not ED	381	26.0	12.9	-13.1			
	ED	181	52.5	31.5	-21.0	26.5	18.6	-7.9
6th	Not ED	413	36.1	16.9	-19.1			
	ED	173	59.5	35.3	-24.3	23.5	18.3	-5.1
7th	Not ED	414	24.4	18.6	-5.8			
	ED	185	46.5	39.5	-7.0	22.1	20.9	-1.2
8th	Not ED	387	35.4	28.7	-6.7			
	ED	173	64.7	54.9	-9.8	29.3	26.2	-3.1

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.8. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA & MDE's K-2 ELA Assessments by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not Economically Disadvantaged)		
			Fall	Spring	Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments								
K	Not ED	738	1.5	0.0	-1.5			
	ED	446	0.7	0.0	-0.7	(0.8)	0.0	(-0.8)
1st	Not ED	583	0.7	0.0	-0.7			
	ED	364	0.8	0.0	-0.8	0.1	0.0	-0.1
2nd	Not ED	552	0.4	0.0	-0.4			
	ED	353	1.1	0.0	-1.1	0.8	0.0	-0.8
Smarter Balanced ICA								
3rd	Not ED	328	45.4	18.9	-26.5			
	ED	174	57.5	43.1	-14.4	12.0	24.2	+12.2
4th	Not ED	350	41.7	26.6	-15.1			
	ED	153	54.2	36.6	-17.6	12.5	10.0	-2.5
5th	Not ED	354	18.6	9.0	-9.6			
	ED	157	35.7	24.8	-10.8	17.0	15.8	-1.2
6th	Not ED	420	8.8	5.2	-3.6			
	ED	177	36.7	25.4	-11.3	27.9	20.2	-7.7
7th	Not ED	398	12.6	10.1	-2.5			
	ED	180	32.8	22.8	-10.0	20.2	12.7	-7.5
8th	Not ED	374	11.2	15.0	3.7			
	ED	159	25.2	23.9	-1.3	13.9	8.9	-5.0

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.9. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not Economically Disadvantaged)		
			Fall		Spring		Change	Fall	Spring	Change
K	Not ED	17,717	151.5	*13.9*	165.1	*13.4*	+13.6			
	ED	19,656	146.8	*16.3*	158.6	*15.6*	+11.9	(4.7)	(6.4)	(+1.7)
1st	Not ED	19,837	167.2	*13.8*	182.2	*13.6*	+15.0			
	ED	23,662	161.7	*16.6*	173.1	*16.0*	+11.5	(5.5)	(9.0)	(+3.5)
2nd	Not ED	21,805	179.8	*13.2*	193.6	*12.9*	+13.8			
	ED	25,234	171.9	*14.7*	182.9	*15.1*	+11.0	(7.9)	(10.7)	(+2.8)
3rd	Not ED	23,186	191.4	*12.6*	203.9	*13.0*	+12.5			
	ED	25,676	182.0	*13.7*	191.7	*15.2*	+9.6	(9.4)	(12.3)	(+2.8)
4th	Not ED	23,870	202.5	*12.9*	213.5	*14.6*	+11.0			
	ED	24,966	192.5	*13.6*	200.5	*15.7*	+8.1	(10.0)	(13.0)	(+2.9)
5th	Not ED	24,293	212.2	*14.1*	221.3	*16.3*	+9.2			
	ED	25,901	200.8	*14.3*	206.9	*16.5*	+6.2	(11.4)	(14.4)	(+3.0)
6th	Not ED	25,362	217.2	*13.9*	224.2	*15.6*	+7.1			
	ED	24,973	206.0	*14.4*	210.8	*16.5*	+4.9	(11.2)	(13.4)	(+2.2)
7th	Not ED	26,830	224.1	*15.4*	229.8	*17.2*	+5.7			
	ED	24,107	212.2	*15.4*	215.9	*17.3*	+3.7	(11.9)	(13.9)	(+2.0)
8th	Not ED	26,600	229.8	*16.5*	233.8	*18.2*	+4.0			
	ED	23,566	217.8	*16.7*	220.5	*18.4*	+2.7	(12.0)	(13.2)	(+1.3)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.10. Average Scale Scores on NWEA's MAP Growth Reading Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not Economically Disadvantaged)		
			Fall		Spring		Change	Fall	Spring	Change
K	Not ED	16,585	147.7	*14.3*	160.6	*13.9*	+13.0			
	ED	18,988	144.1	*15.9*	154.4	*15.1*	+10.2	(3.5)	(6.3)	(+2.7)
1st	Not ED	19,452	163.7	*14.7*	177.3	*14.1*	+13.5			
	ED	23,255	158.0	*17.0*	167.8	*16.0*	+9.8	(5.7)	(9.5)	(+3.8)
2nd	Not ED	20,192	178.6	*16.5*	190.8	*14.9*	+12.2			
	ED	24,464	169.6	*16.8*	179.4	*16.2*	+9.8	(9.0)	(11.3)	(+2.3)
3rd	Not ED	22,415	194.0	*15.5*	202.3	*14.5*	+8.4			
	ED	25,468	182.9	*17.3*	190.0	*16.9*	+7.2	(11.1)	(12.3)	(+1.2)
4th	Not ED	23,398	203.5	*14.2*	209.4	*13.9*	+5.9			
	ED	24,894	192.7	*16.3*	197.6	*16.4*	+4.9	(10.8)	(11.7)	(+1.0)
5th	Not ED	23,769	210.1	*13.8*	214.1	*14.0*	+4.0			
	ED	25,692	199.4	*15.9*	202.5	*16.3*	+3.1	(10.7)	(11.6)	(+0.9)
6th	Not ED	25,221	215.7	*13.7*	218.2	*14.1*	+2.5			
	ED	24,645	205.3	*15.5*	207.2	*16.0*	+2.0	(10.4)	(11.0)	(+0.6)
7th	Not ED	26,946	219.7	*14.3*	221.5	*14.7*	+1.8			
	ED	23,803	209.3	*15.8*	210.8	*16.2*	+1.5	(10.4)	(10.6)	(+0.2)
8th	Not ED	27,883	222.8	*14.8*	223.8	*15.4*	+0.9			
	ED	23,453	213.3	*16.2*	213.9	*16.9*	+0.5	(9.5)	(9.9)	(+0.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.11. Average Scale Scores on Curriculum Associates' i-Ready Math Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not Economically Disadvantaged)		
			Fall		Spring		Change	Fall	Spring	Change
K	Not ED	3,804	364.2	*33.0*	387.4	*29.7*	+23.3			
	ED	5,778	353.7	*38.1*	373.3	*35.9*	+19.6	(10.5)	(14.1)	(+3.6)
1st	Not ED	4,713	390.2	*30.1*	414.6	*29.4*	+24.4			
	ED	6,976	373.8	*34.0*	391.3	*35.1*	+17.5	(16.4)	(23.3)	(+6.9)
2nd	Not ED	4,807	412.0	*28.0*	434.7	*28.7*	+22.7			
	ED	7,304	390.6	*30.4*	405.9	*34.2*	+15.3	(21.4)	(28.7)	(+7.4)
3rd	Not ED	4,851	433.4	*27.0*	457.6	*31.3*	+24.3			
	ED	7,192	409.4	*29.6*	424.0	*35.4*	+14.6	(23.9)	(33.6)	(+9.6)
4th	Not ED	4,997	453.2	*30.6*	476.4	*36.1*	+23.2			
	ED	7,339	426.1	*29.5*	439.5	*36.0*	+13.4	(27.1)	(36.9)	(+9.8)
5th	Not ED	5,215	470.4	*31.0*	488.7	*35.5*	+18.4			
	ED	7,185	441.5	*31.1*	452.4	*37.9*	+10.9	(28.8)	(36.3)	(+7.5)
6th	Not ED	4,588	486.4	*32.9*	499.6	*37.5*	+13.2			
	ED	6,078	454.5	*32.8*	463.1	*39.1*	+8.6	(31.9)	(36.5)	(+4.6)
7th	Not ED	4,276	494.7	*33.8*	505.1	*37.9*	+10.4			
	ED	5,386	465.6	*34.3*	473.2	*41.6*	+7.6	(29.1)	(31.9)	(+2.8)
8th	Not ED	4,171	504.7	*36.5*	511.1	*39.5*	+6.4			
	ED	5,527	474.5	*37.2*	482.3	*43.6*	+7.7	(30.2)	(28.8)	(-1.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.12. Average Scale Scores on Curriculum Associates' i-Ready Reading Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not Economically Disadvantaged)		
			Fall		Spring		Change	Fall	Spring	Change
K	Not ED	3,889	381.2	*47.9*	417.9	*45.8*	+36.7			
	ED	5,826	371.0	*57.3*	395.4	*51.2*	+24.5	(10.2)	(22.4)	(+12.2)
1st	Not ED	4,667	427.8	*47.9*	465.2	*51.2*	+37.3			
	ED	6,997	401.5	*53.8*	426.9	*54.8*	+25.4	(26.3)	(38.2)	(+11.9)
2nd	Not ED	4,733	475.3	*52.6*	512.5	*52.1*	+37.2			
	ED	7,290	436.5	*55.4*	460.1	*60.3*	+23.6	(38.8)	(52.5)	(+13.7)
3rd	Not ED	4,790	513.8	*51.6*	542.5	*52.0*	+28.6			
	ED	7,092	470.1	*56.6*	489.5	*62.4*	+19.4	(43.7)	(53.0)	(+9.3)
4th	Not ED	4,874	541.9	*53.0*	563.5	*54.6*	+21.6			
	ED	7,176	497.3	*56.5*	512.5	*61.5*	+15.2	(44.6)	(51.0)	(+6.4)
5th	Not ED	4,923	564.1	*51.6*	581.9	*53.7*	+17.8			
	ED	6,993	520.5	*57.3*	532.4	*62.8*	+12.0	(43.6)	(49.5)	(+5.8)
6th	Not ED	4,372	585.0	*51.9*	595.3	*54.1*	+10.4			
	ED	5,658	537.6	*58.8*	544.9	*64.9*	+7.3	(47.4)	(50.5)	(+3.1)
7th	Not ED	3,912	596.2	*52.9*	603.7	*55.1*	+7.5			
	ED	5,087	552.1	*60.7*	560.0	*65.9*	+7.9	(44.1)	(43.7)	(-0.4)
8th	Not ED	4,170	606.6	*54.2*	613.8	*55.2*	+7.2			
	ED	5,381	565.2	*61.4*	572.4	*66.9*	+7.2	(41.5)	(41.4)	(-0.0)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.13. Average Scale Scores on Renaissance Learning's Star Math Assessment by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not Economically Disadvantaged)		
			Fall		Spring		Change	Fall	Spring	Change
1st	Not ED	2,205	316.9	*89.2*	436.8	*82.2*	+119.9			
	ED	1,887	283.4	*97.3*	393.8	*98.8*	+110.4	(33.5)	(43.0)	(+9.5)
2nd	Not ED	2,701	423.8	*87.5*	542.0	*82.4*	+118.3			
	ED	2,451	390.0	*101.6*	493.3	*97.3*	+103.4	(33.8)	(48.7)	(+14.9)
3rd	Not ED	2,892	526.7	*81.1*	617.6	*84.8*	+90.9			
	ED	2,486	481.0	*92.5*	561.2	*104.1*	+80.2	(45.7)	(56.4)	(+10.7)
4th	Not ED	2,908	605.1	*83.1*	688.7	*89.0*	+83.6			
	ED	2,525	559.1	*94.5*	628.6	*106.3*	+69.4	(46.0)	(60.1)	(+14.1)
5th	Not ED	2,990	669.6	*89.9*	745.4	*98.4*	+75.8			
	ED	2,582	614.1	*100.5*	672.2	*116.7*	+58.1	(55.5)	(73.1)	(+17.7)
6th	Not ED	2,747	725.0	*90.0*	761.0	*101.5*	+36.1			
	ED	2,448	666.8	*103.0*	693.3	*115.7*	+26.6	(58.2)	(67.7)	(+9.5)
7th	Not ED	2,847	759.3	*93.6*	794.6	*99.2*	+35.3			
	ED	2,389	698.5	*113.3*	728.7	*125.7*	+30.2	(60.8)	(65.9)	(+5.1)
8th	Not ED	2,922	788.3	*99.3*	807.5	*103.6*	+19.2			
	ED	2,247	732.3	*110.7*	748.1	*124.6*	+15.8	(56.0)	(59.4)	(+3.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.14. Average Scale Scores on Renaissance Learning's Star Reading and Literacy Assessments by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not Economically Disadvantaged)		
			Fall		Spring		Change	Fall	Spring	Change
Star Literacy										
K	Not ED	2,173	564.5	*112.7*	716.5	*97.6*	+151.9			
	ED	2,232	522.6	*118.1*	661.7	*116.7*	+139.1	(41.9)	(54.7)	(+12.8)
1st	Not ED	1,457	653.1	*107.4*	773.3	*81.3*	+120.1			
	ED	1,702	604.8	*120.1*	733.7	*100.7*	+128.9	(48.3)	(39.6)	(-8.7)
Star Reading										
2nd	Not ED	2,620	238.8	*156.5*	386.9	*158.1*	+148.0			
	ED	2,561	199.7	*157.4*	312.3	*167.9*	+112.6	(39.2)	(74.6)	(+35.4)
3rd	Not ED	3,045	368.5	*160.3*	496.3	*174.5*	+127.9			
	ED	2,770	300.6	*161.2*	410.7	*181.1*	+110.1	(67.9)	(85.6)	(+17.8)
4th	Not ED	3,115	496.1	*175.3*	607.5	*197.6*	+111.3			
	ED	2,864	414.6	*180.0*	504.9	*205.8*	+90.3	(81.5)	(102.6)	(+21.0)
5th	Not ED	3,189	600.1	*203.9*	697.4	*223.2*	+97.2			
	ED	2,800	496.1	*201.8*	572.9	*228.9*	+76.8	(104.0)	(124.5)	(+20.4)
6th	Not ED	2,844	698.9	*230.6*	759.7	*248.1*	+60.8			
	ED	2,659	575.9	*230.2*	625.1	*251.6*	+49.2	(123.0)	(134.6)	(+11.6)
7th	Not ED	3,025	792.5	*249.7*	841.6	*261.0*	+49.0			
	ED	2,706	653.4	*256.7*	688.7	*271.8*	+35.3	(139.2)	(152.9)	(+13.7)
8th	Not ED	3,194	873.8	*264.6*	904.5	*276.6*	+30.7			
	ED	2,572	731.4	*276.5*	745.9	*292.8*	+14.5	(142.4)	(158.6)	(+16.2)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.15. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 Math Assessments by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*) Fall		Spring		Change	Score Gap (Relative to Not Economically Disadvantaged) Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Not ED	972	496.8	*29.4*	548.1	*34.3*	+51.3			
	ED	617	488.0	*27.0*	532.2	*34.1*	+44.2	(8.8)	(15.9)	(+7.1)
1st	Not ED	650	497.3	*28.6*	538.7	*33.4*	+41.4			
	ED	433	488.6	*23.5*	527.6	*31.2*	+39.0	(8.7)	(11.1)	(+2.4)
2nd	Not ED	611	501.0	*31.6*	546.3	*27.8*	+45.2			
	ED	450	485.4	*27.9*	531.4	*31.3*	+46.0	(15.7)	(14.9)	(-0.8)
Smarter Balanced ICA										
3rd	Not ED	348	2368.9	*56.3*	2426.3	*64.7*	+57.4			
	ED	202	2327.1	*73.0*	2386.5	*77.3*	+59.4	(41.8)	(39.8)	(-2.0)
4th	Not ED	378	2419.4	*66.3*	2471.8	*68.3*	+52.5			
	ED	185	2374.1	*80.1*	2440.3	*90.6*	+66.2	(45.3)	(31.5)	(-13.7)
5th	Not ED	381	2493.7	*71.8*	2533.1	*81.9*	+39.3			
	ED	181	2448.8	*75.3*	2486.5	*95.9*	+37.7	(44.9)	(46.6)	(+1.6)
6th	Not ED	413	2493.4	*66.2*	2540.6	*80.9*	+47.2			
	ED	173	2453.2	*78.3*	2491.5	*98.6*	+38.2	(40.1)	(49.1)	(+9.0)
7th	Not ED	414	2537.3	*84.4*	2566.2	*97.0*	+28.9			
	ED	185	2481.3	*92.8*	2505.5	*114.6*	+24.2	(56.0)	(60.7)	(+4.7)
8th	Not ED	387	2527.3	*86.9*	2564.8	*106.8*	+37.5			
	ED	173	2479.6	*85.3*	2493.8	*110.7*	+14.3	(47.7)	(70.9)	(+23.2)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.3.16. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 ELA Assessments by Economically Disadvantaged Status

Grade	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not Economically Disadvantaged)		
			Fall		Spring		Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Not ED	738	496.8	*27.0*	537.4	*28.0*	+40.7			
	ED	446	487.9	*21.1*	524.9	*26.7*	+37.0	(8.9)	(12.5)	(+3.6)
1st	Not ED	583	504.4	*29.8*	540.2	*28.7*	+35.8			
	ED	364	494.4	*24.9*	528.7	*25.5*	+34.2	(10.0)	(11.5)	(+1.5)
2nd	Not ED	552	499.7	*29.4*	529.6	*27.2*	+29.9			
	ED	353	483.9	*25.7*	513.0	*29.9*	+29.1	(15.8)	(16.6)	(+0.8)
Smarter Balanced ICA										
3rd	Not ED	328	2378.7	*78.7*	2432.2	*82.6*	+53.5			
	ED	174	2352.4	*76.0*	2390.9	*78.5*	+38.5	(26.3)	(41.2)	(+15.0)
4th	Not ED	350	2429.6	*75.6*	2463.1	*89.0*	+33.6			
	ED	153	2413.2	*72.3*	2446.5	*89.3*	+33.3	(16.4)	(16.6)	(+0.2)
5th	Not ED	354	2511.8	*77.6*	2544.6	*83.3*	+32.7			
	ED	157	2466.5	*96.1*	2505.0	*104.8*	+38.6	(45.4)	(39.5)	(-5.8)
6th	Not ED	420	2560.4	*83.4*	2592.0	*85.9*	+31.5			
	ED	177	2494.8	*89.1*	2528.5	*103.8*	+33.8	(65.7)	(63.4)	(-2.3)
7th	Not ED	398	2574.7	*85.8*	2602.9	*100.1*	+28.2			
	ED	180	2520.6	*89.1*	2544.9	*111.3*	+24.3	(54.1)	(58.0)	(+3.9)
8th	Not ED	374	2598.3	*93.5*	2602.6	*111.9*	+4.4			
	ED	159	2540.1	*87.7*	2560.5	*102.1*	+20.4	(58.2)	(42.2)	(-16.0)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Special Education Status

Table 3.4.1 through Table 3.4.16 summarize differences in benchmark assessment outcomes by special education status. For these tables, outcomes for special and general education students are reported separately, and the reference category for outcome gaps is general education students.

As shown in Table 3.4.1 through Table 3.4.8, larger percentages of special education students across nearly all grade levels, subjects, and assessment providers both started and ended the school year "significantly behind grade level." Kindergarten (ELA) and 2nd-grade (ELA) special education students in districts that offered Smarter Balanced ICA and K-2 assessments were the only grade-specific subgroups where a larger percentage of general education than special education students scored "significantly behind grade level" in the fall. Gap changes in the percentage of students who scored "significantly behind grade level" were far less consistent across grades, vendors, and subject.

Mathematics and reading gaps between special and general education students typically increased in the lowest (K-3) grade levels for students who took the NWEA MAP Growth assessments and for students in middle school grade levels who took the Curriculum Associates i-Ready and the Smarter Balanced ICA Mathematics assessments. In NWEA MAP Growth districts, gaps increased because changes in the proportion of special education students scoring "significantly behind grade level" were larger between the fall and spring compared to general education students. Conversely, in Curriculum Associates i-Ready and Smarter Balanced ICA districts, decreases in the proportion of students scoring "significantly behind grade level" between the fall and spring were smaller for special education relative to general education students.

Gaps between special education and general education students typically decreased for students taking the NWEA MAP Growth Mathematics and Reading assessments in later grades, and for students in 1st-5th grades in districts that administered the Curriculum Associates i-Ready assessments. They also largely decreased for students in districts administering the Renaissance Learning Star assessment in both reading and math.

Table 3.4.9 through Table 3.4.16 show scale score gaps for special education relative to general education students. General education students had higher average scale scores compared to special education students across all grade levels and assessment providers. General education students in NWEA MAP Growth districts experienced larger increases in scores during the school year relative to special education students, widening gaps across all grade levels in mathematics and for K-2 in reading. In

contrast, increases in special education students' average reading scale scores were larger than their general education peers in 3rd-8th grades, although the relative differences over time were very small. Students in Curriculum Associates i-Ready districts experienced increases in gaps between special and general education students for the most part, with some exceptions in the early grades for mathematics and later grade levels for reading.

For Renaissance Learning Star 360 and Smarter Balanced ICA and K-2 districts, mathematics and reading gaps between special and general education for the most part increased across both subjects and all grade levels.

Table 3.4.1. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Mathematics Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Gen. Ed.	33,536	9.5	19.0	+9.5			
	Spec. Ed.	3,837	22.9	35.3	+12.5	13.3	16.3	+2.9
1st	Gen. Ed.	38,366	20.1	24.5	+4.4			
	Spec. Ed.	5,133	40.6	44.6	+4.0	20.5	20.1	-0.4
2nd	Gen. Ed.	41,472	23.6	30.3	+6.7			
	Spec. Ed.	5,567	49.0	55.2	+6.2	25.4	25.0	-0.5
3rd	Gen. Ed.	42,918	30.9	34.7	+3.8			
	Spec. Ed.	5,944	61.9	64.4	+2.4	31.0	29.7	-1.4
4th	Gen. Ed.	42,533	21.8	27.7	+5.9			
	Spec. Ed.	6,303	58.3	63.5	+5.3	36.5	35.9	-0.7
5th	Gen. Ed.	43,787	32.3	41.1	+8.8			
	Spec. Ed.	6,407	73.2	78.2	+5.1	40.9	37.1	-3.7
6th	Gen. Ed.	44,319	28.4	35.3	+6.9			
	Spec. Ed.	6,016	75.0	79.2	+4.2	46.6	43.9	-2.7
7th	Gen. Ed.	44,933	29.3	34.7	+5.4			
	Spec. Ed.	6,004	79.3	82.2	+2.9	50.0	47.5	-2.5
8th	Gen. Ed.	44,324	20.6	28.2	+7.6			
	Spec. Ed.	5,842	72.9	79.2	+6.2	52.3	51.0	-1.4

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.2. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Reading Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Gen. Ed.	31,858	5.9	21.5	+15.6			
	Spec. Ed.	3,715	15.0	39.1	+24.1	9.2	17.6	+8.5
1st	Gen. Ed.	37,642	20.5	26.3	+5.8			
	Spec. Ed.	5,065	40.4	49.8	+9.4	19.9	23.5	+3.6
2nd	Gen. Ed.	39,313	27.4	29.7	+2.3			
	Spec. Ed.	5,343	54.4	57.3	+3.0	27.0	27.6	+0.6
3rd	Gen. Ed.	42,019	24.8	30.6	+5.7			
	Spec. Ed.	5,864	56.5	61.1	+4.6	31.7	30.5	-1.2
4th	Gen. Ed.	42,036	23.7	31.5	+7.8			
	Spec. Ed.	6,256	61.7	66.9	+5.3	38.0	35.4	-2.6
5th	Gen. Ed.	43,104	23.8	31.6	+7.8			
	Spec. Ed.	6,357	64.7	70.9	+6.1	40.9	39.3	-1.6
6th	Gen. Ed.	43,829	21.5	29.7	+8.2			
	Spec. Ed.	6,037	66.9	72.2	+5.3	45.3	42.5	-2.9
7th	Gen. Ed.	44,747	20.8	28.0	+7.1			
	Spec. Ed.	6,002	68.1	73.6	+5.5	47.3	45.6	-1.6
8th	Gen. Ed.	45,543	16.4	24.6	+8.2			
	Spec. Ed.	5,793	63.0	71.7	+8.7	46.5	47.1	+0.6

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.3. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Math Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Gen. Ed.	8,784	58.0	29.7	-28.2			
	Spec. Ed.	798	69.4	41.9	-27.6	11.5	12.1	+0.7
1st	Gen. Ed.	10,544	13.5	6.0	-7.5			
	Spec. Ed.	1,145	23.8	12.6	-11.2	10.3	6.6	-3.6
2nd	Gen. Ed.	10,829	30.8	17.5	-13.3			
	Spec. Ed.	1,282	52.0	30.0	-22.0	21.2	12.5	-8.7
3rd	Gen. Ed.	10,657	36.7	21.9	-14.8			
	Spec. Ed.	1,386	62.4	43.9	-18.5	25.7	22.0	-3.7
4th	Gen. Ed.	10,780	38.5	26.2	-12.3			
	Spec. Ed.	1,556	69.0	51.2	-17.8	30.5	25.0	-5.5
5th	Gen. Ed.	10,823	36.9	27.8	-9.0			
	Spec. Ed.	1,577	72.5	60.7	-11.8	35.7	32.9	-2.7
6th	Gen. Ed.	9,332	40.6	31.5	-9.1			
	Spec. Ed.	1,334	78.0	70.2	-7.8	37.5	38.8	+1.3
7th	Gen. Ed.	8,451	41.8	34.7	-7.1			
	Spec. Ed.	1,211	84.8	78.0	-6.9	43.0	43.2	+0.3
8th	Gen. Ed.	8,462	45.5	39.6	-5.9			
	Spec. Ed.	1,236	86.4	81.8	-4.6	40.9	42.2	+1.3

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.4. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Reading Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
K	Gen. Ed.	8,906	48.1	18.2	-29.9			
	Spec. Ed.	809	56.7	27.8	-28.9	8.6	9.6	+1.0
1st	Gen. Ed.	10,531	7.8	3.3	-4.6			
	Spec. Ed.	1,133	14.7	7.1	-7.6	6.8	3.8	-3.0
2nd	Gen. Ed.	10,742	29.9	17.4	-12.5			
	Spec. Ed.	1,281	52.2	33.3	-19.0	22.3	15.9	-6.5
3rd	Gen. Ed.	10,530	36.0	24.5	-11.5			
	Spec. Ed.	1,352	65.2	50.7	-14.5	29.2	26.2	-3.0
4th	Gen. Ed.	10,512	30.5	22.7	-7.8			
	Spec. Ed.	1,538	64.0	52.7	-11.3	33.5	30.0	-3.5
5th	Gen. Ed.	10,397	43.5	34.2	-9.3			
	Spec. Ed.	1,519	78.9	69.5	-9.4	35.4	35.2	-0.2
6th	Gen. Ed.	8,763	45.3	38.9	-6.4			
	Spec. Ed.	1,267	80.7	78.1	-2.5	35.4	39.2	+3.9
7th	Gen. Ed.	7,838	46.4	40.4	-6.0			
	Spec. Ed.	1,161	85.7	80.0	-5.7	39.3	39.6	+0.3
8th	Gen. Ed.	8,340	45.8	39.6	-6.2			
	Spec. Ed.	1,211	84.7	80.3	-4.4	38.9	40.8	+1.8

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.5. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Math Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
1st	Gen. Ed.	3,617	14.0	9.7	-4.3			
	Spec. Ed.	475	26.7	24.8	-1.9	12.7	15.1	+2.4
2nd	Gen. Ed.	4,556	25.3	14.5	-10.8			
	Spec. Ed.	596	50.8	35.7	-15.1	25.6	21.2	-4.3
3rd	Gen. Ed.	4,682	17.6	16.8	-0.8			
	Spec. Ed.	696	48.7	47.4	-1.3	31.1	30.6	-0.5
4th	Gen. Ed.	4,697	18.8	15.5	-3.3			
	Spec. Ed.	736	53.4	49.5	-3.9	34.6	34.0	-0.6
5th	Gen. Ed.	4,849	19.9	17.8	-2.1			
	Spec. Ed.	723	63.8	58.9	-4.8	43.8	41.1	-2.7
6th	Gen. Ed.	4,553	23.2	25.2	+2.1			
	Spec. Ed.	642	70.9	72.1	+1.2	47.7	46.9	-0.8
7th	Gen. Ed.	4,574	23.1	21.3	-1.8			
	Spec. Ed.	662	71.8	66.5	-5.3	48.7	45.1	-3.5
8th	Gen. Ed.	4,566	20.8	22.2	+1.4			
	Spec. Ed.	603	70.6	71.1	+0.5	49.9	48.9	-0.9

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.6. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Reading and Literacy Assessments by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
Star Literacy								
K	Gen. Ed.	3,904	21.8	14.7	-7.1			
	Spec. Ed.	523	37.1	35.0	-2.1	15.3	20.3	+5.0
1st	Gen. Ed.	3,978	26.5	14.5	-12.0			
	Spec. Ed.	586	50.0	36.2	-13.8	23.5	21.7	-1.8
Star Reading								
2nd	Gen. Ed.	4,884	31.4	18.6	-12.8			
	Spec. Ed.	654	59.0	48.6	-10.4	27.6	30.0	+2.4
3rd	Gen. Ed.	5,129	26.4	17.4	-9.0			
	Spec. Ed.	735	64.1	55.9	-8.2	37.7	38.5	+0.8
4th	Gen. Ed.	5,184	20.7	15.6	-5.1			
	Spec. Ed.	808	62.1	54.7	-7.4	41.4	39.1	-2.3
5th	Gen. Ed.	5,239	22.9	21.5	-1.5			
	Spec. Ed.	762	70.6	65.7	-4.9	47.7	44.3	-3.4
6th	Gen. Ed.	4,838	28.3	28.7	+0.4			
	Spec. Ed.	677	75.6	75.8	+0.1	47.3	47.0	-0.3
7th	Gen. Ed.	5,053	27.5	28.4	+0.9			
	Spec. Ed.	689	70.1	71.3	+1.2	42.6	42.9	+0.3
8th	Gen. Ed.	5,109	29.0	33.4	+4.4			
	Spec. Ed.	660	72.0	74.8	+2.9	43.0	41.5	-1.5

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.7. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA & MDE's K-2 Math Assessments by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments								
K	Gen. Ed.	1,424	2.5	0.0	-2.5			
	Spec. Ed.	165	13.3	0.0	-13.3	10.9	0.0	-10.9
1st	Gen. Ed.	970	0.8	0.0	-0.8			
	Spec. Ed.	113	2.7	0.9	-1.8	1.8	0.9	-0.9
2nd	Gen. Ed.	963	1.9	0.1	-1.8			
	Spec. Ed.	98	12.2	1.0	-11.2	10.4	0.9	-9.5
Smarter Balanced ICA								
3rd	Gen. Ed.	481	60.1	25.6	-34.5			
	Spec. Ed.	69	85.5	58.0	-27.5	25.4	32.4	+7.0
4th	Gen. Ed.	500	44.4	18.8	-25.6			
	Spec. Ed.	63	73.0	52.4	-20.6	28.6	33.6	+5.0
5th	Gen. Ed.	499	30.3	14.0	-16.2			
	Spec. Ed.	63	68.3	57.1	-11.1	38.0	43.1	+5.1
6th	Gen. Ed.	516	38.2	16.5	-21.7			
	Spec. Ed.	70	78.6	65.7	-12.9	40.4	49.2	+8.8
7th	Gen. Ed.	537	26.3	19.4	-6.9			
	Spec. Ed.	62	74.2	74.2	0.0	47.9	54.8	+6.9
8th	Gen. Ed.	513	40.7	33.5	-7.2			
	Spec. Ed.	47	85.1	72.3	-12.8	44.4	38.8	-5.6

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.8. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA & MDE's K-2 ELA Assessments by Special Education Status

Grade	Special Educ. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to General Education Students)		
			Fall	Spring	Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments								
K	Gen. Ed.	1,069	1.3	0.0	-1.3			
	Spec. Ed.	115	0.0	0.0	0.0	(1.3)	0.0	(-1.3)
1st	Gen. Ed.	853	0.2	0.0	-0.2			
	Spec. Ed.	94	5.3	0.0	-5.3	5.1	0.0	-5.1
2nd	Gen. Ed.	830	0.7	0.0	-0.7			
	Spec. Ed.	75	0.0	0.0	0.0	(0.7)	0.0	(-0.7)
Smarter Balanced ICA								
3rd	Gen. Ed.	441	46.5	22.4	-24.0			
	Spec. Ed.	61	72.1	62.3	-9.8	25.6	39.8	+14.2
4th	Gen. Ed.	445	42.0	24.9	-17.1			
	Spec. Ed.	58	72.4	65.5	-6.9	30.4	40.6	+10.2
5th	Gen. Ed.	449	19.4	9.1	-10.2			
	Spec. Ed.	62	56.5	48.4	-8.1	37.1	39.3	+2.2
6th	Gen. Ed.	526	12.4	8.0	-4.4			
	Spec. Ed.	71	52.1	35.2	-16.9	39.8	27.2	-12.5
7th	Gen. Ed.	516	14.1	11.2	-2.9			
	Spec. Ed.	62	58.1	37.1	-21.0	43.9	25.9	-18.1
8th	Gen. Ed.	490	12.2	15.1	+2.9			
	Spec. Ed.	43	51.2	46.5	-4.7	38.9	31.4	-7.5

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.9. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Gen. Ed.	33,536	149.6	*15.3*	162.4	*14.7*	+12.8			
	Spec. Ed.	3,837	143.8	*15.5*	156.0	*16.1*	+12.2	(5.8)	(6.4)	(+0.6)
1st	Gen. Ed.	38,366	165.1	*15.3*	178.2	*15.1*	+13.2			
	Spec. Ed.	5,133	157.7	*16.7*	170.0	*17.7*	+12.3	(7.4)	(8.2)	(+0.8)
2nd	Gen. Ed.	41,472	176.6	*13.9*	189.0	*14.3*	+12.3			
	Spec. Ed.	5,567	167.6	*16.5*	179.6	*17.4*	+12.0	(9.0)	(9.4)	(+0.4)
3rd	Gen. Ed.	42,918	187.8	*13.1*	198.9	*14.5*	+11.1			
	Spec. Ed.	5,944	177.1	*16.5*	187.2	*17.9*	+10.1	(10.7)	(11.7)	(+1.0)
4th	Gen. Ed.	42,533	199.1	*12.9*	208.8	*15.2*	+9.7			
	Spec. Ed.	6,303	185.9	*16.7*	193.9	*18.8*	+8.0	(13.1)	(14.9)	(+1.7)
5th	Gen. Ed.	43,787	208.3	*13.9*	216.2	*16.5*	+7.9			
	Spec. Ed.	6,407	192.3	*17.3*	198.2	*19.1*	+5.9	(16.0)	(18.0)	(+2.0)
6th	Gen. Ed.	44,319	213.8	*13.6*	220.0	*15.7*	+6.2			
	Spec. Ed.	6,016	195.6	*16.7*	199.7	*18.7*	+4.1	(18.2)	(20.3)	(+2.1)
7th	Gen. Ed.	44,933	220.9	*14.7*	225.9	*16.8*	+5.0			
	Spec. Ed.	6,004	199.8	*17.2*	202.9	*18.8*	+3.1	(21.1)	(23.0)	(+1.9)
8th	Gen. Ed.	44,324	226.8	*15.8*	230.4	*17.7*	+3.6			
	Spec. Ed.	5,842	203.8	*17.9*	205.8	*19.0*	+2.0	(23.0)	(24.6)	(+1.5)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.10. Average Scale Scores on NWEA's MAP Growth Reading Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Gen. Ed.	31,858	146.3	*15.3*	158.0	*14.7*	+11.7			
	Spec. Ed.	3,715	141.5	*14.7*	151.3	*14.5*	+9.8	(4.8)	(6.7)	(+1.9)
1st	Gen. Ed.	37,642	161.5	*16.0*	173.2	*15.5*	+11.7			
	Spec. Ed.	5,065	153.9	*16.3*	164.2	*16.9*	+10.3	(7.6)	(9.0)	(+1.4)
2nd	Gen. Ed.	39,313	174.9	*16.9*	185.9	*16.1*	+11.0			
	Spec. Ed.	5,343	164.4	*16.9*	174.9	*17.4*	+10.5	(10.5)	(11.0)	(+0.4)
3rd	Gen. Ed.	42,019	189.7	*16.6*	197.3	*16.2*	+7.6			
	Spec. Ed.	5,864	176.5	*18.3*	184.9	*18.4*	+8.4	(13.2)	(12.4)	(-0.7)
4th	Gen. Ed.	42,036	200.0	*14.9*	205.2	*15.1*	+5.3			
	Spec. Ed.	6,256	184.3	*18.5*	190.5	*18.4*	+6.2	(15.7)	(14.7)	(-0.9)
5th	Gen. Ed.	43,104	206.7	*14.3*	210.2	*14.9*	+3.5			
	Spec. Ed.	6,357	189.9	*18.3*	194.0	*18.5*	+4.0	(16.8)	(16.2)	(-0.6)
6th	Gen. Ed.	43,829	212.7	*14.0*	214.9	*14.6*	+2.2			
	Spec. Ed.	6,037	195.0	*17.2*	197.7	*17.4*	+2.7	(17.6)	(17.2)	(-0.5)
7th	Gen. Ed.	44,747	217.1	*14.2*	218.7	*14.8*	+1.6			
	Spec. Ed.	6,002	198.0	*17.4*	200.1	*17.5*	+2.2	(19.1)	(18.6)	(-0.6)
8th	Gen. Ed.	45,543	220.7	*14.5*	221.4	*15.4*	+0.7			
	Spec. Ed.	5,793	201.0	*17.4*	201.9	*17.8*	+0.9	(19.7)	(19.5)	(-0.2)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.11. Average Scale Scores on Curriculum Associates' i-Ready Math Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Gen. Ed.	8,784	358.7	*36.4*	379.8	*34.2*	+21.1			
	Spec. Ed.	798	348.3	*36.5*	369.4	*33.1*	+21.1	(10.4)	(10.4)	(-0.0)
1st	Gen. Ed.	10,544	381.5	*33.1*	401.7	*34.4*	+20.2			
	Spec. Ed.	1,145	370.5	*34.9*	391.9	*37.4*	+21.4	(11.0)	(9.8)	(-1.2)
2nd	Gen. Ed.	10,829	400.9	*30.4*	418.8	*34.5*	+17.9			
	Spec. Ed.	1,282	383.6	*33.7*	405.0	*36.8*	+21.4	(17.3)	(13.8)	(-3.5)
3rd	Gen. Ed.	10,657	421.4	*29.6*	440.2	*36.5*	+18.8			
	Spec. Ed.	1,386	401.1	*34.6*	417.6	*40.0*	+16.5	(20.3)	(22.5)	(+2.3)
4th	Gen. Ed.	10,780	440.3	*31.0*	458.0	*38.9*	+17.7			
	Spec. Ed.	1,556	414.6	*35.4*	430.1	*41.6*	+15.5	(25.7)	(27.9)	(+2.2)
5th	Gen. Ed.	10,823	457.6	*31.9*	472.0	*38.8*	+14.5			
	Spec. Ed.	1,577	426.8	*37.0*	437.7	*43.5*	+10.9	(30.8)	(34.3)	(+3.5)
6th	Gen. Ed.	9,332	472.6	*34.1*	483.8	*39.9*	+11.2			
	Spec. Ed.	1,334	437.2	*36.9*	443.4	*42.9*	+6.2	(35.4)	(40.4)	(+5.0)
7th	Gen. Ed.	8,451	483.8	*33.7*	493.0	*39.7*	+9.2			
	Spec. Ed.	1,211	441.8	*38.7*	447.8	*44.5*	+6.0	(41.9)	(45.1)	(+3.2)
8th	Gen. Ed.	8,462	493.3	*36.2*	500.7	*40.8*	+7.5			
	Spec. Ed.	1,236	448.2	*41.0*	453.1	*44.9*	+4.9	(45.1)	(47.6)	(+2.5)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.12. Average Scale Scores on Curriculum Associates' i-Ready Reading Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
K	Gen. Ed.	8,906	376.0	*53.9*	405.8	*50.4*	+29.8			
	Spec. Ed.	809	365.1	*54.1*	389.1	*47.0*	+24.0	(10.9)	(16.7)	(+5.8)
1st	Gen. Ed.	10,531	413.7	*52.9*	444.0	*56.4*	+30.4			
	Spec. Ed.	1,133	397.1	*53.0*	425.5	*56.0*	+28.4	(16.5)	(18.5)	(+1.9)
2nd	Gen. Ed.	10,742	455.0	*56.7*	484.1	*61.7*	+29.2			
	Spec. Ed.	1,281	424.9	*58.0*	452.1	*63.7*	+27.2	(30.1)	(32.1)	(+2.0)
3rd	Gen. Ed.	10,530	492.2	*56.8*	515.8	*61.8*	+23.6			
	Spec. Ed.	1,352	452.6	*61.6*	472.1	*66.9*	+19.5	(39.7)	(43.7)	(+4.0)
4th	Gen. Ed.	10,512	521.6	*56.2*	539.6	*60.7*	+17.9			
	Spec. Ed.	1,538	472.5	*61.9*	489.3	*67.7*	+16.8	(49.1)	(50.3)	(+1.2)
5th	Gen. Ed.	10,397	545.7	*54.8*	560.0	*60.0*	+14.3			
	Spec. Ed.	1,519	489.4	*63.3*	504.3	*69.3*	+14.9	(56.2)	(55.6)	(-0.6)
6th	Gen. Ed.	8,763	565.9	*55.9*	575.2	*60.2*	+9.3			
	Spec. Ed.	1,267	505.2	*65.6*	509.4	*70.8*	+4.2	(60.7)	(65.8)	(+5.1)
7th	Gen. Ed.	7,838	580.2	*55.6*	587.7	*59.3*	+7.5			
	Spec. Ed.	1,161	511.2	*65.5*	520.1	*72.0*	+8.9	(69.0)	(67.7)	(-1.3)
8th	Gen. Ed.	8,340	592.3	*55.5*	599.7	*58.8*	+7.4			
	Spec. Ed.	1,211	521.3	*67.6*	527.1	*73.1*	+5.8	(70.9)	(72.6)	(+1.6)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.13. Average Scale Scores on Renaissance Learning's Star Math Assessment by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
1st	Gen. Ed.	3,617	306.2	*94.2*	423.3	*89.9*	+117.1			
	Spec. Ed.	475	264.6	*87.6*	368.6	*99.7*	+104.0	(41.6)	(54.7)	(+13.1)
2nd	Gen. Ed.	4,556	414.7	*92.4*	526.1	*87.5*	+111.5			
	Spec. Ed.	596	354.1	*105.7*	463.3	*113.1*	+109.2	(60.6)	(62.8)	(+2.3)
3rd	Gen. Ed.	4,682	515.6	*82.5*	601.7	*89.7*	+86.1			
	Spec. Ed.	696	438.3	*104.6*	522.8	*123.8*	+84.5	(77.3)	(78.9)	(+1.6)
4th	Gen. Ed.	4,697	595.3	*82.4*	673.5	*91.7*	+78.2			
	Spec. Ed.	736	509.9	*110.5*	579.4	*123.1*	+69.5	(85.4)	(94.1)	(+8.7)
5th	Gen. Ed.	4,849	658.0	*87.9*	727.6	*100.0*	+69.6			
	Spec. Ed.	723	549.6	*114.8*	603.3	*135.0*	+53.6	(108.3)	(124.4)	(+16.0)
6th	Gen. Ed.	4,553	713.1	*88.0*	745.8	*100.2*	+32.7			
	Spec. Ed.	642	587.5	*114.8*	611.0	*131.4*	+23.5	(125.5)	(134.8)	(+9.2)
7th	Gen. Ed.	4,574	749.1	*92.2*	782.3	*102.2*	+33.2			
	Spec. Ed.	662	610.3	*125.4*	641.9	*135.5*	+31.6	(138.7)	(140.3)	(+1.6)
8th	Gen. Ed.	4,566	781.3	*91.8*	799.5	*101.4*	+18.3			
	Spec. Ed.	603	633.0	*128.8*	646.5	*136.2*	+13.5	(148.3)	(153.1)	(+4.8)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.14. Average Scale Scores on Renaissance Learning's Star Reading and Literacy Assessments by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
Star Literacy										
K	Gen. Ed.	3,886	548.5	*117.2*	695.5	*107.1*	+147.0			
	Spec. Ed.	519	504.4	*109.9*	637.8	*125.8*	+133.5	(44.2)	(57.7)	(+13.5)
1st	Gen. Ed.	2,692	638.5	*113.9*	762.1	*84.9*	+123.6			
	Spec. Ed.	467	562.0	*112.5*	693.2	*120.6*	+131.2	(76.5)	(69.0)	(-7.6)
Star Reading										
2nd	Gen. Ed.	4,602	228.0	*159.0*	362.5	*164.0*	+134.4			
	Spec. Ed.	579	151.5	*132.2*	250.9	*158.9*	+99.4	(76.5)	(111.6)	(+35.1)
3rd	Gen. Ed.	5,113	351.6	*158.8*	473.6	*173.8*	+122.0			
	Spec. Ed.	702	223.0	*158.9*	323.8	*193.4*	+100.8	(128.6)	(149.8)	(+21.2)
4th	Gen. Ed.	5,183	478.7	*168.4*	583.2	*194.0*	+104.5			
	Spec. Ed.	796	316.1	*203.6*	396.2	*221.7*	+80.1	(162.6)	(187.0)	(+24.4)
5th	Gen. Ed.	5,239	579.6	*194.9*	668.5	*220.3*	+88.9			
	Spec. Ed.	750	355.4	*201.6*	434.4	*225.8*	+79.0	(224.2)	(234.1)	(+9.9)
6th	Gen. Ed.	4,830	670.7	*223.2*	727.9	*244.0*	+57.2			
	Spec. Ed.	673	415.6	*223.8*	455.9	*234.6*	+40.3	(255.0)	(272.0)	(+16.9)
7th	Gen. Ed.	5,044	758.7	*248.5*	802.3	*262.0*	+43.6			
	Spec. Ed.	687	493.2	*243.8*	528.2	*262.5*	+35.0	(265.5)	(274.1)	(+8.6)
8th	Gen. Ed.	5,107	844.2	*261.3*	867.6	*278.3*	+23.4			
	Spec. Ed.	659	546.9	*269.4*	571.7	*283.7*	+24.8	(297.3)	(295.9)	(-1.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.15. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 Math Assessments by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Gen. Ed.	1,424	495.1	*28.2*	543.9	*34.5*	+48.8			
	Spec. Ed.	165	478.6	*30.1*	524.9	*36.2*	+46.3	(16.5)	(18.9)	(+2.5)
1st	Gen. Ed.	970	495.6	*26.8*	536.4	*31.9*	+40.8			
	Spec. Ed.	113	478.2	*23.3*	515.9	*35.9*	+37.8	(17.5)	(20.5)	(+3.0)
2nd	Gen. Ed.	963	496.3	*30.7*	541.6	*29.5*	+45.2			
	Spec. Ed.	98	475.5	*28.2*	524.2	*33.4*	+48.6	(20.8)	(17.4)	(-3.4)
Smarter Balanced ICA										
3rd	Gen. Ed.	481	2358.6	*63.3*	2419.6	*66.4*	+61.0			
	Spec. Ed.	69	2318.7	*74.6*	2356.8	*85.8*	+38.1	(39.8)	(62.7)	(+22.9)
4th	Gen. Ed.	500	2410.9	*69.6*	2468.3	*73.9*	+57.4			
	Spec. Ed.	63	2353.9	*89.1*	2407.4	*86.0*	+53.5	(57.0)	(60.9)	(+3.9)
5th	Gen. Ed.	499	2487.0	*72.9*	2527.7	*84.6*	+40.6			
	Spec. Ed.	63	2418.1	*71.2*	2442.2	*89.4*	+24.1	(68.9)	(85.5)	(+16.5)
6th	Gen. Ed.	516	2490.2	*68.3*	2537.8	*83.9*	+47.6			
	Spec. Ed.	70	2417.2	*69.0*	2439.7	*80.7*	+22.4	(73.0)	(98.1)	(+25.1)
7th	Gen. Ed.	537	2530.2	*85.6*	2562.1	*97.3*	+31.9			
	Spec. Ed.	62	2431.9	*86.9*	2421.0	*98.4*	-10.9	(98.3)	(141.1)	(+42.8)
8th	Gen. Ed.	513	2519.8	*86.8*	2551.1	*110.5*	+31.3			
	Spec. Ed.	47	2433.4	*74.9*	2452.4	*97.9*	+18.9	(86.4)	(98.8)	(+12.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.4.16. Average Scale Scores on DRC's Smarter Balanced ICA and MDE's K-2 ELA Assessments by Special Education Status

Grade	Special Educ. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to General Education Students)		
			Fall		Spring		Change	Fall	Spring	Change
MDE K-2 Benchmark Assessments										
K	Gen. Ed.	1,069	494.4	*25.6*	534.5	*27.9*	+40.1			
	Spec. Ed.	115	484.3	*20.1*	516.5	*25.7*	+32.2	(10.1)	(18.0)	(+7.9)
1st	Gen. Ed.	853	502.8	*27.9*	537.7	*27.4*	+35.0			
	Spec. Ed.	94	480.8	*25.8*	518.1	*27.9*	+37.3	(22.0)	(19.6)	(-2.4)
2nd	Gen. Ed.	830	494.9	*29.1*	525.0	*28.8*	+30.1			
	Spec. Ed.	75	478.8	*24.4*	502.5	*27.7*	+23.7	(16.1)	(22.5)	(+6.4)
Smarter Balanced ICA										
3rd	Gen. Ed.	441	2375.0	*77.9*	2426.4	*81.0*	+51.5			
	Spec. Ed.	61	2330.5	*73.5*	2355.8	*74.4*	+25.4	(44.5)	(70.6)	(+26.1)
4th	Gen. Ed.	445	2430.4	*73.5*	2468.7	*84.0*	+38.3			
	Spec. Ed.	58	2379.7	*71.3*	2376.6	*88.0*	-3.1	(50.7)	(92.1)	(+41.4)
5th	Gen. Ed.	449	2506.9	*83.3*	2543.7	*86.0*	+36.8			
	Spec. Ed.	62	2432.4	*78.6*	2450.5	*94.4*	+18.2	(74.6)	(93.2)	(+18.6)
6th	Gen. Ed.	526	2552.3	*85.6*	2586.1	*89.2*	+33.8			
	Spec. Ed.	71	2457.0	*79.1*	2476.9	*89.8*	+19.9	(95.3)	(109.2)	(+13.9)
7th	Gen. Ed.	516	2568.8	*84.6*	2597.1	*102.1*	+28.3			
	Spec. Ed.	62	2466.5	*85.1*	2482.7	*92.0*	+16.1	(102.3)	(114.4)	(+12.1)
8th	Gen. Ed.	490	2589.1	*93.6*	2599.6	*106.9*	+10.5			
	Spec. Ed.	43	2488.0	*63.6*	2481.6	*94.8*	-6.3	(101.1)	(118.0)	(+16.8)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Instructional Modality

Table 3.5.1 through Table 3.5.8 summarize differences in benchmark assessment outcomes by instructional modality for the NWEA MAP Growth and Curriculum Associates i-Ready assessments. Appendix Tables A.21 through A.28 show the corresponding results for the Renaissance Learning Star 360 and Smarter Balanced ICA and K-2 assessments, but we do not interpret these tables because most of these districts were in-person for the entirety of the school year.

We compare benchmark outcomes across districts that offered only in-person, hybrid, or remote instruction during both the fall and spring benchmark administration periods (i.e., "In-Person All Year," "Hybrid All Year," and "Remote All Year," respectively); districts that offered in-person instruction during one administration period and hybrid or remote instruction during the other period (i.e., "In-Person Part-Year"); and districts that offered hybrid instruction during one administration period and remote instruction during the other period (i.e., "Hybrid Part-Year"). Results are presented separately for each instructional modality, and districts that were "In-Person All Year" are the reference category when calculating outcome gaps.

As mentioned earlier, district-level instructional modality decisions changed throughout the school year. These changes highlight potentially irregular testing environments for some students between the fall and spring assessment periods which may lead to inflated fall scale scores among students who were tested remotely and had access to additional resources (e.g., parental help), especially among students in "Remote All Year" districts.

For NWEA MAP Growth districts (Table 3.5.1 and Table 3.5.2), students in grades one through eight who were remote during both benchmark testing administrations ("Remote All Year") started and ended the year with the highest percentage of students scoring "significantly below grade level" in both mathematics and reading. First through 8th-grade students who were "In-Person All Year" or "In-Person Part-Year" typically started and ended the year with the lowest percentage of students scoring "significantly below grade level" in both mathematics and reading.

For nearly every instructional modality and grade level, the percentage of students in NWEA MAP Growth districts who scored "significantly behind grade level" in mathematics and reading grew throughout the 2020-21 school year ("In-Person All Year" districts were the only subgroup that saw declining proportions of "significantly behind grade level" students in a few early grade levels). However, any increase in the proportion of students scoring "significantly behind grade level" for "In-Person All Year" districts was consistently smaller than increases for districts offering other instructional modalities, hence, gaps between students who were in "In-Person All

Year" districts and students in districts offering other modalities grew for almost all subgroups.

The only subgroup where this trend did not hold was for students in "In-Person Part-Year" districts. For example, among 2nd-grade NWEA MAP Growth students, 6 percentage points fewer students in "In-Person Part-Year" districts scored "significantly behind grade level" in mathematics in the fall compared to students in "In-Person All-Year" districts. By the spring, that gap reversed and three percentage points more students in "In-Person Part-Year" districts scored "significantly behind grade level" compared to students "In-Person All Year" districts. In other words, the initial fall disparity between students in "In-Person Part-Year" and "In-Person All Year" districts compensated for the larger change in the percentage of students who scored "significantly behind grade level" in "In-Person Part-Year" districts and effectively lowered that subgroup gap.

The most alarming increases in gaps between modalities occurred for students enrolled in "Remote All Year" districts. For instance, while 26% of "Remote All Year" 1st graders scored "significantly behind grade level" on the fall mathematics NWEA MAP growth assessment, this increased to 47% by the spring test, for an increase of 21 percentage points. This was relative to a 2% *decrease* in the percentage of "In-Person All Year" students who scored "significantly behind grade level" over the course of the 2020-21 school year, and the gap between these groups grew from two to 25 percentage points by spring 2021. These gap increases were, for the most part, larger in magnitude in reading than in mathematics, especially for later grades.

Similar to NWEA MAP Growth districts, 2nd-8th -grade students in Curriculum Associates i-Ready districts who were "Remote All Year" started and ended the year with the highest percentage of students scoring "significantly below grade level." This group usually experienced smaller decreases, and sometimes increases, in the percentage of students scoring "significantly below grade level" between the fall and spring compared to a consistently declining proportion of students in "In-Person All Year" districts who scored the same way. Thus, mathematics and reading gaps between these two subgroups increased across all grade levels. For example, among 3rd-grade Curriculum Associates i-Ready students in "Remote All Year" districts, 15 percentage points more students scored "significantly behind grade level" in mathematics in the fall and 33 percentage points more in the spring, equaling an 18 percentage point gap increase in the share of students scoring "significantly behind grade level" compared to students in "In-Person All Year" districts.

We note that we see some inconsistencies in the fall data for kindergarten and 1st graders. In particular, data from the Curriculum Associates i-Ready districts suggest that much lower proportions of kindergarten and 1st-grade students in remote and

hybrid districts were testing "significantly below grade level" than in later grades, and even in some cases than students in districts operating in-person. This may be due in part to the fact that Curriculum Associates' definitions for "significantly behind grade level" on the i-Ready assessments are slightly different for K-1 students than for students in later grades. However, we find similar patterns in the scale score data as well. One possible explanation is that K-1 students who took the assessments remotely had assistance from their caregivers at home, thus making it hard to discern their true skill level from the assessments.

Table 3.5.5 and Table 3.5.6 provide average scale scores for students in NWEA MAP Growth districts across instructional modalities. We find that within grade levels, average scale scores at the start of the school year were relatively similar across modalities. Across grades 3-8, students in "Remote All Year" districts scored slightly lower in the fall in both mathematics and reading compared to their counterparts in districts offering some form of in-person instruction, while students in "In-Person All Year" or "In-Person Part-Year" districts typically scored the highest. Average scale score differences in mathematics and reading between students in "In-Person All Year" districts and those in "Remote All Year" districts were about 30 to 50% of the size of the standard deviation associated with "In-Person All Year" students at the beginning of the school year, meaning that the average student in a "Remote All Year" district scored between the 31st and 38th percentiles for "In-Person All Year" districts.

Between the fall and spring semesters, NWEA MAP Growth average scale scores in both mathematics and reading increased for all subgroups and across all grade levels. However, increases among students in "Remote All Year" districts were almost always smaller than those of students in "In-Person All Year" districts," and gaps between these groups increased throughout the school year for 1st-8th grade. In fact, in 3rd-8th grades, mathematics and reading gaps between students in "In-Person All Year" districts and those in districts offering hybrid or remote instruction all increased between the fall and spring.

Similar to NWEA MAP Growth districts, students in Curriculum Associates i-Ready districts exhibited modest differences in average scale scores in both subjects at the start of the school year. Third through 8th-grade students in "Remote All Year" districts had the lowest fall average scale scores in mathematics and reading, while students in "In-Person Part-Year" and "Hybrid All Year" districts had the highest average scale scores. Average mathematics and reading scale score differences between students in "In-Person All Year" districts and those in "Remote All Year" districts were roughly 20 to 40% of the size of the standard deviation associated with "In-Person All Year" districts, suggesting that the average student in a "Remote All Year" district scored between the 34th and 42nd percentiles for students in "In-Person All Year" districts in the fall.

As discussed above, we found some puzzling inconsistencies in early grades scale score data in Curriculum Associates i-Ready districts; K-3 students in "Remote All Year" districts were the only subgroup to see decreases in average scale scores between the fall and spring. Again, this may be related to remote testing irregularities inflating fall scores. Groups with fall-spring decreases in average scale scores all had the highest standard deviations in the fall and lower standard deviations in the spring, signaling a change in the overall distribution of scores for each specific group.

Concerning fall-to-spring gap changes, average mathematics and reading scale score increases for students in "In-Person All Year" districts were typically larger than those for students in "In-Person Part-Year," "Hybrid Part-Year," and "Remote All Year" districts, but smaller than those for students in "Hybrid All Year" districts. Hence, given initial average scale score gaps in the fall, mathematics and reading gaps for students in "Remote All Year" and "Hybrid Part-Year" typically increased while gaps for "In-Person Part-Year" students always decreased.

Table 3.5.1. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Math Assessment by Modality

Grade	Modality	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to In-Person All Year)		
			Fall	Spring	Change	Fall	Spring	Change
	In-Person All Year	19,521	11.4	19.1	+7.6			
	Hybrid All Year	4,911	13.5	26.4	+13.0	2.0	7.4	+5.3
K	Remote All Year	1,338	9.1	24.5	+15.4	(2.3)	5.4	R
	In-Person Part-Year	8,921	7.8	18.5	+10.6	(3.6)	(0.6)	(-3.0)
	Hybrid Part-Year	2,882	12.2	28.8	+16.6	0.8	9.7	+9.0
	In-Person All Year	20,958	23.9	22.1	-1.8			
	Hybrid All Year	5,287	24.6	31.7	+7.1	0.7	9.7	+8.9
1st	Remote All Year	1,665	26.2	47.2	+21.0	2.3	25.1	+22.8
	In-Person Part-Year	10,440	16.8	23.9	+7.1	(7.1)	1.9	R
	Hybrid Part-Year	5,161	22.2	40.4	+18.3	(1.7)	18.4	R
	In-Person All Year	22,507	26.7	26.5	-0.2			
	Hybrid All Year	5,310	29.6	40.3	+10.7	2.9	13.7	+10.8
2nd	Remote All Year	2,267	38.3	58.8	+20.5	11.6	32.2	+20.7
	In-Person Part-Year	11,154	21.0	29.7	+8.8	(5.8)	3.2	R
	Hybrid Part-Year	5,803	28.2	49.3	+21.0	1.5	22.7	+21.2
	In-Person All Year	23,112	33.4	30.5	-2.9			
	Hybrid All Year	5,329	35.2	42.5	+7.3	1.9	12.1	+10.2
3rd	Remote All Year	2,526	51.9	68.8	+16.9	18.6	38.3	+19.8
	In-Person Part-Year	12,231	29.8	36.6	+6.9	(3.6)	6.2	R
	Hybrid Part-Year	5,572	41.2	56.6	+15.4	7.8	26.1	+18.3
	In-Person All Year	23,267	23.4	25.0	+1.7			
	Hybrid All Year	5,701	27.8	36.2	+8.4	4.4	11.1	+6.7
4th	Remote All Year	2,506	44.6	60.4	+15.8	21.2	35.4	+14.1
	In-Person Part-Year	12,193	23.5	30.8	+7.3	0.2	5.8	+5.6
	Hybrid Part-Year	5,078	35.7	50.1	+14.4	12.4	25.1	+12.7
	In-Person All Year	23,495	34.6	39.1	+4.5			
	Hybrid All Year	5,743	40.3	49.3	+9.0	5.7	10.2	+4.5
5th	Remote All Year	2,526	56.4	71.5	+15.2	21.8	32.4	+10.6
	In-Person Part-Year	12,250	32.9	43.7	+10.8	(1.7)	4.6	R
	Hybrid Part-Year	6,038	46.6	61.1	+14.5	12.0	21.9	+9.9
	In-Person All Year	22,638	30.3	34.2	+3.9			
	Hybrid All Year	5,659	35.9	44.2	+8.3	5.6	10.0	+4.4
6th	Remote All Year	2,998	47.8	61.0	+13.2	17.5	26.7	+9.2
	In-Person Part-Year	12,258	31.2	38.6	+7.4	0.9	4.4	+3.5
	Hybrid Part-Year	6,486	42.3	53.0	+10.6	12.0	18.7	+6.7
	In-Person All Year	22,821	32.0	35.1	+3.0			
	Hybrid All Year	5,836	36.8	43.4	+6.6	4.8	8.4	+3.6
7th	Remote All Year	2,923	50.7	59.3	+8.6	18.7	24.2	+5.5
	In-Person Part-Year	12,708	31.4	37.5	+6.1	(0.7)	2.4	R
	Hybrid Part-Year	6,176	45.0	52.1	+7.1	13.0	17.0	+4.0
	In-Person All Year	22,616	23.1	29.4	+6.4			
	Hybrid All Year	5,829	28.2	35.0	+6.8	5.2	5.6	+0.4
8th	Remote All Year	2,862	41.1	48.8	+7.8	18.0	19.4	+1.4
	In-Person Part-Year	12,144	25.5	33.9	+8.4	2.4	4.5	+2.1
	Hybrid Part-Year	6,438	33.6	43.2	+9.5	10.6	13.7	+3.2

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

Table 3.5.2. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Reading Assessment by Modality

Grade	Modality	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to In-Person All Year)		
			Fall	Spring	Change	Fall	Spring	Change
K	In-Person All Year	18,288	7.4	21.6	+14.2			
	Hybrid All Year	4,692	9.0	30.0	+21.0	1.6	8.4	+6.8
	Remote All Year	1,339	3.3	26.0	+22.7	(4.1)	4.4	R
	In-Person Part-Year	8,536	5.0	21.5	+16.5	(2.4)	(0.0)	(-2.3)
	Hybrid Part-Year	2,996	6.1	29.7	+23.6	(1.3)	8.1	R
1st	In-Person All Year	20,216	25.2	25.2	0.0			
	Hybrid All Year	5,011	23.8	32.9	+9.1	(1.4)	7.7	R
	Remote All Year	1,696	25.3	47.7	+22.4	0.1	22.5	+22.4
	In-Person Part-Year	10,627	16.5	25.5	+9.0	(8.7)	0.3	R
	Hybrid Part-Year	5,287	22.1	41.4	+19.3	(3.1)	16.2	R
2nd	In-Person All Year	21,258	31.8	27.9	-3.9			
	Hybrid All Year	5,073	31.8	35.1	+3.3	(0.0)	7.2	R
	Remote All Year	2,251	39.3	51.1	+11.8	7.5	23.2	+15.7
	In-Person Part-Year	11,114	23.2	28.7	+5.4	(8.6)	0.7	R
	Hybrid Part-Year	5,045	35.3	53.3	+18.0	3.4	25.4	+21.9
3rd	In-Person All Year	22,004	27.9	28.7	+0.8			
	Hybrid All Year	5,099	28.0	36.4	+8.4	0.1	7.7	+7.6
	Remote All Year	2,378	41.8	57.9	+16.1	13.9	29.1	+15.3
	In-Person Part-Year	12,345	24.0	31.8	+7.7	(3.9)	3.0	R
	Hybrid Part-Year	6,045	35.7	48.3	+12.6	7.8	19.6	+11.8
4th	In-Person All Year	22,548	26.2	30.3	+4.1			
	Hybrid All Year	5,661	30.0	38.8	+8.9	3.8	8.6	+4.7
	Remote All Year	2,561	44.1	58.6	+14.5	18.0	28.4	+10.4
	In-Person Part-Year	12,339	25.2	34.6	+9.4	(1.0)	4.3	R
	Hybrid Part-Year	5,096	37.3	50.0	+12.7	11.2	19.8	+8.6
5th	In-Person All Year	22,961	26.0	31.5	+5.5			
	Hybrid All Year	5,663	29.9	38.8	+8.9	3.9	7.3	+3.4
	Remote All Year	2,594	45.7	56.7	+11.0	19.7	25.2	+5.5
	In-Person Part-Year	12,090	26.5	34.7	+8.2	0.5	3.2	+2.7
	Hybrid Part-Year	6,015	37.4	48.5	+11.2	11.4	17.0	+5.7
6th	In-Person All Year	22,375	23.3	29.9	+6.6			
	Hybrid All Year	5,554	30.2	39.5	+9.3	6.8	9.5	+2.7
	Remote All Year	2,938	39.5	50.5	+11.0	16.2	20.6	+4.4
	In-Person Part-Year	12,293	24.8	32.8	+8.0	1.5	2.8	+1.4
	Hybrid Part-Year	6,419	34.8	44.1	+9.3	11.5	14.2	+2.7
7th	In-Person All Year	22,441	23.5	29.4	+5.9			
	Hybrid All Year	5,679	30.6	37.5	+6.9	7.2	8.2	+1.0
	Remote All Year	2,840	38.3	47.1	+8.8	14.8	17.7	+2.9
	In-Person Part-Year	13,062	23.4	30.9	+7.5	(0.1)	1.5	R
	Hybrid Part-Year	6,251	34.2	42.1	+7.8	10.8	12.7	+1.9
8th	In-Person All Year	22,819	18.6	26.3	+7.7			
	Hybrid All Year	5,882	26.1	33.2	+7.2	7.4	6.9	-0.5
	Remote All Year	2,849	32.4	41.2	+8.8	13.8	14.8	+1.1
	In-Person Part-Year	13,078	19.5	28.3	+8.9	0.8	2.0	+1.2
	Hybrid Part-Year	6,402	28.6	37.8	+9.2	9.9	11.5	+1.5

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

Table 3.5.3. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Math Assessment by Modality

Grade	Modality	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to In-Person All Year)		
			Fall	Spring	Change	Fall	Spring	Change
K	In-Person All Year	5,686	66.2	31.0	-35.2			
	Hybrid All Year	109	45.9	27.5	-18.3	(20.4)	(3.5)	(-16.9)
	Remote All Year	145	48.3	51.7	+3.4	(18.0)	20.7	R
	In-Person Part-Year	2,578	39.9	24.1	-15.7	(26.4)	(6.9)	(-19.5)
	Hybrid Part-Year	1,522	64.5	43.0	-21.6	(1.7)	12.0	R
1st	In-Person All Year	7,004	15.3	6.6	-8.7			
	Hybrid All Year	104	15.4	3.8	-11.5	0.1	(2.8)	R
	Remote All Year	145	18.6	15.9	-2.8	3.3	9.3	+6.0
	In-Person Part-Year	3,078	9.1	4.1	-5.0	(6.2)	(2.5)	(-3.7)
	Hybrid Part-Year	1,797	19.8	10.9	-9.0	4.5	4.2	-0.2
2nd	In-Person All Year	7,158	35.5	20.0	-15.5			
	Hybrid All Year	158	28.5	11.4	-17.1	(7.1)	(8.6)	(+1.6)
	Remote All Year	122	44.3	40.2	-4.1	8.7	20.2	+11.4
	In-Person Part-Year	3,293	22.4	12.7	-9.7	(13.2)	(7.3)	(-5.9)
	Hybrid Part-Year	1,811	42.9	25.1	-17.8	7.4	5.1	-2.2
3rd	In-Person All Year	7,214	41.0	24.0	-17.1			
	Hybrid All Year	115	38.3	20.0	-18.3	(2.8)	(4.0)	(+1.2)
	Remote All Year	177	55.9	56.5	+0.6	14.9	32.5	+17.6
	In-Person Part-Year	3,316	29.5	18.0	-11.5	(11.6)	(6.0)	(-5.6)
	Hybrid Part-Year	1,638	53.1	36.1	-16.9	12.0	12.1	+0.1
4th	In-Person All Year	7,170	45.1	29.9	-15.2			
	Hybrid All Year	102	37.3	21.6	-15.7	(7.8)	(8.3)	(+0.5)
	Remote All Year	221	63.3	48.4	-14.9	18.3	18.5	+0.3
	In-Person Part-Year	3,527	30.0	20.8	-9.2	(15.1)	(9.1)	(-6.0)
	Hybrid Part-Year	1,745	54.0	42.6	-11.3	8.9	12.7	+3.8
5th	In-Person All Year	7,223	43.9	32.8	-11.1			
	Hybrid All Year	307	28.0	17.6	-10.4	(15.9)	(15.2)	(-0.7)
	Remote All Year	192	61.5	62.5	+1.0	17.5	29.7	+12.2
	In-Person Part-Year	3,455	31.2	25.1	-6.1	(12.7)	(7.7)	(-5.0)
	Hybrid Part-Year	1,662	54.0	43.1	-10.8	10.0	10.3	+0.3
6th	In-Person All Year	5,542	48.6	37.5	-11.1			
	Hybrid All Year	271	31.4	19.9	-11.4	(17.3)	(17.6)	(+0.3)
	Remote All Year	219	70.8	61.6	-9.1	22.1	24.1	+2.0
	In-Person Part-Year	3,383	33.7	28.2	-5.5	(14.9)	(9.3)	(-5.6)
	Hybrid Part-Year	1,637	59.3	49.8	-9.5	10.6	12.3	+1.6
7th	In-Person All Year	5,079	51.0	42.3	-8.7			
	Hybrid All Year	276	27.2	19.9	-7.2	(23.8)	(22.4)	(-1.5)
	Remote All Year	201	68.2	63.2	-5.0	17.1	20.9	+3.7
	In-Person Part-Year	2,962	36.0	31.7	-4.3	(15.1)	(10.6)	(-4.5)
	Hybrid Part-Year	1,530	60.3	52.7	-7.6	9.3	10.4	+1.1
8th	In-Person All Year	5,143	55.3	47.7	-7.6			
	Hybrid All Year	233	32.6	31.8	-0.9	(22.7)	(15.9)	(-6.7)
	Remote All Year	208	69.2	65.9	-3.4	14.0	18.2	+4.2
	In-Person Part-Year	2,881	36.4	34.2	-2.3	(18.8)	(13.5)	(-5.3)
	Hybrid Part-Year	1,583	63.4	55.2	-8.1	8.1	7.5	-0.5

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

Table 3.5.4. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Reading Assessment by Modality

Grade	Modality	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to In-Person All Year)		
			Fall	Spring	Change	Fall	Spring	Change
K	In-Person All Year	5,623	54.1	19.4	-34.7			
	Hybrid All Year	273	54.9	9.9	-45.1	0.8	(9.5)	R
	Remote All Year	130	29.2	30.8	+1.5	(24.9)	11.4	R
	In-Person Part-Year	2,609	33.0	14.7	-18.4	(21.1)	(4.7)	(-16.4)
	Hybrid Part-Year	1,547	54.9	28.3	-26.6	0.8	8.9	+8.2
1st	In-Person All Year	6,863	9.7	4.0	-5.7			
	Hybrid All Year	278	4.3	0.4	-4.0	(5.4)	(3.6)	(-1.8)
	Remote All Year	132	7.6	12.1	+4.5	(2.1)	8.1	R
	In-Person Part-Year	3,027	5.4	2.5	-2.9	(4.4)	(1.5)	(-2.9)
	Hybrid Part-Year	1,817	9.6	4.3	-5.3	(0.1)	0.3	R
2nd	In-Person All Year	7,060	35.1	21.2	-13.9			
	Hybrid All Year	280	22.9	8.9	-13.9	(12.3)	(12.2)	(-0.0)
	Remote All Year	119	39.5	37.8	-1.7	4.4	16.6	+12.3
	In-Person Part-Year	3,171	22.6	13.3	-9.3	(12.5)	(7.8)	(-4.6)
	Hybrid Part-Year	1,825	38.0	21.2	-16.8	2.9	(0.0)	R
3rd	In-Person All Year	6,914	42.1	28.6	-13.5			
	Hybrid All Year	302	28.5	16.6	-11.9	(13.6)	(12.1)	(-1.6)
	Remote All Year	167	52.7	50.3	-2.4	10.6	21.7	+11.1
	In-Person Part-Year	3,261	29.8	20.8	-9.0	(12.3)	(7.8)	(-4.4)
	Hybrid Part-Year	1,652	47.2	35.9	-11.3	5.1	7.3	+2.2
4th	In-Person All Year	7,012	36.8	27.1	-9.7			
	Hybrid All Year	240	25.8	10.4	-15.4	(11.0)	(16.6)	(+5.7)
	Remote All Year	204	42.2	41.2	-1.0	5.4	14.1	+8.8
	In-Person Part-Year	3,251	26.5	20.8	-5.8	(10.3)	(6.3)	(-4.0)
	Hybrid Part-Year	1,771	40.5	34.7	-5.8	3.7	7.6	+3.9
5th	In-Person All Year	6,878	50.1	40.1	-10.1			
	Hybrid All Year	292	36.6	24.7	-12.0	(13.5)	(15.4)	(+1.9)
	Remote All Year	160	61.9	66.3	+4.4	11.7	26.2	+14.4
	In-Person Part-Year	3,335	39.6	31.1	-8.5	(10.5)	(9.0)	(-1.5)
	Hybrid Part-Year	1,685	55.6	46.9	-8.7	5.5	6.8	+1.3
6th	In-Person All Year	5,497	50.9	43.0	-7.8			
	Hybrid All Year	259	42.9	35.5	-7.3	(8.0)	(7.5)	(-0.5)
	Remote All Year	205	73.2	68.8	-4.4	22.3	25.8	+3.5
	In-Person Part-Year	2,837	40.8	37.8	-3.0	(10.0)	(5.2)	(-4.8)
	Hybrid Part-Year	1,605	60.4	55.8	-4.6	9.5	12.7	+3.2
7th	In-Person All Year	4,726	54.1	47.2	-6.9			
	Hybrid All Year	271	39.9	25.8	-14.0	(14.3)	(21.3)	(+7.1)
	Remote All Year	192	68.8	61.5	-7.3	14.6	14.3	-0.4
	In-Person Part-Year	2,685	41.9	39.0	-2.9	(12.2)	(8.1)	(-4.0)
	Hybrid Part-Year	1,498	60.7	55.2	-5.5	6.6	8.0	+1.4
8th	In-Person All Year	5,115	54.3	46.4	-7.9			
	Hybrid All Year	271	38.0	39.5	+1.5	(16.3)	(6.9)	(-9.4)
	Remote All Year	198	66.7	61.6	-5.1	12.3	15.2	+2.9
	In-Person Part-Year	2,727	38.9	35.9	-3.0	(15.4)	(10.6)	(-4.9)
	Hybrid Part-Year	1,592	60.4	53.1	-7.3	6.0	6.6	+0.6

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

Table 3.5.5. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by Modality

Grade	Modality	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to In-Person All Year)		
			Fall		Spring		Change	Fall	Spring	Change
	In-Person All Year	19,521	147.5	*14.3*	161.8	*13.9*	+14.2			
	Hybrid All Year	4,911	146.7	*14.5*	158.8	*14.7*	+12.1	(0.8)	(3.0)	(+2.1)
K	Remote All Year	1,338	153.4	*18.3*	163.6	*19.0*	+10.3	5.8	1.9	-4.0
	In-Person Part-Year	8,921	152.3	*15.9*	162.8	*14.9*	+10.5	4.8	1.1	-3.7
	Hybrid Part-Year	2,882	151.9	*18.5*	160.7	*18.5*	+8.8	4.4	(1.0)	R
	In-Person All Year	20,958	162.5	*14.2*	178.4	*14.2*	+15.9			
	Hybrid All Year	5,287	162.8	*14.8*	175.2	*14.9*	+12.4	0.3	(3.2)	R
1st	Remote All Year	1,665	164.5	*17.7*	171.2	*18.8*	+6.6	2.0	(7.2)	R
	In-Person Part-Year	10,440	166.6	*15.1*	178.5	*15.5*	+11.9	4.1	0.2	-3.9
	Hybrid Part-Year	5,161	168.8	*20.1*	174.5	*19.3*	+5.7	6.2	(3.9)	R
	In-Person All Year	22,507	174.8	*13.8*	189.7	*13.8*	+14.9			
	Hybrid All Year	5,310	174.0	*14.2*	185.3	*14.2*	+11.3	(0.8)	(4.4)	(+3.6)
2nd	Remote All Year	2,267	172.7	*16.2*	179.7	*16.7*	+7.0	(2.1)	(10.0)	(+8.0)
	In-Person Part-Year	11,154	178.1	*14.5*	189.3	*15.2*	+11.2	3.2	(0.5)	R
	Hybrid Part-Year	5,803	176.8	*16.5*	183.1	*16.8*	+6.3	1.9	(6.7)	R
	In-Person All Year	23,112	186.6	*13.2*	200.1	*14.1*	+13.5			
	Hybrid All Year	5,329	185.8	*13.6*	195.9	*15.0*	+10.1	(0.8)	(4.2)	(+3.5)
3rd	Remote All Year	2,526	181.3	*15.1*	186.8	*16.1*	+5.5	(5.3)	(13.3)	(+8.0)
	In-Person Part-Year	12,231	188.5	*14.1*	198.1	*15.2*	+9.6	1.9	(2.0)	R
	Hybrid Part-Year	5,572	185.3	*16.1*	191.4	*17.3*	+6.1	(1.3)	(8.7)	(+7.5)
	In-Person All Year	23,267	198.0	*13.2*	209.8	*15.3*	+11.8			
	Hybrid All Year	5,701	196.3	*13.4*	204.8	*15.4*	+8.5	(1.7)	(5.0)	(+3.3)
4th	Remote All Year	2,506	191.4	*14.9*	195.9	*16.2*	+4.5	(6.6)	(13.9)	(+7.3)
	In-Person Part-Year	12,193	199.1	*14.5*	207.4	*16.5*	+8.3	1.1	(2.4)	R
	Hybrid Part-Year	5,078	195.4	*16.8*	200.6	*18.5*	+5.2	(2.5)	(9.2)	(+6.7)
	In-Person All Year	23,495	207.0	*14.5*	216.5	*16.9*	+9.5			
	Hybrid All Year	5,743	204.9	*14.2*	212.4	*16.4*	+7.4	(2.1)	(4.2)	(+2.1)
5th	Remote All Year	2,526	199.8	*15.3*	203.2	*16.7*	+3.4	(7.2)	(13.3)	(+6.1)
	In-Person Part-Year	12,250	208.3	*15.6*	214.9	*18.3*	+6.6	1.3	(1.6)	R
	Hybrid Part-Year	6,038	204.1	*17.6*	208.0	*19.5*	+3.9	(2.9)	(8.5)	(+5.6)
	In-Person All Year	22,638	212.5	*14.4*	219.9	*16.4*	+7.4			
	Hybrid All Year	5,659	210.4	*14.6*	216.0	*16.6*	+5.5	(2.1)	(3.9)	(+1.9)
6th	Remote All Year	2,998	206.7	*15.4*	210.0	*16.9*	+3.3	(5.8)	(9.9)	(+4.1)
	In-Person Part-Year	12,258	213.2	*15.5*	218.5	*17.5*	+5.3	0.7	(1.4)	R
	Hybrid Part-Year	6,486	209.4	*17.1*	213.1	*19.1*	+3.7	(3.1)	(6.8)	(+3.7)
	In-Person All Year	22,821	219.2	*15.6*	225.0	*17.6*	+5.8			
	Hybrid All Year	5,836	217.6	*15.8*	222.1	*17.8*	+4.5	(1.6)	(2.9)	(+1.3)
7th	Remote All Year	2,923	212.9	*16.3*	215.6	*18.0*	+2.8	(6.3)	(9.4)	(+3.1)
	In-Person Part-Year	12,708	220.5	*16.7*	224.7	*18.8*	+4.2	1.3	(0.3)	R
	Hybrid Part-Year	6,176	215.4	*18.6*	218.7	*20.5*	+3.3	(3.8)	(6.3)	(+2.5)
	In-Person All Year	22,616	225.1	*16.6*	229.2	*18.3*	+4.1			
	Hybrid All Year	5,829	223.3	*17.5*	226.7	*19.1*	+3.3	(1.8)	(2.6)	(+0.7)
8th	Remote All Year	2,862	218.4	*18.0*	221.3	*19.5*	+2.9	(6.8)	(7.9)	(+1.2)
	In-Person Part-Year	12,144	225.3	*18.0*	228.2	*19.8*	+2.9	0.1	(1.0)	R
	Hybrid Part-Year	6,438	222.3	*19.8*	224.3	*21.9*	+2.0	(2.8)	(4.9)	(+2.1)

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

Table 3.5.6. Average Scale Scores on NWEA's MAP Growth Reading Assessment by Modality

Grade	Modality	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to In-Person All Year)		
			Fall		Spring		Change	Fall	Spring	Change
	In-Person All Year	18,288	143.6	*13.8*	157.2	*14.0*	+13.6			
	Hybrid All Year	4,692	143.2	*14.1*	154.5	*14.4*	+11.3	(0.4)	(2.7)	(+2.3)
K	Remote All Year	1,339	153.2	*17.7*	159.9	*17.9*	+6.7	9.6	2.7	-6.9
	In-Person Part-Year	8,536	149.6	*16.3*	158.3	*14.9*	+8.7	6.0	1.1	-4.9
	Hybrid Part-Year	2,996	149.8	*17.6*	156.7	*16.9*	+7.0	6.1	(0.5)	R
	In-Person All Year	20,216	158.4	*14.7*	172.9	*14.6*	+14.5			
	Hybrid All Year	5,011	159.4	*15.0*	169.9	*14.9*	+10.5	1.0	(3.0)	R
1st	Remote All Year	1,696	161.3	*18.0*	165.9	*18.0*	+4.6	2.8	(7.0)	R
	In-Person Part-Year	10,627	163.5	*15.5*	173.7	*15.6*	+10.2	5.1	0.8	-4.3
	Hybrid Part-Year	5,287	165.4	*21.0*	170.0	*19.8*	+4.6	7.0	(2.9)	R
	In-Person All Year	21,258	172.9	*17.0*	186.4	*15.8*	+13.5			
	Hybrid All Year	5,073	172.7	*16.8*	183.4	*16.1*	+10.7	(0.1)	(2.9)	(+2.8)
2nd	Remote All Year	2,251	172.7	*19.5*	178.5	*19.5*	+5.8	(0.2)	(7.9)	(+7.7)
	In-Person Part-Year	11,114	177.0	*16.9*	186.2	*16.3*	+9.3	4.1	(0.1)	R
	Hybrid Part-Year	5,045	171.4	*17.2*	176.9	*16.6*	+5.5	(1.4)	(9.4)	(+8.0)
	In-Person All Year	22,004	188.3	*17.0*	198.0	*15.8*	+9.7			
	Hybrid All Year	5,099	187.7	*17.1*	194.6	*16.5*	+6.9	(0.5)	(3.4)	(+2.8)
3rd	Remote All Year	2,378	182.5	*18.5*	186.3	*18.7*	+3.8	(5.8)	(11.7)	(+5.9)
	In-Person Part-Year	12,345	190.2	*16.9*	196.9	*16.6*	+6.7	2.0	(1.1)	R
	Hybrid Part-Year	6,045	185.8	*18.9*	190.5	*18.7*	+4.7	(2.4)	(7.4)	(+5.0)
	In-Person All Year	22,548	198.8	*15.5*	205.5	*15.1*	+6.7			
	Hybrid All Year	5,661	197.1	*15.9*	202.3	*15.8*	+5.2	(1.7)	(3.2)	(+1.5)
4th	Remote All Year	2,561	191.8	*18.0*	194.4	*18.4*	+2.6	(7.0)	(11.1)	(+4.1)
	In-Person Part-Year	12,339	199.5	*15.9*	204.0	*16.0*	+4.5	0.7	(1.5)	R
	Hybrid Part-Year	5,096	195.0	*18.1*	198.2	*18.3*	+3.2	(3.8)	(7.3)	(+3.5)
	In-Person All Year	22,961	205.6	*15.0*	210.1	*15.2*	+4.5			
	Hybrid All Year	5,663	203.8	*15.6*	207.0	*16.0*	+3.2	(1.8)	(3.0)	(+1.3)
5th	Remote All Year	2,594	198.0	*17.4*	200.4	*17.6*	+2.4	(7.5)	(9.7)	(+2.1)
	In-Person Part-Year	12,090	205.8	*15.7*	208.8	*16.3*	+3.0	0.3	(1.3)	R
	Hybrid Part-Year	6,015	201.9	*17.8*	203.8	*18.3*	+1.9	(3.7)	(6.2)	(+2.6)
	In-Person All Year	22,375	211.7	*14.6*	214.5	*14.9*	+2.9			
	Hybrid All Year	5,554	208.7	*15.2*	210.9	*15.6*	+2.3	(3.0)	(3.6)	(+0.6)
6th	Remote All Year	2,938	205.7	*16.7*	206.9	*17.4*	+1.1	(5.9)	(7.7)	(+1.7)
	In-Person Part-Year	12,293	211.9	*15.4*	213.7	*15.8*	+1.7	0.3	(0.9)	R
	Hybrid Part-Year	6,419	208.2	*17.3*	209.5	*18.1*	+1.4	(3.5)	(5.0)	(+1.5)
	In-Person All Year	22,441	215.6	*15.2*	217.9	*15.3*	+2.3			
	Hybrid All Year	5,679	212.9	*16.0*	214.6	*16.4*	+1.6	(2.6)	(3.3)	(+0.6)
7th	Remote All Year	2,840	210.4	*16.8*	211.3	*17.5*	+0.9	(5.2)	(6.6)	(+1.4)
	In-Person Part-Year	13,062	216.4	*15.7*	217.6	*16.0*	+1.2	0.9	(0.2)	R
	Hybrid Part-Year	6,251	212.5	*17.7*	213.5	*18.2*	+1.0	(3.1)	(4.3)	(+1.3)
	In-Person All Year	22,819	219.5	*15.3*	220.6	*16.0*	+1.1			
	Hybrid All Year	5,882	216.2	*16.4*	217.4	*16.8*	+1.2	(3.3)	(3.2)	(-0.1)
8th	Remote All Year	2,849	213.5	*17.1*	214.5	*17.6*	+1.0	(6.0)	(6.1)	(+0.0)
	In-Person Part-Year	13,078	219.9	*15.9*	220.2	*16.8*	+0.3	0.4	(0.3)	R
	Hybrid Part-Year	6,402	216.2	*18.0*	216.3	*18.9*	+0.1	(3.3)	(4.3)	(+1.0)

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

Table 3.5.7. Average Scale Scores on Curriculum Associates' i-Ready Math Assessment by Modality

Grade	Modality	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to In-Person All Year)		
			Fall		Spring		Change	Fall	Spring	Change
	In-Person All Year	5,686	353.0	*35.4*	379.2	*34.5*	+26.2			
	Hybrid All Year	109	362.8	*29.1*	380.2	*29.9*	+17.4	9.8	1.0	-8.9
K	Remote All Year	145	369.2	*39.8*	366.9	*33.0*	-2.3	16.2	(12.3)	R
	In-Person Part-Year	2,578	371.6	*36.3*	382.4	*32.8*	+10.9	18.6	3.2	-15.4
	Hybrid Part-Year	1,522	352.7	*35.1*	370.6	*35.5*	+17.9	(0.3)	(8.6)	(+8.4)
	In-Person All Year	7,004	378.8	*33.2*	400.9	*35.1*	+22.2			
	Hybrid All Year	104	379.5	*32.4*	405.3	*30.3*	+25.8	0.7	4.4	+3.7
1st	Remote All Year	145	383.6	*38.0*	381.2	*35.4*	-2.4	4.9	(19.7)	R
	In-Person Part-Year	3,078	388.8	*32.6*	407.3	*32.0*	+18.6	10.0	6.4	-3.6
	Hybrid Part-Year	1,797	372.3	*32.3*	387.9	*34.8*	+15.6	(6.5)	(13.1)	(+6.6)
	In-Person All Year	7,158	397.1	*31.1*	416.6	*35.8*	+19.5			
	Hybrid All Year	158	397.3	*28.7*	419.0	*30.6*	+21.7	0.2	2.4	+2.2
2nd	Remote All Year	122	395.7	*34.1*	393.9	*27.1*	-1.8	(1.4)	(22.7)	(+21.3)
	In-Person Part-Year	3,293	407.9	*30.5*	425.3	*33.1*	+17.4	10.8	8.7	-2.1
	Hybrid Part-Year	1,811	390.3	*28.4*	405.4	*31.0*	+15.2	(6.8)	(11.1)	(+4.3)
	In-Person All Year	7,214	417.9	*30.0*	438.1	*37.5*	+20.1			
	Hybrid All Year	115	421.3	*27.6*	437.5	*33.4*	+16.2	3.4	(0.6)	R
3rd	Remote All Year	177	408.4	*33.2*	407.8	*32.1*	-0.6	(9.6)	(30.3)	(+20.7)
	In-Person Part-Year	3,316	426.6	*31.7*	445.7	*36.5*	+19.1	8.6	7.6	-1.1
	Hybrid Part-Year	1,638	409.2	*29.1*	420.8	*33.5*	+11.6	(8.8)	(17.3)	(+8.5)
	In-Person All Year	7,170	434.8	*31.5*	453.6	*39.8*	+18.8			
	Hybrid All Year	102	443.8	*31.5*	460.5	*36.3*	+16.7	9.0	6.9	-2.1
4th	Remote All Year	221	424.7	*30.8*	430.5	*34.7*	+5.8	(10.1)	(23.1)	(+13.0)
	In-Person Part-Year	3,527	446.5	*34.3*	465.1	*40.4*	+18.6	11.7	11.5	-0.2
	Hybrid Part-Year	1,745	427.5	*29.0*	437.1	*34.0*	+9.6	(7.3)	(16.5)	(+9.2)
	In-Person All Year	7,223	451.3	*33.3*	466.4	*41.2*	+15.1			
	Hybrid All Year	307	460.7	*30.2*	480.7	*33.6*	+20.0	9.4	14.3	+4.9
5th	Remote All Year	192	437.6	*28.1*	440.2	*31.6*	+2.6	(13.7)	(26.2)	(+12.5)
	In-Person Part-Year	3,455	462.8	*35.7*	476.7	*40.6*	+13.9	11.5	10.3	-1.2
	Hybrid Part-Year	1,662	443.9	*29.7*	453.2	*35.7*	+9.3	(7.4)	(13.2)	(+5.8)
	In-Person All Year	5,542	465.0	*35.2*	477.7	*42.4*	+12.7			
	Hybrid All Year	271	476.1	*32.4*	495.4	*33.6*	+19.3	11.1	17.8	+6.6
6th	Remote All Year	219	450.1	*27.5*	456.6	*31.9*	+6.5	(14.9)	(21.1)	(+6.2)
	In-Person Part-Year	3,383	478.9	*37.5*	486.9	*42.1*	+8.0	13.9	9.2	-4.6
	Hybrid Part-Year	1,637	456.1	*32.0*	463.3	*39.0*	+7.2	(8.9)	(14.4)	(+5.5)
	In-Person All Year	5,079	475.3	*35.5*	485.5	*42.7*	+10.2			
	Hybrid All Year	276	492.7	*32.8*	503.7	*36.4*	+10.9	17.5	18.2	+0.7
7th	Remote All Year	201	461.1	*33.8*	466.1	*37.2*	+4.9	(14.1)	(19.4)	(+5.3)
	In-Person Part-Year	2,962	488.6	*38.1*	495.5	*42.8*	+6.9	13.3	10.0	-3.3
	Hybrid Part-Year	1,530	467.6	*34.1*	475.1	*40.2*	+7.6	(7.7)	(10.3)	(+2.6)
	In-Person All Year	5,143	483.3	*39.2*	492.6	*44.1*	+9.3			
	Hybrid All Year	233	504.6	*34.8*	507.3	*41.4*	+2.7	21.3	14.6	-6.6
8th	Remote All Year	208	469.4	*36.6*	473.3	*41.4*	+3.9	(13.9)	(19.3)	(+5.4)
	In-Person Part-Year	2,881	499.7	*39.6*	503.4	*43.3*	+3.7	16.4	10.7	-5.7
	Hybrid Part-Year	1,583	478.5	*35.6*	486.4	*43.8*	+8.0	(4.8)	(6.2)	(+1.4)

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

Table 3.5.8. Average Scale Scores on Curriculum Associates' i-Ready Reading Assessment by Modality

Grade	Modality	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to In-Person All Year)		
			Fall		Spring		Change	Fall	Spring	Change
	In-Person All Year	5,623	370.7	*54.8*	405.2	*51.4*	+34.5			
	Hybrid All Year	273	367.7	*42.2*	412.6	*39.2*	+44.9	(3.0)	7.4	R
K	Remote All Year	130	407.9	*64.6*	393.5	*55.2*	-14.4	37.2	(11.7)	R
	In-Person Part-Year	2,609	389.9	*52.4*	408.4	*48.0*	+18.5	19.2	3.2	-16.0
	Hybrid Part-Year	1,547	367.2	*50.3*	392.4	*51.0*	+25.2	(3.5)	(12.8)	(+9.3)
	In-Person All Year	6,863	409.3	*54.0*	441.5	*58.0*	+32.2			
	Hybrid All Year	278	412.6	*45.1*	459.0	*51.6*	+46.4	3.3	17.4	+14.1
1st	Remote All Year	132	410.7	*57.8*	410.3	*53.2*	-0.4	1.4	(31.2)	R
	In-Person Part-Year	3,027	423.9	*50.9*	452.0	*53.3*	+28.2	14.6	10.5	-4.1
	Hybrid Part-Year	1,817	402.7	*49.9*	426.4	*51.9*	+23.8	(6.6)	(15.1)	(+8.5)
	In-Person All Year	7,060	447.4	*57.8*	477.8	*64.1*	+30.3			
	Hybrid All Year	280	458.2	*50.1*	500.4	*56.1*	+42.2	10.8	22.7	+11.9
2nd	Remote All Year	119	448.7	*60.7*	440.0	*56.5*	-8.8	1.3	(37.8)	R
	In-Person Part-Year	3,171	467.0	*56.6*	494.9	*60.1*	+27.9	19.6	17.2	-2.4
	Hybrid Part-Year	1,825	440.9	*52.6*	464.6	*55.0*	+23.7	(6.6)	(13.2)	(+6.6)
	In-Person All Year	6,914	484.3	*58.9*	510.5	*64.8*	+26.1			
	Hybrid All Year	302	497.8	*49.7*	522.7	*53.6*	+24.9	13.5	12.3	-1.2
3rd	Remote All Year	167	474.2	*61.0*	465.7	*61.8*	-8.5	(10.1)	(44.8)	(+34.7)
	In-Person Part-Year	3,261	499.9	*58.0*	522.4	*61.6*	+22.4	15.6	11.9	-3.7
	Hybrid Part-Year	1,652	477.0	*55.5*	491.6	*60.4*	+14.6	(7.3)	(18.8)	(+11.5)
	In-Person All Year	7,012	512.2	*59.8*	532.6	*64.3*	+20.4			
	Hybrid All Year	240	528.1	*51.7*	556.5	*54.6*	+28.4	16.0	23.9	+8.0
4th	Remote All Year	204	501.4	*55.6*	501.7	*60.2*	+0.3	(10.8)	(30.9)	(+20.1)
	In-Person Part-Year	3,251	527.8	*58.6*	543.6	*62.7*	+15.9	15.6	11.1	-4.5
	Hybrid Part-Year	1,771	505.8	*54.3*	516.3	*59.4*	+10.5	(6.4)	(16.2)	(+9.8)
	In-Person All Year	6,878	535.5	*59.8*	550.8	*65.0*	+15.3			
	Hybrid All Year	292	551.9	*53.6*	568.9	*60.4*	+17.0	16.4	18.1	+1.7
5th	Remote All Year	160	517.0	*56.1*	516.7	*54.3*	-0.3	(18.5)	(34.1)	(+15.6)
	In-Person Part-Year	3,335	549.5	*57.7*	563.9	*61.3*	+14.4	13.9	13.1	-0.8
	Hybrid Part-Year	1,685	529.2	*54.1*	540.7	*60.8*	+11.6	(6.4)	(10.1)	(+3.7)
	In-Person All Year	5,497	556.7	*60.9*	568.1	*65.0*	+11.4			
	Hybrid All Year	259	567.5	*56.0*	582.5	*47.5*	+15.0	10.7	14.3	+3.6
6th	Remote All Year	205	535.2	*53.9*	539.2	*59.9*	+4.1	(21.6)	(28.9)	(+7.3)
	In-Person Part-Year	2,837	569.5	*59.9*	575.0	*64.4*	+5.4	12.8	6.8	-6.0
	Hybrid Part-Year	1,605	544.7	*57.4*	549.0	*66.3*	+4.2	(12.0)	(19.2)	(+7.2)
	In-Person All Year	4,726	567.6	*61.8*	577.2	*64.9*	+9.7			
	Hybrid All Year	271	586.1	*52.3*	599.8	*50.5*	+13.6	18.6	22.5	+3.9
7th	Remote All Year	192	556.8	*52.0*	561.3	*56.1*	+4.5	(10.8)	(15.9)	(+5.1)
	In-Person Part-Year	2,685	584.1	*60.0*	588.7	*64.3*	+4.6	16.5	11.5	-5.0
	Hybrid Part-Year	1,498	559.1	*60.1*	564.6	*65.2*	+5.5	(8.5)	(12.7)	(+4.2)
	In-Person All Year	5,115	578.3	*62.6*	589.1	*64.4*	+10.7			
	Hybrid All Year	271	599.8	*53.8*	599.0	*61.0*	-0.8	21.5	9.9	-11.6
8th	Remote All Year	198	559.7	*64.5*	562.7	*66.6*	+3.0	(18.7)	(26.4)	(+7.8)
	In-Person Part-Year	2,727	598.2	*59.0*	602.2	*63.4*	+4.0	19.8	13.1	-6.7
	Hybrid Part-Year	1,592	573.3	*58.8*	577.4	*67.2*	+4.1	(5.1)	(11.7)	(+6.6)

Notes: Additional information for this table can be found in Report Note 6 at the end of this report.

2019 M-STEP Proficiency Levels

Table 3.6.1 through Table 3.6.16 summarize differences in benchmark assessment outcomes by 2019 M-STEP proficiency levels. We present results separately for students who scored "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" on the 2019 mathematics and ELA assessments, and students who were "Proficient" in 2019 were the reference category when calculating outcome gaps. Because students do not take the M-STEP until the 3rd grade, and the most recent M-STEP before the 2020-21 school year was taken in 2019, this portion of our analysis is constrained to the 5th-8th grades.

Across all grades, subjects, and assessment providers, 2019 M-STEP proficiency levels were clearly related to the percentage of students scoring "significantly behind grade level" in both the fall and spring for each subgroup; students who scored "Not Proficient" on the 2019 M-STEP both started and ended the year with the largest percentage of students scoring "significantly behind grade level," followed by students who scored "Partially Proficient," and "Proficient." Students who scored "Advanced" on the 2019 M-STEP both started and ended 2020-21 school year with the lowest percentage of students scoring "significantly behind grade level."

Notably, in NWEA MAP Growth districts, a higher percentage of students across all grades, subjects, and 2019 M-STEP proficiency levels scored "significantly behind grade level" at the end of the school year compared to the beginning. This implies that all students progressed at a slower rate this year than would have been expected in a pre-pandemic year, regardless of their prior achievement level. Further, across all grade levels in NWEA MAP Growth districts, there were large increases in the percent of students who scored "significantly behind grade level" by the end of the year among those who had scored "Partially Proficient" on the 2019 M-STEP. These changes lead to larger spring mathematics and reading gaps between students scoring "Partially Proficient" and "Proficient" on the 2019 M-STEP, suggesting that the students who were struggling yet not "significantly below grade level" before the pandemic were the most hurt by the pandemic school year. Together, these consistent increases in the proportion of students scoring "significantly behind grade level" for all prior proficiency levels exacerbated the pre-existing gaps between "Proficient" students and those in the lower proficiency levels ("Not Proficient" and "Partially Proficient"). While students who scored "Advanced" in the 2018-2019 school year also saw increases in the percentage of students who were "significantly behind grade level" over the 2020-21 school year these increases were very small and led to large gaps between "Advanced" and "Proficient" groups of students.

For students in Curriculum Associates i-Ready districts, both mathematics and reading gaps across all grade levels decreased between students who scored "Proficient" on the 2019 M-STEP and those who scored at any other proficiency level. These changes occurred because a large proportion of "Not Proficient" and "Partially Proficient" students scored "significantly behind grade level" in the fall and fall-to-spring decreases in the proportion of students scoring "significantly behind grade level" were greater for these groups relatively to students who scored "Proficient" on the 2019 M-STEP. Similarly, fall-to-spring decreases for "Advanced" students were smaller relative to students who scored "Proficient" on the 2019 M-STEP, decreasing gaps across both subjects and all grade levels.

In Renaissance Learning Star 360 districts, we see similar gap decreases between students who scored "Proficient" on the 2019 M-STEP and those who scored "Not Proficient" or "Partially Proficient" except for students in 8th grade. Finally, for Smarter Balanced ICA districts, the gaps between students who scored "Not Proficient" and "Proficient" increased in mathematics and decreased in reading across most grade levels, while gaps between "Partially Proficient" and "Proficient" students decreased in both subjects and all grade levels.

Table 3.6.9 through Table 3.6.16 show the same analyses, but for average scale scores. Across all assessment providers, both subjects, and both testing periods, average scale scores for students who scored "Not Proficient" or "Partially Proficient" on the 2019 M-STEP lagged students who scored "Proficient" on the same assessment. Conversely, "Proficient" students, on average, scored lower compared to students who scored "Advanced" on the 2019 M STEP. Further, across all assessment providers and nearly all grade levels, students in each prior proficiency level, on average, saw increases in both mathematics and reading scale scores between the fall and spring (except 8th-grade "Not Proficient" students in Smarter Balanced ICA districts).

The magnitude of these increases in average scale scores from fall to spring differ across 2019 M-STEP proficiency levels, with average scores for "Not Proficient" and "Advanced" students typically increasing the least and most, respectively, across all vendors, grades, and subjects. Across all prior proficiency and grade levels, mathematics gaps between each student subgroup and those who scored "Proficient" on the 2019 M-STEP always increased. This trend holds for reading gaps across most grade levels, however, there were a few instances where reading gaps between "Proficient" students and students in other proficiency levels decreased slightly by the spring (i.e., 8th-grade reading gaps for i-Ready "Not Proficient," i-Ready "Advanced," and Star 360 "Advanced" students). It is important to note that for students who took the NWEA MAP Growth and Curriculum Associate i-Ready assessments, the changes in average scale score achievement gaps over the course of the 2020-21 school year were quite small.

Table 3.6.1. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Mathematics Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	12,068	86.0	90.8	+4.7	75.9	69.9	-6.0
	Partially Proficient	12,547	44.8	59.7	+14.9	34.7	38.9	+4.2
	Proficient	13,368	10.1	20.8	+10.7			
	Advanced	9,536	1.2	2.9	+1.8	(9.0)	(17.9)	(+8.9)
6th	Not Proficient	10,402	86.5	92.3	+5.8	80.2	81.6	+1.4
	Partially Proficient	16,069	37.5	49.9	+12.4	31.3	39.2	+7.9
	Proficient	12,777	6.2	10.7	+4.4			
	Advanced	8,449	0.6	1.1	+0.5	(5.6)	(9.6)	(+4.0)
7th	Not Proficient	16,055	78.4	84.3	+6.0	74.2	77.7	+3.5
	Partially Proficient	14,436	25.5	34.0	+8.6	21.3	27.4	+6.1
	Proficient	9,156	4.1	6.6	+2.5			
	Advanced	8,528	0.3	0.7	+0.4	(3.8)	(5.9)	(+2.1)
8th	Not Proficient	15,117	66.8	78.9	+12.2	65.7	76.5	+10.8
	Partially Proficient	15,174	12.9	23.4	+10.5	11.8	21.0	+9.2
	Proficient	9,607	1.1	2.4	+1.3			
	Advanced	7,612	0.1	0.3	+0.2	(0.9)	(2.1)	(+1.1)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.2. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Reading Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	13,232	68.6	78.2	+9.6	61.7	65.1	+3.4
	Partially Proficient	11,715	27.9	41.2	+13.3	21.0	28.1	+7.1
	Proficient	10,888	6.9	13.1	+6.1			
	Advanced	10,936	1.1	2.2	+1.2	(5.9)	(10.8)	(+5.0)
6th	Not Proficient	14,634	63.5	74.1	+10.7	57.3	61.2	+3.9
	Partially Proficient	9,896	23.6	37.3	+13.7	17.4	24.3	+6.9
	Proficient	10,536	6.2	13.0	+6.8			
	Advanced	12,121	0.9	2.1	+1.2	(5.3)	(10.9)	(+5.6)
7th	Not Proficient	14,203	64.4	73.4	+9.0	59.3	63.6	+4.3
	Partially Proficient	10,438	23.5	35.9	+12.4	18.4	26.1	+7.7
	Proficient	14,139	5.1	9.8	+4.8			
	Advanced	9,125	0.4	1.1	+0.7	(4.7)	(8.7)	(+4.1)
8th	Not Proficient	13,741	56.6	69.9	+13.3	54.5	64.4	+9.8
	Partially Proficient	13,207	15.1	27.8	+12.7	13.0	22.2	+9.2
	Proficient	14,531	2.1	5.6	+3.5			
	Advanced	7,163	0.1	0.5	+0.4	(2.0)	(5.1)	(+3.1)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.3. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Math Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	3,940	83.7	70.2	-13.5	73.5	65.3	-8.3
	Partially Proficient	2,668	39.2	23.6	-15.7	29.1	18.6	-10.5
	Proficient	2,807	10.2	5.0	-5.2			
	Advanced	2,187	1.5	1.2	-0.3	(8.7)	(3.8)	(-4.9)
6th	Not Proficient	3,143	90.9	79.1	-11.8	81.5	73.4	-8.1
	Partially Proficient	2,891	46.2	30.3	-15.8	36.8	24.6	-12.1
	Proficient	2,160	9.4	5.7	-3.7			
	Advanced	1,788	1.8	1.2	-0.7	(7.6)	(4.5)	(-3.0)
7th	Not Proficient	3,785	84.4	74.6	-9.8	75.8	68.0	-7.8
	Partially Proficient	2,149	35.5	25.0	-10.4	26.9	18.5	-8.4
	Proficient	1,482	8.6	6.5	-2.0			
	Advanced	1,584	2.7	2.0	-0.8	(5.9)	(4.6)	(-1.3)
8th	Not Proficient	3,830	88.1	79.8	-8.3	80.1	72.3	-7.7
	Partially Proficient	2,446	38.8	30.5	-8.3	30.7	23.0	-7.7
	Proficient	1,508	8.0	7.5	-0.5			
	Advanced	1,223	0.9	1.1	+0.2	(7.1)	(6.4)	(-0.7)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.4. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Reading Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	4,376	85.0	74.1	-10.8	70.1	65.6	-4.5
	Partially Proficient	2,424	46.2	28.5	-17.6	31.3	20.1	-11.2
	Proficient	2,073	14.9	8.5	-6.4			
	Advanced	2,229	2.4	1.3	-1.1	(12.4)	(7.2)	(-5.2)
6th	Not Proficient	3,877	85.9	79.0	-6.9	66.0	65.3	-0.7
	Partially Proficient	1,657	47.7	37.6	-10.1	27.8	23.9	-3.9
	Proficient	1,721	19.9	13.7	-6.2			
	Advanced	2,055	2.9	2.4	-0.5	(17.0)	(11.3)	(-5.7)
7th	Not Proficient	3,294	86.7	79.8	-7.0	66.2	62.3	-3.9
	Partially Proficient	1,598	54.3	42.2	-12.1	33.8	24.7	-9.1
	Proficient	2,161	20.5	17.5	-3.0			
	Advanced	1,287	1.7	2.0	+0.3	(18.8)	(15.5)	(-3.3)
8th	Not Proficient	3,401	87.3	79.5	-7.8	72.5	68.4	-4.1
	Partially Proficient	2,172	50.6	41.9	-8.8	35.9	30.8	-5.1
	Proficient	2,199	14.8	11.1	-3.7			
	Advanced	1,097	1.3	1.0	-0.3	(13.5)	(10.0)	(-3.5)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.5. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Math Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	1,069	69.4	67.3	-2.2	61.3	60.0	-1.2
	Partially Proficient	1,392	31.1	25.2	-5.9	23.0	18.0	-5.0
	Proficient	1,659	8.1	7.2	-0.9			
	Advanced	1,209	1.5	0.8	-0.7	(6.6)	(6.4)	(-0.2)
6th	Not Proficient	942	77.3	78.1	+0.8	71.3	68.2	-3.1
	Partially Proficient	1,734	32.5	34.4	+2.0	26.5	24.5	-2.0
	Proficient	1,440	6.0	9.9	+4.0			
	Advanced	824	1.7	2.2	+0.5	(4.3)	(7.7)	(+3.5)
7th	Not Proficient	1,554	66.0	60.6	-5.3	60.9	56.0	-4.9
	Partially Proficient	1,564	21.0	19.5	-1.5	15.9	14.9	-1.1
	Proficient	990	5.1	4.6	-0.4			
	Advanced	861	1.2	1.0	-0.1	(3.9)	(3.6)	(-0.3)
8th	Not Proficient	1,388	64.7	66.7	+2.0	62.1	62.8	+0.7
	Partially Proficient	1,680	19.0	21.1	+2.1	16.4	17.2	+0.8
	Proficient	1,072	2.6	3.9	+1.3			
	Advanced	796	0.4	0.5	+0.1	(2.2)	(3.4)	(+1.2)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.6. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Reading Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	1,262	71.9	68.1	-3.9	60.6	56.9	-3.7
	Partially Proficient	1,443	37.4	33.6	-3.7	26.0	22.4	-3.5
	Proficient	1,492	11.4	11.2	-0.2			
	Advanced	1,545	1.7	1.2	-0.5	(9.7)	(10.0)	(+0.3)
6th	Not Proficient	1,411	73.6	75.7	+2.1	57.0	60.3	+3.3
	Partially Proficient	1,108	41.5	42.2	+0.7	24.9	26.8	+1.9
	Proficient	1,241	16.6	15.4	-1.2			
	Advanced	1,470	2.8	3.5	+0.7	(13.8)	(11.9)	(-1.9)
7th	Not Proficient	1,485	72.4	73.5	+1.1	60.4	60.0	-0.4
	Partially Proficient	1,178	38.8	38.7	-0.1	26.8	25.2	-1.6
	Proficient	1,729	12.0	13.5	+1.6			
	Advanced	1,047	1.4	2.1	+0.7	(10.5)	(11.4)	(+0.9)
8th	Not Proficient	1,420	75.8	78.5	+2.7	65.5	65.4	-0.0
	Partially Proficient	1,532	37.0	46.4	+9.4	26.7	33.3	+6.7
	Proficient	1,767	10.4	13.1	+2.7			
	Advanced	791	0.3	0.6	+0.4	(10.1)	(12.4)	(+2.3)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.7. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA Math Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	73	83.6	65.8	-17.8	54.5	55.9	+1.4
	Partially Proficient	132	51.5	24.2	-27.3	22.4	14.4	-8.1
	Proficient	172	29.1	9.9	-19.2			
	Advanced	158	3.2	0.6	-2.5	(25.9)	(9.3)	(-16.7)
6th	Not Proficient	62	88.7	71.0	-17.7	61.0	68.6	+7.6
	Partially Proficient	201	68.2	39.3	-28.9	40.4	36.9	-3.6
	Proficient	166	27.7	2.4	-25.3			
	Advanced	142	5.6	0.0	-5.6	(22.1)	(2.4)	(-19.7)
7th	Not Proficient	130	76.9	70.8	-6.2	70.1	67.0	-3.1
	Partially Proficient	189	34.4	22.8	-11.6	27.6	19.0	-8.6
	Proficient	132	6.8	3.8	-3.0			
	Advanced	120	1.7	0.0	-1.7	(5.2)	(3.8)	(-1.4)
8th	Not Proficient	127	86.6	82.7	-3.9	63.5	69.6	+6.1
	Partially Proficient	170	57.1	46.5	-10.6	34.0	33.4	-0.6
	Proficient	130	23.1	13.1	-10.0			
	Advanced	122	6.6	0.0	-6.6	(16.5)	(13.1)	(-3.4)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.8. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA ELA Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Proficient)		
			Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	62	72.6	56.5	-16.1	60.0	53.3	-6.7
	Partially Proficient	112	43.8	23.2	-20.5	31.2	20.1	-11.1
	Proficient	127	12.6	3.1	-9.4			
	Advanced	185	2.7	1.1	-1.6	(9.9)	(2.1)	(-7.8)
6th	Not Proficient	89	49.4	41.6	-7.9	43.6	38.6	-4.9
	Partially Proficient	148	31.1	14.9	-16.2	25.2	11.9	-13.3
	Proficient	171	5.8	2.9	-2.9			
	Advanced	173	0.0	0.6	+0.6	(5.8)	(2.3)	(-3.5)
7th	Not Proficient	112	52.7	37.5	-15.2	45.3	33.0	-12.4
	Partially Proficient	127	22.8	19.7	-3.1	15.5	15.2	-0.3
	Proficient	177	7.3	4.5	-2.8			
	Advanced	137	0.7	1.5	+0.7	(6.6)	(3.1)	(-3.6)
8th	Not Proficient	116	46.6	52.6	+6.0	44.8	46.3	+1.5
	Partially Proficient	140	17.1	14.3	-2.9	15.4	8.0	-7.4
	Proficient	175	1.7	6.3	+4.6			
	Advanced	90	0.0	0.0	0.0	(1.7)	(6.3)	(+4.6)

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.9. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	12,068	191.3	*11.3*	196.2	*13.0*	+4.9	(20.7)	(24.5)	(+3.8)
	Partially Proficient	12,547	203.3	*8.6*	210.3	*10.3*	+6.9	(8.7)	(10.4)	(+1.7)
	Proficient	13,368	212.0	*8.2*	220.6	*10.2*	+8.6			
	Advanced	9,536	223.3	*10.5*	233.9	*12.0*	+10.6	11.3	13.2	+2.0
6th	Not Proficient	10,402	195.1	*11.4*	198.3	*12.7*	+3.2	(23.0)	(27.0)	(+4.0)
	Partially Proficient	16,069	208.9	*8.6*	214.2	*9.9*	+5.4	(9.3)	(11.1)	(+1.8)
	Proficient	12,777	218.1	*7.9*	225.3	*9.2*	+7.2			
	Advanced	8,449	229.4	*9.9*	238.0	*10.5*	+8.6	11.3	12.7	+1.4
7th	Not Proficient	16,055	204.2	*11.9*	206.9	*13.2*	+2.7	(22.9)	(26.5)	(+3.6)
	Partially Proficient	14,436	218.3	*8.5*	223.0	*10.0*	+4.7	(8.8)	(10.4)	(+1.6)
	Proficient	9,156	227.1	*8.1*	233.4	*9.5*	+6.3			
	Advanced	8,528	238.5	*10.6*	245.7	*11.3*	+7.2	11.4	12.3	+0.9
8th	Not Proficient	15,117	208.4	*12.4*	210.0	*13.4*	+1.5	(25.7)	(28.7)	(+3.0)
	Partially Proficient	15,174	223.7	*8.9*	227.1	*10.2*	+3.3	(10.4)	(11.6)	(+1.2)
	Proficient	9,607	234.2	*8.3*	238.7	*9.3*	+4.6			
	Advanced	7,612	247.1	*10.4*	252.9	*11.4*	+5.7	13.0	14.1	+1.2

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.10. Average Scale Scores on NWEA's MAP Growth Reading Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	13,232	190.4	*13.6*	193.5	*14.2*	+3.1	(20.1)	(20.7)	(+0.6)
	Partially Proficient	11,715	202.4	*10.1*	205.8	*10.8*	+3.4	(8.0)	(8.4)	(+0.4)
	Proficient	10,888	210.4	*8.7*	214.2	*9.2*	+3.8			
	Advanced	10,936	220.0	*8.7*	223.7	*9.1*	+3.7	9.5	9.5	-0.1
6th	Not Proficient	14,634	197.2	*12.9*	199.2	*13.5*	+2.0	(18.5)	(18.8)	(+0.3)
	Partially Proficient	9,896	208.4	*9.8*	210.4	*10.6*	+2.0	(7.3)	(7.6)	(+0.3)
	Proficient	10,536	215.7	*8.4*	218.0	*9.0*	+2.3			
	Advanced	12,121	225.2	*8.8*	227.8	*9.3*	+2.6	9.5	9.8	+0.3
7th	Not Proficient	14,203	200.7	*13.1*	202.2	*13.7*	+1.6	(20.4)	(20.5)	(+0.1)
	Partially Proficient	10,438	212.2	*9.8*	213.8	*10.6*	+1.5	(8.8)	(8.9)	(+0.1)
	Proficient	14,139	221.0	*8.6*	222.7	*9.3*	+1.7			
	Advanced	9,125	232.0	*8.9*	233.8	*9.2*	+1.8	10.9	11.1	+0.1
8th	Not Proficient	13,741	203.8	*13.4*	204.2	*14.3*	+0.4	(22.4)	(23.1)	(+0.7)
	Partially Proficient	13,207	216.6	*10.0*	217.1	*11.0*	+0.5	(9.6)	(10.2)	(+0.6)
	Proficient	14,531	226.2	*8.6*	227.3	*9.5*	+1.1			
	Advanced	7,163	237.4	*8.5*	238.7	*8.8*	+1.2	11.2	11.4	+0.2

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.11. Average Scale Scores on Curriculum Associates' i-Ready Math Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	3,940	425.4	*25.6*	433.0	*30.8*	+7.7	(44.2)	(54.7)	(+10.5)
	Partially Proficient	2,668	452.4	*19.5*	466.0	*24.7*	+13.6	(17.2)	(21.7)	(+4.5)
	Proficient	2,807	469.6	*17.6*	487.7	*22.7*	+18.1			
	Advanced	2,187	492.1	*21.8*	513.2	*24.2*	+21.1	22.5	25.5	+3.0
6th	Not Proficient	3,143	435.5	*25.3*	442.3	*31.8*	+6.8	(52.1)	(58.5)	(+6.4)
	Partially Proficient	2,891	466.1	*19.8*	476.5	*26.5*	+10.4	(21.5)	(24.2)	(+2.7)
	Proficient	2,160	487.6	*18.9*	500.7	*23.0*	+13.1			
	Advanced	1,788	512.0	*22.1*	527.7	*24.9*	+15.7	24.4	27.0	+2.5
7th	Not Proficient	3,785	452.8	*27.5*	459.0	*35.9*	+6.2	(48.1)	(52.8)	(+4.7)
	Partially Proficient	2,149	484.1	*20.3*	493.3	*25.9*	+9.2	(16.8)	(18.5)	(+1.7)
	Proficient	1,482	500.9	*17.1*	511.8	*21.6*	+10.9			
	Advanced	1,584	521.4	*22.9*	533.7	*25.2*	+12.3	20.6	21.9	+1.4
8th	Not Proficient	3,830	459.0	*29.6*	465.4	*37.1*	+6.4	(55.9)	(57.3)	(+1.4)
	Partially Proficient	2,446	495.1	*21.0*	502.9	*27.0*	+7.8	(19.8)	(19.8)	(-0.1)
	Proficient	1,508	514.9	*18.1*	522.7	*23.3*	+7.7			
	Advanced	1,223	540.8	*21.1*	548.7	*22.4*	+7.9	25.9	26.0	+0.2

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.12. Average Scale Scores on Curriculum Associates' i-Ready Reading Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	4,376	495.1	*47.6*	506.5	*54.0*	+11.3	(74.5)	(79.8)	(+5.4)
	Partially Proficient	2,424	542.5	*35.9*	558.1	*38.5*	+15.7	(27.1)	(28.2)	(+1.1)
	Proficient	2,073	569.6	*28.8*	586.3	*33.6*	+16.7			
	Advanced	2,229	602.0	*29.5*	619.2	*30.8*	+17.2	32.4	32.9	+0.4
6th	Not Proficient	3,877	515.5	*48.6*	521.7	*54.8*	+6.2	(72.3)	(77.3)	(+5.0)
	Partially Proficient	1,657	564.5	*35.1*	574.4	*39.1*	+9.9	(23.3)	(24.6)	(+1.3)
	Proficient	1,721	587.8	*29.9*	599.0	*33.3*	+11.2			
	Advanced	2,055	621.7	*29.3*	631.8	*30.4*	+10.1	33.9	32.8	-1.1
7th	Not Proficient	3,294	528.4	*49.6*	535.5	*56.3*	+7.0	(76.9)	(75.8)	(-1.1)
	Partially Proficient	1,598	575.7	*36.0*	585.6	*41.6*	+9.9	(29.5)	(25.6)	(-3.9)
	Proficient	2,161	605.3	*31.4*	611.2	*34.3*	+5.9			
	Advanced	1,287	640.3	*27.0*	648.4	*29.7*	+8.1	35.1	37.2	+2.2
8th	Not Proficient	3,401	537.6	*50.0*	545.5	*58.0*	+7.9	(84.8)	(84.0)	(-0.9)
	Partially Proficient	2,172	589.6	*36.6*	596.5	*42.1*	+6.9	(32.9)	(32.9)	(+0.1)
	Proficient	2,199	622.5	*30.2*	629.4	*30.3*	+7.0			
	Advanced	1,097	656.5	*26.0*	663.4	*29.6*	+6.9	34.1	34.0	-0.1

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.13. Average Scale Scores on Renaissance Learning's Star Math Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	1,069	545.3	*93.0*	592.7	*103.1*	+47.3	(128.2)	(154.3)	(+26.2)
	Partially Proficient	1,392	616.4	*63.8*	682.6	*79.8*	+66.2	(57.1)	(64.4)	(+7.3)
	Proficient	1,659	673.5	*60.5*	747.0	*69.2*	+73.5			
	Advanced	1,209	733.3	*64.7*	814.6	*61.6*	+81.4	59.8	67.6	+7.8
6th	Not Proficient	942	589.4	*87.2*	611.2	*104.8*	+21.8	(153.6)	(165.3)	(+11.7)
	Partially Proficient	1,734	679.6	*69.3*	710.1	*83.5*	+30.5	(63.5)	(66.4)	(+2.9)
	Proficient	1,440	743.0	*57.2*	776.5	*68.8*	+33.5			
	Advanced	824	798.8	*59.2*	838.6	*64.6*	+39.8	55.8	62.1	+6.3
7th	Not Proficient	1,554	643.2	*93.3*	670.5	*109.1*	+27.3	(145.0)	(154.0)	(+9.0)
	Partially Proficient	1,564	733.9	*71.4*	765.4	*76.4*	+31.5	(54.4)	(59.1)	(+4.7)
	Proficient	990	788.3	*58.8*	824.5	*60.9*	+36.2			
	Advanced	861	841.4	*54.3*	882.0	*62.0*	+40.6	53.2	57.5	+4.3
8th	Not Proficient	1,388	667.8	*99.5*	677.0	*114.5*	+9.2	(156.1)	(167.9)	(+11.9)
	Partially Proficient	1,680	767.3	*68.1*	785.1	*75.7*	+17.8	(56.5)	(59.8)	(+3.3)
	Proficient	1,072	823.8	*55.8*	844.9	*56.8*	+21.1			
	Advanced	796	871.4	*43.5*	894.4	*47.1*	+23.0	47.6	49.5	+1.9

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.14. Average Scale Scores on Renaissance Learning's Star Reading Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	1,260	372.3	*157.1*	432.9	*170.1*	+60.6	(214.6)	(250.4)	(+35.7)
	Partially Proficient	1,442	476.6	*130.9*	561.2	*164.0*	+84.6	(110.3)	(122.0)	(+11.7)
	Proficient	1,492	586.9	*141.1*	683.2	*169.6*	+96.3			
	Advanced	1,545	746.1	*181.4*	851.1	*185.8*	+105.1	159.2	167.9	+8.7
6th	Not Proficient	1,411	448.6	*171.4*	481.7	*185.6*	+33.1	(226.1)	(256.4)	(+30.4)
	Partially Proficient	1,108	571.7	*148.8*	623.1	*171.6*	+51.3	(102.9)	(115.0)	(+12.1)
	Proficient	1,241	674.7	*167.9*	738.1	*176.2*	+63.5			
	Advanced	1,470	863.1	*195.5*	934.6	*208.3*	+71.5	188.5	196.5	+8.1
7th	Not Proficient	1,485	501.3	*174.3*	527.9	*196.8*	+26.5	(300.9)	(323.2)	(+22.2)
	Partially Proficient	1,178	655.1	*178.3*	700.8	*191.7*	+45.7	(147.2)	(150.2)	(+3.0)
	Proficient	1,729	802.3	*183.7*	851.0	*192.7*	+48.8			
	Advanced	1,047	1022.1	*200.8*	1074.2	*194.8*	+52.1	219.9	223.1	+3.3
8th	Not Proficient	1,420	561.0	*202.9*	572.6	*223.9*	+11.6	(372.0)	(396.5)	(+24.5)
	Partially Proficient	1,532	748.1	*185.9*	764.9	*206.9*	+16.7	(184.9)	(204.2)	(+19.4)
	Proficient	1,767	933.0	*196.3*	969.1	*202.9*	+36.1			
	Advanced	791	1148.4	*167.1*	1178.6	*167.8*	+30.3	215.4	209.5	-5.8

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.15. Average Scale Scores on DRC's Smarter Balanced ICA Math Assessment by 2019 M-STEP Proficiency

Grade	2019 Math Proficiency	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	73	2398.8	*56.0*	2412.7	*81.7*	+13.9	(84.3)	(112.1)	(+27.7)
	Partially Proficient	132	2439.3	*64.5*	2482.3	*61.4*	+43.0	(43.8)	(42.5)	(-1.4)
	Proficient	172	2483.1	*52.7*	2524.8	*65.4*	+41.7			
	Advanced	158	2547.2	*53.5*	2596.3	*57.9*	+49.1	64.1	71.5	+7.4
6th	Not Proficient	62	2393.5	*62.9*	2404.8	*91.8*	+11.2	(103.7)	(145.3)	(+41.7)
	Partially Proficient	201	2445.6	*51.4*	2483.1	*61.5*	+37.6	(51.7)	(67.0)	(+15.3)
	Proficient	166	2497.2	*47.2*	2550.1	*49.1*	+52.9			
	Advanced	142	2551.2	*47.8*	2610.6	*55.2*	+59.4	54.0	60.5	+6.5
7th	Not Proficient	130	2432.7	*72.1*	2437.2	*84.3*	+4.4	(117.9)	(153.9)	(+36.0)
	Partially Proficient	189	2497.1	*61.9*	2520.8	*67.6*	+23.7	(53.5)	(70.3)	(+16.7)
	Proficient	132	2550.6	*48.0*	2591.1	*56.1*	+40.5			
	Advanced	120	2622.4	*61.3*	2667.6	*62.0*	+45.1	71.8	76.5	+4.7
8th	Not Proficient	127	2433.3	*68.8*	2435.8	*79.6*	+2.6	(103.6)	(144.5)	(+40.9)
	Partially Proficient	170	2488.5	*68.3*	2508.2	*92.2*	+19.7	(48.3)	(72.1)	(+23.8)
	Proficient	130	2536.8	*53.7*	2580.3	*70.3*	+43.5			
	Advanced	122	2601.2	*75.9*	2662.8	*64.5*	+61.6	64.4	82.5	+18.1

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.6.16. Average Scale Scores on DRC's Smarter Balanced ICA ELA Assessment by 2019 M-STEP Proficiency

Grade	2019 ELA Proficiency	N Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Proficient)		
			Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	62	2392.4	*79.4*	2419.8	*82.8*	+27.4	(106.3)	(116.0)	(+9.7)
	Partially Proficient	112	2449.9	*75.2*	2482.1	*68.6*	+32.3	(48.9)	(53.6)	(+4.7)
	Proficient	127	2498.8	*49.5*	2535.8	*64.5*	+37.0			
	Advanced	185	2561.4	*58.7*	2600.0	*60.6*	+38.6	62.7	64.2	+1.5
6th	Not Proficient	89	2454.1	*70.7*	2471.8	*74.6*	+17.8	(99.7)	(109.6)	(+9.9)
	Partially Proficient	148	2489.8	*76.5*	2529.1	*79.5*	+39.3	(64.0)	(52.4)	(-11.6)
	Proficient	171	2553.8	*64.3*	2581.5	*67.2*	+27.7			
	Advanced	173	2616.5	*63.7*	2657.6	*54.4*	+41.1	62.8	76.2	+13.4
7th	Not Proficient	112	2470.0	*77.8*	2480.7	*86.9*	+10.7	(103.8)	(121.4)	(+17.5)
	Partially Proficient	127	2516.2	*58.5*	2541.3	*80.2*	+25.1	(57.6)	(60.8)	(+3.2)
	Proficient	177	2573.8	*60.9*	2602.1	*84.9*	+28.3			
	Advanced	137	2650.7	*57.2*	2686.1	*63.8*	+35.4	76.9	84.0	+7.1
8th	Not Proficient	116	2486.3	*62.9*	2477.5	*78.8*	-8.8	(126.5)	(145.8)	(+19.3)
	Partially Proficient	140	2541.4	*63.7*	2558.8	*82.2*	+17.4	(71.4)	(64.4)	(-7.0)
	Proficient	175	2612.8	*66.0*	2623.3	*82.8*	+10.4			
	Advanced	90	2701.5	*56.3*	2720.1	*50.9*	+18.6	88.7	96.8	+8.1

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Socioeconomic Achievement Gaps Among Students with the Same Prior M-STEP Proficiency Levels

Considering these strong associations between prior (2019) proficiency levels and performance on fall and spring benchmark assessments, it is likely that some of the relationships we saw in our comparisons across demographic subgroups are driven, at least in part, by differences in achievement that pre-date the pandemic. For instance, as we discussed earlier in this section, there are consistent achievement gaps between students of different socioeconomic statuses and racial/ethnic subgroups, and many of these gaps grew larger over the course of the 2020-21 school year. However, changes in the gaps may not have affected all students within a given socioeconomic or racial/ethnic group equally. To delve deeper into these patterns, we compare gaps between demographic groups, as well as fall-to-spring changes in these gaps, across subgroups of students who had the same prior proficiency levels on the 2019 M-STEP assessment. We focus on socioeconomic achievement gaps only, and not on racial/ethnic achievement gaps, as the number of students within each combination of a prior proficiency level and economically disadvantaged status is large enough for us to compare these patterns for most grade levels, subjects, and assessment providers, while the sample sizes are too small to do many of the corresponding comparisons by race/ethnicity or other subgroups.

Table 3.7.1 through Table 3.7.16 summarize differences in benchmark assessment outcomes by combinations of 2019 M-STEP proficiency levels and economically disadvantaged status. We present results for each 2019 M-STEP proficiency level, economically disadvantaged status, and grade level combination separately, and students that were not considered economically disadvantaged within each modality were the reference category when calculating outcome gaps for economically disadvantaged students in the same grade with the same prior proficiency level.

For NWEA MAP Growth, Curriculum Associates i-Ready, and Renaissance Learning Star 360 districts, regardless of students' prior proficiency levels, higher percentages of economically disadvantaged students scored "significantly behind grade level" in both the fall and the spring semesters compared to their more advantaged peers, and this pattern is consistent across both subjects and nearly all grade levels. For Smarter Balanced ICA districts, this pattern also generally holds, however, there are a few exceptions where economically disadvantaged students who scored "Advanced" on the 2019 M-STEP outperformed students not considered economically disadvantaged in the fall. In each of these instances, there were few economically disadvantaged students in these districts who scored "Advanced" on the 2019 M-STEP to begin with, and none of them were considered "significantly behind grade level" in fall 2020.

Before moving on to a discussion of gaps, it is important to pause to examine the proportion of students who are scoring "significantly behind grade level" in some subsets of students. In particular, 93% and 94% of economically disadvantaged 5th- and 6th-grade students who scored "Not Proficient" on their 2019 M-STEP mathematics tests scored "significantly behind grade level" on the NWEA MAP Growth Math assessment by spring of 2021, as did 88% of 7th graders and 83% of 8th graders in the same category. These numbers are not quite as stark for reading outcomes for the students in NWEA MAP Growth districts, but still approximately three-quarters or more of the economically disadvantaged students who scored "Not Proficient" on their 2019 M-STEP ELA assessment scored "significantly behind grade level" by the spring of 2021. This trend is similar for students in districts taking the other three benchmark assessments. The one exception is for students in districts offering the Smarter Balanced ICA ELA assessment. However, there were so few economically disadvantaged students in those districts that we do not put much weight on those results.

When we examine average scale scores for students by economic disadvantage and 2019 M-STEP proficiency level (Table 3.7.9 through Table 3.7.16), we find that across all grades, subjects, and assessment providers, average scale scores in the fall were higher for students who were not economically disadvantaged. In both the fall and spring, gaps between students who are and are not economically disadvantaged tended to be slightly larger among those who scored in the lowest or highest possible proficiency levels on the 2019 M-STEP ("Not Proficient" and "Advanced," respectively), compared to those who scored "Partially Proficient" or "Proficient."

For NWEA MAP Growth districts, average mathematics and reading scale score increases throughout the school year were typically larger among the more advantaged students and these gaps became larger between the fall and spring for nearly all grade levels and 2019 M-STEP proficiency levels. For most subjects and grade levels, gap changes in Curriculum Associates i-Ready and Renaissance Learning Star 360 districts were consistent with this pattern. However, as we noted in our overall comparisons by economically disadvantaged status, there were a few grade levels and subjects where the gaps decreased slightly. For these same grade levels and subjects, we now see that these decreases sometimes were, and sometimes were not, uniform across students with different 2019 M-STEP proficiency levels. For instance, in Curriculum Associates i-Ready districts, 8th-grade mathematics gaps decreased across all prior proficiency levels, while 8th-grade reading gaps increased for students with the highest and lowest prior proficiency levels and decreased for students in the middle two levels.

In contrast to districts using any of the other assessment providers, in Smarter Balanced ICA districts many of the gaps between economically disadvantaged

students and students who were not economically disadvantaged *decreased* between the fall and spring, some groups of economically disadvantaged students in these districts ended the school year with higher average scores than their more advantaged peers with the same prior proficiency levels. However, we once again stress that there are relatively few economically disadvantaged students in these districts, and even fewer after disaggregating by prior achievement level, making it difficult to draw any inferences about these districts.

Table 3.7.1. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Mathematics Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	3,061	78.4	84.1	+5.7			
		ED	8,998	88.7	93.0	+4.4	10.2	9.0	-1.3
	Partially Proficient	Not ED	5,355	35.2	47.3	+12.1			
		ED	7,187	52.0	68.9	+17.0	16.7	21.6	+4.9
	Proficient	Not ED	7,677	7.4	13.7	+6.4			
		ED	5,687	13.9	30.4	+16.5	6.5	16.7	+10.2
	Advanced	Not ED	6,999	0.6	1.4	+0.8			
		ED	2,537	2.8	7.2	+4.3	2.3	5.8	+3.5
6th	Not Proficient	Not ED	2,535	80.2	86.7	+6.6			
		ED	7,862	88.5	94.1	+5.6	8.4	7.3	-1.0
	Partially Proficient	Not ED	7,148	30.3	40.0	+9.7			
		ED	8,918	43.3	57.8	+14.5	13.0	17.8	+4.8
	Proficient	Not ED	7,905	4.5	7.0	+2.5			
		ED	4,872	9.1	16.6	+7.5	4.5	9.6	+5.0
	Advanced	Not ED	6,491	0.4	0.6	+0.2			
		ED	1,958	1.5	2.8	+1.3	1.2	2.2	+1.1
7th	Not Proficient	Not ED	4,983	71.2	77.3	+6.1			
		ED	11,066	81.6	87.5	+5.9	10.4	10.2	-0.3
	Partially Proficient	Not ED	7,567	20.6	26.7	+6.2			
		ED	6,867	30.8	42.0	+11.2	10.3	15.3	+5.0
	Proficient	Not ED	6,064	3.0	4.7	+1.8			
		ED	3,090	6.3	10.2	+3.9	3.4	5.5	+2.1
	Advanced	Not ED	6,791	0.3	0.5	+0.2			
		ED	1,737	0.5	1.6	+1.0	0.3	1.1	+0.8
8th	Not Proficient	Not ED	4,913	57.2	71.2	+14.0			
		ED	10,197	71.4	82.6	+11.2	14.2	11.4	-2.8
	Partially Proficient	Not ED	7,959	10.7	19.7	+8.9			
		ED	7,211	15.3	27.5	+12.2	4.6	7.8	+3.3
	Proficient	Not ED	6,429	0.8	2.0	+1.2			
		ED	3,178	1.5	3.2	+1.7	0.7	1.3	+0.5
	Advanced	Not ED	6,052	0.0	0.2	+0.1			
		ED	1,560	0.4	0.9	+0.4	0.4	0.7	+0.3

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.2. Percentage of Students "Significantly Behind Grade Level" on NWEA's MAP Growth Reading Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	3,568	59.0	67.0	+7.9			
		ED	9,659	72.1	82.3	+10.2	13.1	15.4	+2.2
	Partially Proficient	Not ED	5,015	22.4	33.1	+10.7			
		ED	6,693	32.0	47.2	+15.2	9.6	14.2	+4.6
	Proficient	Not ED	6,213	4.9	9.3	+4.3			
		ED	4,674	9.6	18.1	+8.5	4.7	8.8	+4.2
	Advanced	Not ED	7,769	0.6	1.4	+0.7			
		ED	3,164	2.1	4.4	+2.3	1.4	3.0	+1.6
6th	Not Proficient	Not ED	4,448	52.9	63.4	+10.5			
		ED	10,180	68.1	78.8	+10.7	15.2	15.4	+0.2
	Partially Proficient	Not ED	4,491	19.0	31.2	+12.2			
		ED	5,404	27.4	42.3	+14.9	8.4	11.1	+2.7
	Proficient	Not ED	6,158	4.4	10.3	+5.9			
		ED	4,378	8.7	16.7	+8.1	4.3	6.4	+2.2
	Advanced	Not ED	8,819	0.5	1.5	+1.0			
		ED	3,302	2.0	3.7	+1.7	1.5	2.2	+0.8
7th	Not Proficient	Not ED	4,550	54.7	64.5	+9.8			
		ED	9,649	68.9	77.6	+8.7	14.2	13.1	-1.1
	Partially Proficient	Not ED	4,982	19.2	30.5	+11.3			
		ED	5,454	27.3	40.8	+13.5	8.1	10.3	+2.2
	Proficient	Not ED	8,850	3.9	7.9	+4.0			
		ED	5,289	7.1	13.1	+6.0	3.3	5.3	+2.0
	Advanced	Not ED	7,082	0.3	0.8	+0.5			
		ED	2,041	0.8	2.4	+1.5	0.5	1.6	+1.1
8th	Not Proficient	Not ED	4,709	48.9	63.0	+14.1			
		ED	9,026	60.6	73.5	+12.9	11.7	10.5	-1.2
	Partially Proficient	Not ED	6,783	12.9	24.2	+11.3			
		ED	6,423	17.3	31.5	+14.2	4.4	7.3	+2.9
	Proficient	Not ED	9,485	1.7	4.7	+3.0			
		ED	5,043	2.8	7.3	+4.5	1.1	2.6	+1.4
	Advanced	Not ED	5,609	0.1	0.4	+0.3			
		ED	1,554	0.2	1.0	+0.8	0.1	0.6	+0.5

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.3. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Math Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	693	70.1	52.1	-18.0			
		ED	3,224	86.6	74.0	-12.7	16.5	21.9	+5.4
	Partially Proficient	Not ED	969	29.6	14.2	-15.4			
		ED	1,695	44.8	28.9	-15.9	15.2	14.7	-0.5
	Proficient	Not ED	1,591	7.0	2.5	-4.6			
		ED	1,214	14.3	8.3	-6.0	7.3	5.9	-1.4
	Advanced	Not ED	1,623	0.6	0.3	-0.2			
		ED	564	4.3	3.9	-0.4	3.7	3.6	-0.1
6th	Not Proficient	Not ED	509	86.8	68.0	-18.9			
		ED	2,608	91.6	81.2	-10.4	4.7	13.2	+8.5
	Partially Proficient	Not ED	1,081	38.6	22.6	-16.0			
		ED	1,805	50.6	35.0	-15.7	12.1	12.4	+0.3
	Proficient	Not ED	1,310	7.0	3.2	-3.8			
		ED	847	12.9	9.4	-3.4	5.8	6.2	+0.4
	Advanced	Not ED	1,411	0.6	0.4	-0.3			
		ED	377	6.4	4.2	-2.1	5.7	3.9	-1.8
7th	Not Proficient	Not ED	781	79.6	66.6	-13.1			
		ED	2,988	85.5	76.6	-8.9	5.9	10.0	+4.1
	Partially Proficient	Not ED	985	32.3	20.7	-11.6			
		ED	1,161	38.1	28.8	-9.3	5.8	8.1	+2.3
	Proficient	Not ED	969	7.0	4.3	-2.7			
		ED	513	11.5	10.7	-0.8	4.5	6.4	+1.9
	Advanced	Not ED	1,249	1.5	1.2	-0.3			
		ED	335	7.2	4.8	-2.4	5.6	3.6	-2.1
8th	Not Proficient	Not ED	838	85.8	75.7	-10.1			
		ED	2,981	88.7	81.0	-7.7	2.9	5.4	+2.5
	Partially Proficient	Not ED	1,078	34.0	25.7	-8.3			
		ED	1,366	42.5	34.3	-8.2	8.4	8.6	+0.1
	Proficient	Not ED	970	7.0	7.3	+0.3			
		ED	537	9.7	7.8	-1.9	2.7	0.5	-2.2
	Advanced	Not ED	987	0.5	0.6	+0.1			
		ED	236	2.5	3.0	+0.4	2.0	2.4	+0.3

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

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Table 3.7.4. Percentage of Students "Significantly Behind Grade Level" on Curriculum Associates' i-Ready Reading Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	831	77.6	60.9	-16.7			
		ED	3,521	86.7	77.2	-9.5	9.0	16.3	+7.2
	Partially Proficient	Not ED	979	38.6	20.2	-18.4			
		ED	1,443	51.3	34.0	-17.3	12.7	13.7	+1.1
	Proficient	Not ED	1,154	12.7	5.6	-7.1			
		ED	917	17.4	12.1	-5.3	4.7	6.5	+1.8
	Advanced	Not ED	1,616	1.9	0.4	-1.5			
		ED	612	3.8	3.8	0.0	1.8	3.4	+1.5
6th	Not Proficient	Not ED	855	77.0	68.1	-8.9			
		ED	3,003	88.4	82.1	-6.3	11.4	14.0	+2.6
	Partially Proficient	Not ED	667	41.1	28.5	-12.6			
		ED	986	52.0	43.5	-8.5	10.9	15.0	+4.1
	Proficient	Not ED	994	18.2	12.2	-6.0			
		ED	726	22.3	15.8	-6.5	4.1	3.7	-0.4
	Advanced	Not ED	1,551	1.9	1.6	-0.3			
		ED	502	6.0	5.0	-1.0	4.0	3.4	-0.7
7th	Not Proficient	Not ED	687	83.7	76.7	-7.0			
		ED	2,591	87.5	80.5	-6.9	3.8	3.8	+0.0
	Partially Proficient	Not ED	662	50.0	35.8	-14.2			
		ED	931	57.6	46.8	-10.7	7.6	11.0	+3.5
	Proficient	Not ED	1,292	18.3	15.3	-3.0			
		ED	869	23.7	20.8	-2.9	5.4	5.5	+0.1
	Advanced	Not ED	987	1.5	1.6	+0.1			
		ED	300	2.3	3.0	+0.7	0.8	1.4	+0.6
8th	Not Proficient	Not ED	744	82.7	76.2	-6.5			
		ED	2,647	88.6	80.4	-8.2	5.9	4.1	-1.7
	Partially Proficient	Not ED	928	48.1	40.6	-7.4			
		ED	1,241	52.6	42.8	-9.8	4.6	2.2	-2.4
	Proficient	Not ED	1,336	13.7	9.4	-4.3			
		ED	862	16.5	13.5	-3.0	2.8	4.0	+1.3
	Advanced	Not ED	867	1.0	0.7	-0.3			
		ED	230	2.2	2.2	0.0	1.1	1.5	+0.3

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

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Table 3.7.5. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Math Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	301	69.4	62.1	-7.3			
		ED	658	75.2	73.4	-1.8	5.8	11.3	+5.5
	Partially Proficient	Not ED	549	30.4	21.1	-9.3			
		ED	676	38.2	33.3	-4.9	7.7	12.2	+4.4
	Proficient	Not ED	913	7.7	6.4	-1.3			
		ED	551	11.4	10.7	-0.7	3.8	4.4	+0.6
	Advanced	Not ED	811	0.9	0.1	-0.7			
		ED	291	3.8	2.7	-1.0	2.9	2.6	-0.3
6th	Not Proficient	Not ED	253	75.1	73.5	-1.6			
		ED	599	82.8	82.6	-0.2	7.7	9.1	+1.4
	Partially Proficient	Not ED	740	28.6	29.2	+0.5			
		ED	831	41.0	43.9	+2.9	12.4	14.7	+2.3
	Proficient	Not ED	806	5.6	7.9	+2.4			
		ED	477	8.4	15.3	+6.9	2.8	7.4	+4.6
	Advanced	Not ED	575	1.9	2.4	+0.5			
		ED	162	1.2	2.5	+1.2	(0.7)	0.0	R
7th	Not Proficient	Not ED	500	64.2	53.6	-10.6			
		ED	913	73.7	68.1	-5.6	9.5	14.5	+5.0
	Partially Proficient	Not ED	792	19.9	17.7	-2.3			
		ED	615	26.0	25.5	-0.5	6.1	7.9	+1.8
	Proficient	Not ED	565	3.7	4.4	+0.7			
		ED	327	8.9	6.1	-2.8	5.2	1.7	-3.5
	Advanced	Not ED	594	0.8	0.3	-0.5			
		ED	206	2.4	3.4	+1.0	1.6	3.1	+1.5
8th	Not Proficient	Not ED	487	62.4	64.1	+1.6			
		ED	807	70.5	71.6	+1.1	8.1	7.6	-0.5
	Partially Proficient	Not ED	822	18.7	21.7	+2.9			
		ED	698	23.1	24.9	+1.9	4.3	3.3	-1.1
	Proficient	Not ED	646	2.6	3.6	+0.9			
		ED	331	3.3	5.7	+2.4	0.7	2.2	+1.5
	Advanced	Not ED	591	0.3	0.3	0.0			
		ED	136	0.7	1.5	+0.7	0.4	1.1	+0.7

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

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Table 3.7.6. Percentage of Students "Significantly Behind Grade Level" on Renaissance Learning's Star Reading Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	369	69.6	64.8	-4.9			
		ED	794	77.8	74.8	-3.0	8.2	10.0	+1.9
	Partially Proficient	Not ED	595	38.5	32.6	-5.9			
		ED	698	41.1	39.7	-1.4	2.6	7.1	+4.4
	Proficient	Not ED	792	10.4	9.5	-0.9			
		ED	532	15.4	15.4	0.0	5.1	5.9	+0.9
	Advanced	Not ED	1,003	1.2	0.9	-0.3			
		ED	380	3.4	2.4	-1.1	2.2	1.5	-0.8
6th	Not Proficient	Not ED	419	72.8	74.5	+1.7			
		ED	898	77.4	78.7	+1.3	4.6	4.3	-0.3
	Partially Proficient	Not ED	439	45.8	41.9	-3.9			
		ED	547	43.3	47.9	+4.6	(2.5)	6.0	R
	Proficient	Not ED	676	16.3	15.5	-0.7			
		ED	452	19.9	17.3	-2.7	3.6	1.7	-1.9
	Advanced	Not ED	958	2.5	2.6	+0.1			
		ED	368	4.3	6.8	+2.4	1.8	4.2	+2.3
7th	Not Proficient	Not ED	444	72.5	71.8	-0.7			
		ED	889	78.6	80.3	+1.7	6.1	8.5	+2.4
	Partially Proficient	Not ED	501	36.1	37.7	+1.6			
		ED	535	48.4	47.3	-1.1	12.3	9.6	-2.7
	Proficient	Not ED	930	11.1	12.8	+1.7			
		ED	612	15.7	18.1	+2.5	4.6	5.3	+0.7
	Advanced	Not ED	679	0.7	2.5	+1.8			
		ED	237	3.4	2.5	-0.8	2.6	0.0	-2.6
8th	Not Proficient	Not ED	442	76.5	79.9	+3.4			
		ED	875	81.0	82.9	+1.8	4.6	3.0	-1.6
	Partially Proficient	Not ED	735	39.3	45.2	+5.9			
		ED	675	39.4	55.0	+15.6	0.1	9.8	+9.7
	Proficient	Not ED	1,039	9.8	12.4	+2.6			
		ED	560	13.9	17.7	+3.8	4.1	5.3	+1.2
	Advanced	Not ED	566	0.2	0.7	+0.5			
		ED	157	0.6	0.6	0.0	0.5	(0.1)	R

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

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Table 3.7.7. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA Math Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	37	78.4	56.8	-21.6			
		ED	36	88.9	75.0	-13.9	10.5	18.2	+7.7
	Partially Proficient	Not ED	85	44.7	21.2	-23.5			
		ED	47	63.8	29.8	-34.0	19.1	8.6	-10.5
	Proficient	Not ED	118	22.0	5.9	-16.1			
		ED	54	44.4	18.5	-25.9	22.4	12.6	-9.8
	Advanced	Not ED	123	1.6	0.0	-1.6			
		ED	35	8.6	2.9	-5.7	6.9	2.9	-4.1
6th	Not Proficient	Not ED	30	86.7	60.0	-26.7			
		ED	32	90.6	81.3	-9.4	4.0	21.3	+17.3
	Partially Proficient	Not ED	125	66.4	38.4	-28.0			
		ED	76	71.1	40.8	-30.3	4.7	2.4	-2.3
	Proficient	Not ED	128	23.4	3.1	-20.3			
		ED	38	42.1	0.0	-42.1	18.7	(3.1)	R
	Advanced	Not ED	123	6.5	0.0	-6.5			
		ED	19	0.0	0.0	0.0	(6.5)	0.0	(-6.5)
7th	Not Proficient	Not ED	66	74.2	57.6	-16.7			
		ED	64	79.7	84.4	+4.7	5.4	26.8	+21.4
	Partially Proficient	Not ED	133	28.6	21.8	-6.8			
		ED	56	48.2	25.0	-23.2	19.6	3.2	-16.4
	Proficient	Not ED	90	6.7	4.4	-2.2			
		ED	42	7.1	2.4	-4.8	0.5	(2.1)	R
	Advanced	Not ED	107	1.9	0.0	-1.9			
		ED	13	0.0	0.0	0.0	(1.9)	0.0	(-1.9)
8th	Not Proficient	Not ED	59	83.1	84.7	+1.7			
		ED	68	89.7	80.9	-8.8	6.7	(3.9)	R
	Partially Proficient	Not ED	109	54.1	44.0	-10.1			
		ED	61	62.3	50.8	-11.5	8.2	6.8	-1.4
	Proficient	Not ED	102	20.6	9.8	-10.8			
		ED	28	32.1	25.0	-7.1	11.6	15.2	+3.6
	Advanced	Not ED	109	6.4	0.0	-6.4			
		ED	13	7.7	0.0	-7.7	1.3	0.0	-1.3

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.8. Percentage of Students "Significantly Behind Grade Level" on DRC's Smarter Balanced ICA ELA Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Percent "Significantly Behind"			Percentage Point Gap (Relative to Not ED)		
				Fall	Spring	Change	Fall	Spring	Change
5th	Not Proficient	Not ED	26	65.4	46.2	-19.2			
		ED	36	77.8	63.9	-13.9	12.4	17.7	+5.3
	Partially Proficient	Not ED	78	43.6	21.8	-21.8			
		ED	34	44.1	26.5	-17.6	0.5	4.7	+4.1
	Proficient	Not ED	91	9.9	1.1	-8.8			
		ED	36	19.4	8.3	-11.1	9.6	7.2	-2.3
	Advanced	Not ED	143	2.1	0.7	-1.4			
		ED	42	4.8	2.4	-2.4	2.7	1.7	-1.0
6th	Not Proficient	Not ED	47	34.0	25.5	-8.5			
		ED	42	66.7	59.5	-7.1	32.6	34.0	+1.4
	Partially Proficient	Not ED	84	20.2	10.7	-9.5			
		ED	64	45.3	20.3	-25.0	25.1	9.6	-15.5
	Proficient	Not ED	131	3.1	0.8	-2.3			
		ED	40	15.0	10.0	-5.0	11.9	9.2	-2.7
	Advanced	Not ED	150	0.0	0.0	0.0			
		ED	23	0.0	4.3	+4.3	0.0	4.3	+4.3
7th	Not Proficient	Not ED	54	48.1	35.2	-13.0			
		ED	58	56.9	39.7	-17.2	8.7	4.5	-4.3
	Partially Proficient	Not ED	80	13.8	16.3	+2.5			
		ED	47	38.3	25.5	-12.8	24.5	9.3	-15.3
	Proficient	Not ED	130	5.4	3.1	-2.3			
		ED	47	12.8	4.3	-8.5	7.4	1.2	-6.2
	Advanced	Not ED	116	0.9	1.7	+0.9			
		ED	21	0.0	0.0	0.0	(0.9)	(1.7)	(+0.9)
8th	Not Proficient	Not ED	61	44.3	55.7	+11.5			
		ED	55	49.1	47.3	-1.8	4.8	(8.5)	R
	Partially Proficient	Not ED	86	15.1	14.0	-1.2			
		ED	54	20.4	14.8	-5.6	5.3	0.9	-4.4
	Proficient	Not ED	143	0.7	6.3	+5.6			
		ED	32	6.3	6.3	0.0	5.6	(0.0)	R
	Advanced	Not ED	75	0.0	0.0	0.0			
		ED	15	0.0	0.0	0.0	0.0	0.0	0.0

Notes: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but

means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.9. Average Scale Scores on NWEA's MAP Growth Mathematics Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*) Fall		Spring		Change	Score Gap (Relative to Not ED) Fall	Spring	Change
5th	Not Proficient	Not ED	3,061	194.6	*10.8*	200.7	*12.6*	+6.1			
		ED	8,998	190.2	*11.2*	194.6	*12.8*	+4.5	(4.4)	(6.0)	(+1.6)
	Partially Proficient	Not ED	5,355	205.2	*8.3*	213.2	*9.9*	+8.0			
		ED	7,187	201.9	*8.4*	208.1	*10.1*	+6.2	(3.3)	(5.1)	(+1.8)
	Proficient	Not ED	7,677	213.4	*8.1*	222.9	*9.7*	+9.5			
		ED	5,687	210.2	*7.9*	217.6	*10.1*	+7.4	(3.2)	(5.3)	(+2.1)
	Advanced	Not ED	6,999	224.7	*10.5*	235.9	*11.6*	+11.2			
		ED	2,537	219.2	*9.4*	228.2	*11.3*	+9.0	(5.5)	(7.7)	(+2.2)
6th	Not Proficient	Not ED	2,535	197.8	*11.5*	201.7	*12.9*	+3.9			
		ED	7,862	194.2	*11.2*	197.2	*12.4*	+3.0	(3.6)	(4.5)	(+1.0)
	Partially Proficient	Not ED	7,148	210.4	*8.3*	216.4	*9.5*	+6.1			
		ED	8,918	207.7	*8.6*	212.5	*9.9*	+4.8	(2.7)	(4.0)	(+1.2)
	Proficient	Not ED	7,905	219.2	*7.7*	226.8	*8.7*	+7.6			
		ED	4,872	216.4	*7.9*	222.9	*9.3*	+6.6	(2.8)	(3.8)	(+1.0)
	Advanced	Not ED	6,491	230.5	*9.9*	239.2	*10.3*	+8.8			
		ED	1,958	225.8	*8.9*	234.0	*10.3*	+8.2	(4.6)	(5.2)	(+0.6)
7th	Not Proficient	Not ED	4,983	206.8	*11.5*	210.2	*12.7*	+3.4			
		ED	11,066	203.0	*12.0*	205.4	*13.2*	+2.4	(3.8)	(4.7)	(+1.0)
	Partially Proficient	Not ED	7,567	219.4	*8.2*	224.7	*9.5*	+5.3			
		ED	6,867	217.0	*8.7*	221.1	*10.2*	+4.0	(2.4)	(3.7)	(+1.2)
	Proficient	Not ED	6,064	228.0	*7.9*	234.4	*9.2*	+6.4			
		ED	3,090	225.3	*8.2*	231.4	*9.7*	+6.0	(2.7)	(3.0)	(+0.4)
	Advanced	Not ED	6,791	239.5	*10.7*	246.8	*11.3*	+7.3			
		ED	1,737	234.7	*9.3*	241.4	*10.4*	+6.6	(4.7)	(5.4)	(+0.7)
8th	Not Proficient	Not ED	4,913	211.1	*11.9*	212.8	*13.0*	+1.8			
		ED	10,197	207.2	*12.4*	208.6	*13.4*	+1.4	(3.9)	(4.2)	(+0.3)
	Partially Proficient	Not ED	7,959	224.6	*8.8*	228.2	*10.1*	+3.6			
		ED	7,211	222.7	*8.8*	225.9	*10.3*	+3.1	(1.9)	(2.3)	(+0.4)
	Proficient	Not ED	6,429	234.8	*8.1*	239.4	*9.1*	+4.6			
		ED	3,178	232.9	*8.5*	237.4	*9.7*	+4.6	(2.0)	(1.9)	(-0.0)
	Advanced	Not ED	6,052	247.8	*10.4*	253.6	*11.4*	+5.8			
		ED	1,560	244.4	*10.0*	249.8	*11.0*	+5.4	(3.4)	(3.8)	(+0.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.10. Average Scale Scores on NWEA's MAP Growth Reading Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not ED)		
				Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	Not ED	3,568	194.1	*12.7*	198.1	*13.2*	+4.0			
		ED	9,659	189.0	*13.7*	191.8	*14.1*	+2.8	(5.1)	(6.3)	(+1.2)
	Partially Proficient	Not ED	5,015	204.1	*9.5*	208.0	*10.0*	+3.9			
		ED	6,693	201.1	*10.5*	204.2	*11.0*	+3.1	(3.0)	(3.7)	(+0.8)
	Proficient	Not ED	6,213	211.6	*8.1*	215.7	*8.5*	+4.1			
		ED	4,674	208.9	*9.1*	212.2	*9.8*	+3.3	(2.7)	(3.5)	(+0.8)
	Advanced	Not ED	7,769	221.0	*8.5*	224.9	*8.7*	+3.9			
		ED	3,164	217.5	*8.7*	220.7	*9.3*	+3.2	(3.5)	(4.2)	(+0.7)
6th	Not Proficient	Not ED	4,448	200.5	*12.2*	203.0	*12.9*	+2.4			
		ED	10,180	195.8	*13.0*	197.5	*13.5*	+1.7	(4.7)	(5.4)	(+0.7)
	Partially Proficient	Not ED	4,491	209.9	*9.5*	212.2	*9.8*	+2.2			
		ED	5,404	207.2	*10.0*	209.0	*11.0*	+1.8	(2.8)	(3.2)	(+0.4)
	Proficient	Not ED	6,158	216.5	*8.1*	219.0	*8.6*	+2.5			
		ED	4,378	214.5	*8.8*	216.6	*9.5*	+2.1	(2.0)	(2.3)	(+0.4)
	Advanced	Not ED	8,819	226.1	*8.6*	228.7	*9.1*	+2.7			
		ED	3,302	222.8	*9.1*	225.2	*9.6*	+2.4	(3.2)	(3.5)	(+0.3)
7th	Not Proficient	Not ED	4,550	203.6	*12.8*	205.5	*13.2*	+1.9			
		ED	9,649	199.3	*13.1*	200.7	*13.7*	+1.4	(4.3)	(4.8)	(+0.5)
	Partially Proficient	Not ED	4,982	213.4	*9.4*	215.1	*10.3*	+1.7			
		ED	5,454	211.2	*10.1*	212.6	*10.8*	+1.4	(2.2)	(2.4)	(+0.3)
	Proficient	Not ED	8,850	221.9	*8.3*	223.5	*8.9*	+1.6			
		ED	5,289	219.7	*9.0*	221.4	*9.6*	+1.7	(2.2)	(2.1)	(-0.1)
	Advanced	Not ED	7,082	232.6	*8.8*	234.5	*8.9*	+1.9			
		ED	2,041	229.8	*8.7*	231.4	*9.7*	+1.5	(2.7)	(3.1)	(+0.3)
8th	Not Proficient	Not ED	4,709	206.0	*13.1*	206.5	*14.1*	+0.5			
		ED	9,026	202.7	*13.4*	203.0	*14.2*	+0.3	(3.4)	(3.6)	(+0.2)
	Partially Proficient	Not ED	6,783	217.4	*9.7*	218.1	*10.6*	+0.7			
		ED	6,423	215.7	*10.1*	216.1	*11.2*	+0.3	(1.7)	(2.0)	(+0.3)
	Proficient	Not ED	9,485	226.8	*8.4*	228.0	*9.2*	+1.2			
		ED	5,043	225.1	*8.8*	226.0	*9.8*	+0.9	(1.7)	(1.9)	(+0.3)
	Advanced	Not ED	5,609	237.9	*8.5*	239.1	*8.8*	+1.2			
		ED	1,554	235.9	*8.1*	237.1	*8.8*	+1.2	(2.0)	(2.0)	(+0.0)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.11. Average Scale Scores on Curriculum Associates' i-Ready Math Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*) Fall		Spring		Change	Score Gap (Relative to Not ED) Fall	Spring	Change
5th	Not Proficient	Not ED	693	434.7	*26.4*	445.1	*30.4*	+10.5			
		ED	3,224	423.4	*25.0*	430.5	*30.3*	+7.1	(11.3)	(14.6)	(+3.4)
	Partially Proficient	Not ED	969	457.0	*19.4*	473.7	*22.7*	+16.8			
		ED	1,695	449.7	*19.1*	461.6	*24.7*	+11.9	(7.2)	(12.2)	(+4.9)
	Proficient	Not ED	1,591	472.8	*17.1*	492.3	*20.3*	+19.5			
		ED	1,214	465.3	*17.4*	481.6	*24.2*	+16.3	(7.5)	(10.7)	(+3.2)
	Advanced	Not ED	1,623	494.9	*21.5*	516.7	*22.6*	+21.9			
		ED	564	484.0	*20.5*	503.1	*25.6*	+19.1	(10.9)	(13.7)	(+2.8)
6th	Not Proficient	Not ED	509	441.4	*24.1*	449.8	*31.3*	+8.5			
		ED	2,608	434.3	*25.5*	440.8	*31.7*	+6.5	(7.0)	(9.0)	(+2.0)
	Partially Proficient	Not ED	1,081	469.7	*19.7*	481.1	*25.3*	+11.4			
		ED	1,805	463.9	*19.6*	473.8	*26.7*	+9.8	(5.7)	(7.3)	(+1.5)
	Proficient	Not ED	1,310	490.1	*18.9*	504.3	*21.1*	+14.2			
		ED	847	483.9	*18.2*	495.3	*24.8*	+11.4	(6.2)	(9.0)	(+2.8)
	Advanced	Not ED	1,411	514.7	*21.8*	530.5	*23.8*	+15.8			
		ED	377	502.2	*20.4*	517.4	*26.2*	+15.3	(12.5)	(13.0)	(+0.5)
7th	Not Proficient	Not ED	781	458.2	*26.3*	465.4	*34.3*	+7.2			
		ED	2,988	451.4	*27.6*	457.4	*36.1*	+6.0	(6.8)	(8.0)	(+1.2)
	Partially Proficient	Not ED	985	485.6	*19.0*	494.8	*23.3*	+9.2			
		ED	1,161	482.8	*21.3*	492.0	*27.9*	+9.2	(2.9)	(2.8)	(-0.1)
	Proficient	Not ED	969	502.0	*16.5*	513.3	*20.2*	+11.2			
		ED	513	498.7	*17.9*	509.0	*24.0*	+10.3	(3.3)	(4.3)	(+1.0)
	Advanced	Not ED	1,249	523.9	*22.3*	536.1	*23.9*	+12.2			
		ED	335	512.2	*22.8*	524.9	*27.9*	+12.7	(11.7)	(11.1)	(-0.6)
8th	Not Proficient	Not ED	838	464.1	*28.8*	469.3	*35.7*	+5.1			
		ED	2,981	457.6	*29.8*	464.3	*37.4*	+6.7	(6.5)	(4.9)	(-1.6)
	Partially Proficient	Not ED	1,078	497.6	*20.2*	504.0	*23.0*	+6.4			
		ED	1,366	493.1	*21.4*	502.1	*29.8*	+9.0	(4.5)	(1.9)	(-2.6)
	Proficient	Not ED	970	515.7	*17.4*	522.5	*21.4*	+6.7			
		ED	537	513.6	*19.3*	523.1	*26.4*	+9.5	(2.2)	0.6	R
	Advanced	Not ED	987	542.3	*20.8*	549.5	*21.2*	+7.2			
		ED	236	534.8	*21.3*	545.6	*26.6*	+10.8	(7.5)	(3.9)	(-3.6)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.12. Average Scale Scores on Curriculum Associates' i-Ready Reading Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*) Fall		Spring		Change	Score Gap (Relative to Not ED) Fall	Spring	Change
5th	Not Proficient	Not ED	831	508.2	*46.2*	524.2	*51.9*	+16.0			
		ED	3,521	492.1	*47.4*	502.4	*53.8*	+10.3	(16.2)	(21.8)	(+5.7)
	Partially Proficient	Not ED	979	547.2	*33.7*	565.5	*35.1*	+18.3			
		ED	1,443	539.3	*37.0*	553.3	*39.8*	+14.0	(8.0)	(12.2)	(+4.2)
	Proficient	Not ED	1,154	572.5	*27.8*	591.2	*29.2*	+18.7			
		ED	917	565.9	*29.5*	580.3	*37.6*	+14.4	(6.5)	(10.9)	(+4.3)
	Advanced	Not ED	1,616	604.2	*28.7*	622.2	*28.0*	+18.0			
		ED	612	596.2	*30.7*	611.1	*35.9*	+14.9	(8.1)	(11.2)	(+3.1)
6th	Not Proficient	Not ED	855	532.0	*44.7*	539.9	*49.2*	+7.9			
		ED	3,003	511.0	*48.7*	516.7	*55.1*	+5.7	(21.0)	(23.2)	(+2.2)
	Partially Proficient	Not ED	667	569.9	*34.0*	581.4	*36.5*	+11.4			
		ED	986	561.2	*34.3*	569.9	*39.9*	+8.7	(8.7)	(11.5)	(+2.8)
	Proficient	Not ED	994	589.8	*29.5*	601.7	*31.0*	+11.9			
		ED	726	585.0	*30.2*	595.3	*36.0*	+10.3	(4.8)	(6.4)	(+1.7)
	Advanced	Not ED	1,551	624.4	*28.4*	634.0	*28.9*	+9.7			
		ED	502	613.5	*30.4*	624.8	*34.0*	+11.2	(10.8)	(9.3)	(-1.6)
7th	Not Proficient	Not ED	687	538.2	*46.1*	544.7	*51.7*	+6.5			
		ED	2,591	526.0	*50.0*	533.2	*57.2*	+7.1	(12.2)	(11.5)	(-0.7)
	Partially Proficient	Not ED	662	578.8	*35.6*	589.6	*38.9*	+10.9			
		ED	931	573.5	*36.1*	582.8	*43.1*	+9.3	(5.3)	(6.8)	(+1.5)
	Proficient	Not ED	1,292	607.4	*29.2*	613.4	*31.4*	+6.0			
		ED	869	602.1	*34.1*	607.8	*38.1*	+5.7	(5.3)	(5.6)	(+0.3)
	Advanced	Not ED	987	641.9	*26.9*	649.2	*29.4*	+7.3			
		ED	300	635.3	*26.8*	646.1	*30.2*	+10.8	(6.6)	(3.1)	(-3.5)
8th	Not Proficient	Not ED	744	546.9	*49.1*	555.6	*53.5*	+8.7			
		ED	2,647	535.1	*50.0*	542.7	*58.9*	+7.5	(11.7)	(12.9)	(+1.2)
	Partially Proficient	Not ED	928	592.1	*34.3*	598.2	*35.7*	+6.1			
		ED	1,241	587.7	*38.1*	595.2	*46.2*	+7.5	(4.4)	(3.0)	(-1.4)
	Proficient	Not ED	1,336	623.8	*29.8*	630.8	*28.0*	+7.0			
		ED	862	620.3	*30.7*	627.4	*33.4*	+7.0	(3.5)	(3.4)	(-0.0)
	Advanced	Not ED	867	656.9	*25.8*	664.6	*26.3*	+7.7			
		ED	230	655.1	*26.9*	659.1	*39.4*	+4.0	(1.8)	(5.4)	(+3.6)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.13. Average Scale Scores on Renaissance Learning's Star Math Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*)					Score Gap (Relative to Not ED)		
				Fall		Spring		Change	Fall	Spring	Change
5th	Not Proficient	Not ED	301	552.8	*84.8*	617.3	*89.3*	+64.5			
		ED	658	538.9	*94.5*	583.4	*108.0*	+44.6	(13.9)	(33.9)	(+19.9)
	Partially Proficient	Not ED	549	621.8	*60.3*	695.1	*75.1*	+73.3			
		ED	676	610.8	*63.6*	672.5	*83.1*	+61.6	(10.9)	(22.7)	(+11.7)
	Proficient	Not ED	913	678.1	*59.3*	755.4	*69.7*	+77.3			
		ED	551	663.1	*61.9*	732.6	*68.2*	+69.5	(14.9)	(22.7)	(+7.8)
	Advanced	Not ED	811	736.5	*60.4*	821.4	*56.9*	+84.8			
		ED	291	716.1	*72.2*	792.5	*67.8*	+76.4	(20.5)	(28.9)	(+8.4)
6th	Not Proficient	Not ED	253	603.1	*88.4*	627.1	*116.1*	+24.1			
		ED	599	583.3	*85.4*	606.2	*100.4*	+22.9	(19.8)	(21.0)	(+1.2)
	Partially Proficient	Not ED	740	689.9	*64.0*	725.6	*74.3*	+35.6			
		ED	831	669.1	*72.6*	695.2	*90.6*	+26.1	(20.8)	(30.4)	(+9.5)
	Proficient	Not ED	806	745.4	*56.1*	783.3	*65.6*	+37.9			
		ED	477	736.5	*59.9*	764.8	*74.0*	+28.3	(8.9)	(18.5)	(+9.6)
	Advanced	Not ED	575	800.7	*58.3*	841.5	*63.4*	+40.8			
		ED	162	791.2	*54.5*	829.7	*63.9*	+38.5	(9.5)	(11.8)	(+2.3)
7th	Not Proficient	Not ED	500	659.6	*85.7*	693.4	*95.8*	+33.8			
		ED	913	631.1	*96.7*	657.5	*116.8*	+26.3	(28.5)	(36.0)	(+7.5)
	Partially Proficient	Not ED	792	739.4	*70.0*	775.8	*70.3*	+36.4			
		ED	615	724.4	*70.2*	755.6	*80.7*	+31.1	(15.0)	(20.2)	(+5.3)
	Proficient	Not ED	565	792.9	*52.9*	830.3	*60.1*	+37.5			
		ED	327	775.2	*67.5*	815.2	*62.4*	+40.0	(17.6)	(15.1)	(-2.5)
	Advanced	Not ED	594	841.0	*51.7*	883.7	*55.8*	+42.7			
		ED	206	839.8	*60.4*	877.9	*75.6*	+38.1	(1.1)	(5.8)	(+4.6)
8th	Not Proficient	Not ED	487	678.0	*101.4*	691.1	*108.7*	+13.1			
		ED	807	658.9	*99.4*	667.3	*119.9*	+8.3	(19.1)	(23.9)	(+4.8)
	Partially Proficient	Not ED	822	770.0	*68.4*	788.0	*73.7*	+17.9			
		ED	698	761.3	*67.7*	779.0	*80.1*	+17.7	(8.7)	(9.0)	(+0.2)
	Proficient	Not ED	646	826.6	*57.5*	847.4	*53.1*	+20.9			
		ED	331	817.4	*55.3*	838.2	*65.1*	+20.7	(9.1)	(9.3)	(+0.1)
	Advanced	Not ED	591	872.6	*43.5*	897.1	*47.0*	+24.4			
		ED	136	866.5	*44.9*	885.6	*46.8*	+19.2	(6.2)	(11.5)	(+5.3)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

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Table 3.7.14. Average Scale Scores on Renaissance Learning's Star Reading Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*) Fall		Spring		Change	Score Gap (Relative to Not ED) Fall	Spring	Change
5th	Not Proficient	Not ED	369	387.6	*142.3*	456.6	*157.8*	+68.9			
		ED	792	363.2	*162.9*	416.1	*175.4*	+52.9	(24.5)	(40.4)	(+16.0)
	Partially Proficient	Not ED	595	478.7	*117.3*	571.3	*158.7*	+92.6			
		ED	697	476.0	*137.3*	550.0	*165.6*	+74.0	(2.7)	(21.3)	(+18.6)
	Proficient	Not ED	792	593.7	*133.7*	697.5	*161.5*	+103.8			
		ED	532	579.2	*147.5*	662.1	*174.1*	+83.0	(14.6)	(35.4)	(+20.8)
	Advanced	Not ED	1,003	756.7	*178.8*	857.0	*181.0*	+100.3			
		ED	380	718.5	*183.9*	826.2	*194.6*	+107.7	(38.2)	(30.8)	(-7.4)
6th	Not Proficient	Not ED	419	470.5	*159.9*	503.1	*184.2*	+32.6			
		ED	898	434.3	*174.7*	471.9	*187.7*	+37.6	(36.2)	(31.2)	(-5.0)
	Partially Proficient	Not ED	439	575.6	*149.9*	634.3	*158.8*	+58.7			
		ED	547	570.9	*142.4*	615.2	*178.8*	+44.3	(4.7)	(19.1)	(+14.4)
	Proficient	Not ED	676	680.1	*160.0*	748.1	*171.6*	+68.0			
		ED	452	659.8	*168.9*	729.3	*182.6*	+69.5	(20.3)	(18.8)	(-1.5)
	Advanced	Not ED	958	869.1	*193.6*	944.9	*200.4*	+75.8			
		ED	368	842.3	*198.6*	916.9	*222.8*	+74.7	(26.9)	(28.0)	(+1.1)
7th	Not Proficient	Not ED	444	526.4	*162.2*	564.2	*191.5*	+37.8			
		ED	889	481.1	*181.8*	501.6	*198.0*	+20.5	(45.3)	(62.6)	(+17.3)
	Partially Proficient	Not ED	501	669.3	*161.3*	723.6	*187.1*	+54.3			
		ED	535	636.0	*194.0*	673.5	*189.8*	+37.5	(33.3)	(50.1)	(+16.9)
	Proficient	Not ED	930	808.4	*175.3*	858.7	*184.7*	+50.3			
		ED	612	791.2	*187.2*	840.7	*199.2*	+49.5	(17.2)	(18.0)	(+0.8)
	Advanced	Not ED	679	1025.9	*193.3*	1081.1	*193.8*	+55.2			
		ED	237	1003.0	*212.3*	1054.7	*196.9*	+51.7	(22.9)	(26.4)	(+3.5)
8th	Not Proficient	Not ED	442	571.8	*186.9*	588.2	*219.4*	+16.4			
		ED	875	542.0	*209.3*	554.6	*226.5*	+12.6	(29.8)	(33.6)	(+3.8)
	Partially Proficient	Not ED	735	749.4	*182.0*	778.1	*197.3*	+28.7			
		ED	675	745.1	*193.0*	746.0	*216.8*	+0.9	(4.2)	(32.1)	(+27.8)
	Proficient	Not ED	1,039	937.4	*191.1*	974.1	*196.6*	+36.7			
		ED	560	914.4	*203.7*	945.1	*219.0*	+30.7	(23.0)	(28.9)	(+6.0)
	Advanced	Not ED	566	1147.7	*164.4*	1179.2	*170.3*	+31.5			
		ED	157	1143.7	*173.0*	1167.5	*165.2*	+23.9	(4.0)	(11.7)	(+7.7)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. M-STEP data were provided to EPIC by MDE. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

Table 3.7.15. Average Scale Scores on DRC's Smarter Balanced ICA Math Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 Math Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*) Fall		Spring		Change	Score Gap (Relative to Not ED) Fall	Spring	Change
5th	Not Proficient	Not ED	37	2418.3	*40.9*	2432.0	*81.9*	+13.7			
		ED	36	2378.7	*62.5*	2392.8	*77.7*	+14.2	(39.6)	(39.2)	(-0.4)
	Partially Proficient	Not ED	85	2443.2	*69.1*	2485.2	*59.5*	+42.0			
		ED	47	2432.1	*55.1*	2477.1	*65.0*	+45.0	(11.1)	(8.1)	(-3.0)
	Proficient	Not ED	118	2492.9	*51.9*	2533.1	*59.6*	+40.2			
		ED	54	2461.6	*48.1*	2506.6	*73.8*	+45.0	(31.3)	(26.5)	(-4.8)
	Advanced	Not ED	123	2551.8	*48.7*	2600.0	*53.3*	+48.2			
		ED	35	2531.3	*66.1*	2583.4	*71.3*	+52.1	(20.5)	(16.6)	(-3.8)
6th	Not Proficient	Not ED	30	2415.1	*63.1*	2426.4	*79.2*	+11.3			
		ED	32	2373.4	*56.5*	2384.5	*99.2*	+11.1	(41.7)	(41.9)	(+0.2)
	Partially Proficient	Not ED	125	2447.1	*49.4*	2483.5	*53.7*	+36.4			
		ED	76	2443.0	*54.8*	2482.5	*73.0*	+39.5	(4.1)	(1.0)	(-3.1)
	Proficient	Not ED	128	2500.1	*40.4*	2550.6	*48.2*	+50.6			
		ED	38	2487.7	*64.9*	2548.4	*52.5*	+60.7	(12.4)	(2.2)	(-10.2)
	Advanced	Not ED	123	2551.7	*48.0*	2613.7	*54.6*	+62.1			
		ED	19	2548.3	*47.8*	2590.2	*56.0*	+41.9	(3.4)	(23.5)	(+20.1)
7th	Not Proficient	Not ED	66	2445.9	*55.3*	2465.5	*75.8*	+19.7			
		ED	64	2419.2	*84.5*	2407.9	*83.0*	-11.3	(26.7)	(57.6)	(+30.9)
	Partially Proficient	Not ED	133	2504.4	*57.4*	2523.2	*67.3*	+18.8			
		ED	56	2479.8	*68.9*	2515.2	*68.8*	+35.5	(24.6)	(8.0)	(-16.7)
	Proficient	Not ED	90	2551.4	*47.3*	2586.9	*58.2*	+35.4			
		ED	42	2549.0	*49.8*	2600.2	*50.8*	+51.2	(2.5)	13.3	R
	Advanced	Not ED	107	2626.4	*61.7*	2667.9	*62.4*	+41.5			
		ED	13	2590.1	*48.5*	2665.2	*61.4*	+75.2	(36.3)	(2.6)	(-33.7)
8th	Not Proficient	Not ED	59	2437.0	*71.7*	2434.4	*73.8*	-2.6			
		ED	68	2430.0	*66.5*	2437.1	*84.8*	+7.0	(7.0)	2.7	R
	Partially Proficient	Not ED	109	2489.2	*63.3*	2517.8	*86.5*	+28.5			
		ED	61	2487.3	*76.8*	2491.2	*100.1*	+3.9	(1.9)	(26.6)	(+24.6)
	Proficient	Not ED	102	2539.8	*52.0*	2586.5	*63.7*	+46.7			
		ED	28	2526.1	*59.4*	2557.8	*87.9*	+31.7	(13.7)	(28.8)	(+15.1)
	Advanced	Not ED	109	2600.3	*77.2*	2662.5	*64.9*	+62.2			
		ED	13	2608.9	*66.2*	2665.0	*63.5*	+56.1	8.6	2.5	-6.2

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

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Table 3.7.16. Average Scale Scores on DRC's Smarter Balanced ICA ELA Assessment by 2019 M-STEP Proficiency and Economically Disadvantaged Status

Grade	2019 ELA Proficiency	Econ. Disad. Status	*N* Tested	Mean Scale Score (SD in *italics*) Fall		Spring		Change	Score Gap (Relative to Not ED) Fall	Spring	Change
5th	Not Proficient	Not ED	26	2416.8	*62.9*	2429.4	*88.5*	+12.6			
		ED	36	2374.8	*86.0*	2412.8	*78.9*	+38.0	(42.0)	(16.6)	(-25.5)
	Partially Proficient	Not ED	78	2452.8	*69.8*	2487.1	*59.7*	+34.2			
		ED	34	2443.1	*86.9*	2470.8	*85.7*	+27.7	(9.7)	(16.3)	(+6.5)
	Proficient	Not ED	91	2504.5	*46.7*	2536.7	*55.3*	+32.2			
		ED	36	2484.1	*53.7*	2533.3	*84.4*	+49.2	(20.4)	(3.4)	(-17.0)
	Advanced	Not ED	143	2564.8	*56.5*	2602.0	*57.4*	+37.2			
		ED	42	2549.8	*65.3*	2592.9	*70.5*	+43.0	(15.0)	(9.2)	(-5.8)
6th	Not Proficient	Not ED	47	2472.0	*65.4*	2495.9	*75.8*	+23.8			
		ED	42	2434.0	*71.6*	2445.0	*64.1*	+11.0	(38.0)	(50.9)	(+12.8)
	Partially Proficient	Not ED	84	2502.2	*79.6*	2536.6	*81.7*	+34.3			
		ED	64	2473.5	*69.4*	2519.2	*75.9*	+45.8	(28.8)	(17.4)	(-11.4)
	Proficient	Not ED	131	2559.7	*55.8*	2587.0	*61.5*	+27.3			
		ED	40	2534.2	*84.6*	2563.3	*81.3*	+29.1	(25.5)	(23.7)	(-1.8)
	Advanced	Not ED	150	2621.2	*61.7*	2658.0	*51.0*	+36.8			
		ED	23	2586.5	*69.4*	2655.3	*74.3*	+68.8	(34.6)	(2.6)	(-32.0)
7th	Not Proficient	Not ED	54	2478.5	*77.0*	2487.6	*83.0*	+9.1			
		ED	58	2462.1	*78.4*	2474.3	*90.6*	+12.3	(16.4)	(13.2)	(-3.2)
	Partially Proficient	Not ED	80	2524.6	*54.5*	2544.4	*80.6*	+19.8			
		ED	47	2502.0	*62.9*	2536.1	*81.0*	+34.1	(22.5)	(8.3)	(-14.2)
	Proficient	Not ED	130	2580.5	*57.9*	2616.3	*74.8*	+35.8			
		ED	47	2555.3	*65.8*	2572.0	*83.9*	+16.7	(25.2)	(44.3)	(+19.2)
	Advanced	Not ED	116	2652.7	*57.7*	2682.6	*65.0*	+29.9			
		ED	21	2639.2	*54.9*	2704.3	*55.1*	+65.0	(13.5)	21.7	R
8th	Not Proficient	Not ED	61	2490.6	*63.1*	2459.3	*84.1*	-31.3			
		ED	55	2481.6	*62.8*	2500.3	*67.3*	+18.7	(8.9)	41.0	R
	Partially Proficient	Not ED	86	2547.9	*65.1*	2562.2	*74.2*	+14.2			
		ED	54	2531.0	*60.5*	2549.8	*89.0*	+18.9	(16.9)	(12.3)	(-4.6)
	Proficient	Not ED	143	2617.1	*60.7*	2624.8	*83.9*	+7.7			
		ED	32	2593.5	*84.4*	2613.5	*81.7*	+20.0	(23.7)	(11.3)	(-12.4)
	Advanced	Not ED	75	2708.4	*52.6*	2721.8	*50.1*	+13.3			
		ED	15	2667.0	*63.4*	2698.7	*56.5*	+31.7	(41.4)	(23.1)	(-18.4)

Notes: The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than

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COMPARING STUDENT TRAJECTORIES ON M-STEPS BEFORE AND DURING THE PANDEMIC

Since Michigan resumed M-STEP testing in spring 2021, we are now able to compare student achievement trends on the state's summative assessment before and during the COVID-19 pandemic. The following analysis compares movement between M-STEP proficiency levels for two cohorts of Michigan students: a "pre-pandemic cohort" that completed either the mathematics or ELA M-STEP assessment in two time periods before the school closures that occurred at the start of the pandemic (i.e., spring 2017 and spring 2019) and a "pandemic" cohort that completed one iteration of the M-STEP before the pandemic and the first administration of the assessment since the pandemic (i.e., spring 2019 and spring 2021)

We calculate the distribution of students across M-STEP proficiency levels for those students in the pre-pandemic cohort who completed either the M-STEP Mathematics or ELA assessment in both 2017 and 2019 (e.g., students who completed the 3rd-grade M-STEP Mathematics in 2017 and the 5th-grade M-STEP Mathematics in 2019). We repeat this calculation for the pandemic cohort of students who completed M-STEP assessments for the same grade-levels and subject in 2019 and 2021 (e.g., students who completed the 3rd-grade M-STEP Mathematics in 2019 and 5th-grade M-STEP Mathematics in 2021). By comparing the distribution of proficiency levels for each administration both within and across cohorts, we can see how achievement trends differ across students who completed both assessments before the pandemic and those who were affected by the pandemic over the past two school years. This analysis is repeated for students who initially completed 3rd-, 4th-, or 5th-grade M-STEP assessments in 2017 (or 2019). We also provide breakdowns for each of the student subgroups examined in the main analysis. In the main text that follows, we only show results for the overall population of Michigan students and breakdowns by race/ethnicity. Patterns for other subgroups are similar, and follow the expected trajectories given the results discussed above in relation to benchmark assessment data. The remaining subgroup analyses can be found in Appendix Tables A.29–A.34.

These M-STEP analyses are based on imperfect and incomplete data. Although nearly all (N=825) Michigan districts participated in M-STEP testing in spring 2021, participation rates within those districts were much lower than in a typical year, and

the students who are represented in the analysis do not perfectly reflect the population of Michigan students overall or, in many cases, within a given district. Moreover, participation rates varied greatly across different types of districts; districts with greater 2021 M-STEP participation rates were more likely to offer in-person instruction throughout the 2020-21 school year. These differences are particularly important to keep in mind when comparing achievement across students in the pre-pandemic and pandemic cohorts.

Table 3.8.1 through Table 3.8.8 provide the overall and subgroup-specific comparisons of students in the pre-pandemic and pandemic cohorts. Each row of the table represents a group of students in the same cohort who achieved the same proficiency level on the M-STEP in the first time period (i.e., 2017 for the pre-pandemic cohort and 2019 for the pandemic cohort). The percentages in each row show the shares of these students that achieved each possible proficiency level two years later (i.e., 2019 for the pre-pandemic cohort and 2021 for the pandemic cohort). Each cell is shaded according to these percentages, where darker shades of green correspond to higher percentages (i.e., the background of a cell that represents 100% of students would be the darkest shade of green, while the background of a cell that represents 0% of students would be white). If students were equally likely to score within any one of the four proficiency levels in the second time period, regardless of their prior proficiency level, each cell would be the same light shade of green (representing 25% of students in each of the four cells in each row).

There are several important takeaways from the combined set of tables. First, across all student characteristics (race/ethnicity, gender, economic disadvantage, and special education) and grade levels (3rd, 4th, and 5th in the base year), it was far less likely for students to move from lower to higher M-STEP proficiency levels between test administrations during the pandemic relative to prior to the pandemic. Second, and relatedly, it was far more likely for students during the pandemic than before the pandemic to move from higher to lower M-STEP proficiency levels across years.

This can easily be seen in Table 3.8.1 for the overall population of students who took the M-STEPs. For example, as seen in the top panel of the table, 83% of students in the pre-pandemic cohort who scored “Not Proficient” on the 3rd-grade M-STEP Mathematics assessment in 2017 scored “Not Proficient” again on the 5th-grade assessment in 2019. The remaining 16% and 2% who scored “Not Proficient” in 2017 scored “Partially Proficient” and “Proficient” in 2019, respectively. However, for the pandemic cohort, 91% of students who scored “Not Proficient” on the 3rd-grade M-STEP Mathematics assessment in 2019 scored “Not Proficient” again in 2021, an increase of eight percentage points between cohorts. Conversely, at the top of the distribution, 65% of students in the pre-pandemic cohort who scored “Advanced” on the 3rd-grade M-STEP Mathematics assessment in 2017 scored “Advanced” again in

2019, while 26% scored "Proficient," 8% scored "Partially Proficient," and 1% scored "Not Proficient." For the pandemic cohort, only 49% of students who scored "Advanced" on the 3rd-grade M-STEP Mathematics assessment 2019 scored "Advanced" again in 2021, while 31% scored "Proficient," 17% scored "Partially Proficient," and 3% scored "Not Proficient."

Table 3.8.3 through Table 3.8.8 provides the same analyses for racial/ethnic subgroups. The overall trends carry through for all subgroups of students. However, these patterns are more pronounced for some groups than for others. For instance, in Table 3.8.3, 97% of Black students in the pandemic cohort who were "Not Proficient" in mathematics as 3rd graders were still "Not Proficient" two years later as 5th graders (compared to 90% for the pre-pandemic cohort). Of Black students in the pandemic cohort who were "Advanced" in mathematics as 3rd graders in the first time period, only 20% were still "Advanced" as 5th graders in the second time period, while 34% were "Proficient," 30% were "Partially Proficient," and 16% were "Not Proficient." In comparison, out of all Black students from the pre-pandemic cohort who were "Advanced" in mathematics as 3rd graders, 44% were still "Advanced" two years later as 5th graders, 31% were "Proficient," 18% were "Partially Proficient," and 6% were "Not Proficient." These patterns provide suggestive evidence that, while the pandemic school years stifled upward mobility through M-STEP proficiency levels for all students, certain groups of students—in particular Black students—fared worse during the pandemic than did others. Although not shown here, Appendix Tables A.29-A.34 show that economically disadvantaged students were also less likely to stay at or move up in their proficiency level during the pandemic than they were prior to the pandemic, especially relative to their non-economically disadvantaged peers.

Table 3.8.1. Two-Year M-STEP Mathematics Proficiency Level Trajectories between 2017-2019 and 2019-2021					
3rd-Grade Proficiency Level (2017, 2019)	Cohort	5th-Grade Proficiency Level (2019, 2021)			
		Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	Pandemic	91%	8%	1%	0%
	Pre-Pandemic	83%	16%	2%	0%
Partially Proficient	Pandemic	57%	35%	6%	1%
	Pre-Pandemic	42%	45%	11%	2%
Proficient	Pandemic	20%	45%	27%	8%
	Pre-Pandemic	10%	39%	35%	16%
Advanced	Pandemic	3%	17%	31%	49%
	Pre-Pandemic	1%	8%	26%	65%
4th-Grade Proficiency Level (2017, 2019)	Cohort	6th-Grade Proficiency Level (2019, 2021)			
		Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	Pandemic	93%	7%	0%	0%
	Pre-Pandemic	85%	14%	1%	0%
Partially Proficient	Pandemic	51%	43%	5%	0%
	Pre-Pandemic	35%	52%	12%	1%
Proficient	Pandemic	11%	50%	31%	8%
	Pre-Pandemic	5%	36%	42%	17%
Advanced	Pandemic	1%	13%	34%	51%
	Pre-Pandemic	0%	5%	25%	70%
5th-Grade Proficiency Level (2017, 2019)	Cohort	7th -Grade Proficiency Level (2019, 2021)			
		Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	Pandemic	85%	14%	1%	0%
	Pre-Pandemic	78%	21%	2%	0%
Partially Proficient	Pandemic	37%	48%	13%	1%
	Pre-Pandemic	25%	52%	20%	2%
Proficient	Pandemic	8%	38%	43%	11%
	Pre-Pandemic	4%	27%	48%	21%
Advanced	Pandemic	1%	10%	35%	54%
	Pre-Pandemic	0%	4%	24%	71%

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort (i.e., 3rd-, 4th-, or 5th-grade proficiency in 2017 for the pre-pandemic cohort, or 3rd-, 4th-, or 5th-grade proficiency in 2019 for students in the pandemic cohort). Proficiency levels across the top row represents achievement levels two years later for students in each cohort (i.e., 5th-, 6th-, or 7th-grade proficiency in 2019 for students in the pre-pandemic cohort, or 5th-, 6th-, or 7th-grade proficiency for students in the pandemic cohort). The percentages in each row and column combination represent the share of students from a particular cohort and base-year achievement level that scored at a particular proficiency level two years later. For example, in the top-left corner of this table, among pandemic cohort students who scored "Not Proficient" on the 2019 3rd-grade M-STEP Mathematics assessment, 91% also scored "Not Proficient" on the 5th-grade assessment in 2021.

Table 3.8.2. Two-Year M-STEP ELA Proficiency Level Trajectories between 2017-2019 and 2019-2021					
3rd-Grade Proficiency Level (2017, 2019)	Cohort	5th-Grade Proficiency Level (2019, 2021)			
		Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	Pandemic	80%	16%	4%	0%
	Pre-Pandemic	73%	20%	6%	0%
Partially Proficient	Pandemic	40%	37%	21%	2%
	Pre-Pandemic	30%	38%	29%	3%
Proficient	Pandemic	12%	27%	49%	12%
	Pre-Pandemic	8%	22%	54%	16%
Advanced	Pandemic	2%	6%	38%	54%
	Pre-Pandemic	1%	4%	34%	60%
4th-Grade Proficiency Level (2017, 2019)	Cohort	6th-Grade Proficiency Level (2019, 2021)			
		Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	Pandemic	76%	21%	3%	0%
	Pre-Pandemic	69%	26%	5%	0%
Partially Proficient	Pandemic	38%	45%	17%	0%
	Pre-Pandemic	26%	46%	26%	1%
Proficient	Pandemic	13%	39%	43%	5%
	Pre-Pandemic	7%	30%	53%	9%
Advanced	Pandemic	2%	12%	48%	38%
	Pre-Pandemic	1%	7%	42%	50%
5th-Grade Proficiency Level (2017, 2019)	Cohort	7th-Grade Proficiency Level (2019, 2021)			
		Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	Pandemic	73%	24%	3%	0%
	Pre-Pandemic	74%	23%	3%	0%
Partially Proficient	Pandemic	34%	47%	19%	0%
	Pre-Pandemic	33%	48%	19%	1%
Proficient	Pandemic	9%	33%	52%	6%
	Pre-Pandemic	8%	32%	52%	8%
Advanced	Pandemic	1%	7%	49%	43%
	Pre-Pandemic	1%	6%	44%	49%

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort (i.e., 3rd-, 4th-, or 5th-grade proficiency in 2017 for the pre-pandemic cohort, or 3rd-, 4th-, or 5th-grade proficiency in 2019 for students in the pandemic cohort). Proficiency levels across the top row represents achievement levels two years later for students in each cohort (i.e., 5th-, 6th-, or 7th-grade proficiency in 2019 for students in the pre-pandemic cohort, or 5th-, 6th-, or 7th-grade proficiency for students in the pandemic cohort). The percentages in each row and column combination represent the share of students from a particular cohort and base-year achievement level that scored at a particular proficiency level two years later. For example, in the top-left corner of this table, among pandemic cohort students who scored "Not Proficient" on the 2019 3rd-grade M-STEP Mathematics assessment, 91% also scored "Not Proficient" on the 5th-grade assessment in 2021.

Table 3.8.3. Two-Year M-STEP Mathematics Proficiency Level Trajectories between 2017-2019 and 2019-2021 by Race/Ethnicity						
3rd-Grade Proficiency Level (2017, 2019)	Subgroup	Cohort	5th-Grade Proficiency Level (2019, 2021)			
			Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	White	Pandemic	88%	11%	1%	0%
		Pre-Pandemic	77%	20%	2%	0%
	Black	Pandemic	97%	3%	0%	0%
		Pre-Pandemic	90%	9%	1%	0%
	Latino/a/x	Pandemic	93%	6%	1%	0%
		Pre-Pandemic	82%	17%	1%	0%
	Asian	Pandemic	86%	11%	2%	1%
		Pre-Pandemic	71%	25%	3%	1%
	Other	Pandemic	91%	9%	0%	0%
		Pre-Pandemic	84%	14%	1%	0%
Partially Proficient	White	Pandemic	52%	39%	8%	1%
		Pre-Pandemic	37%	48%	13%	2%
	Black	Pandemic	81%	17%	2%	0%
		Pre-Pandemic	59%	35%	5%	1%
	Latino/a/x	Pandemic	63%	32%	4%	1%
		Pre-Pandemic	47%	43%	9%	1%
	Asian	Pandemic	48%	38%	12%	2%
		Pre-Pandemic	26%	46%	22%	6%
	Other	Pandemic	63%	33%	4%	1%
		Pre-Pandemic	43%	44%	12%	2%
Proficient	White	Pandemic	17%	46%	29%	9%
		Pre-Pandemic	8%	38%	36%	17%
	Black	Pandemic	48%	39%	11%	2%
		Pre-Pandemic	20%	47%	24%	9%
	Latino/a/x	Pandemic	27%	47%	22%	5%
		Pre-Pandemic	13%	42%	32%	13%
	Asian	Pandemic	10%	43%	32%	15%
		Pre-Pandemic	3%	27%	39%	31%
	Other	Pandemic	24%	46%	24%	7%
		Pre-Pandemic	13%	42%	31%	14%
Advanced	White	Pandemic	2%	17%	32%	49%
		Pre-Pandemic	1%	8%	27%	65%
	Black	Pandemic	16%	30%	34%	20%
		Pre-Pandemic	6%	18%	31%	44%
	Latino/a/x	Pandemic	5%	22%	34%	39%
		Pre-Pandemic	1%	12%	28%	59%
	Asian	Pandemic	1%	8%	18%	73%
		Pre-Pandemic	0%	2%	13%	85%
	Other	Pandemic	5%	18%	32%	45%
		Pre-Pandemic	1%	9%	25%	65%

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort and racial/ethnic subgroup combination. Proficiency levels across the top row represents achievement levels two years later. The percentages in each row and column combination represent the share of students from a particular cohort, racial/ethnic subgroup, and base-year achievement level that

scored at a particular proficiency level two years later. For example, in the top-left corner of this table, among 3rd-grade White pandemic cohort students who scored "Not Proficient" on the 2019 M-STEP Mathematics assessment, 88% also scored "Not Proficient" on the 5th-grade assessment in 2021.

Table 3.8.4. Two-Year M-STEP Mathematics Proficiency Level Trajectories between 2017-2019 and 2019-2021 by Race/Ethnicity						
4th-Grade Proficiency Level (2017, 2019)	Subgroup	Cohort	6th-Grade Proficiency Level (2019, 2021)			
			Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	White	Pandemic	91%	9%	0%	0%
		Pre-Pandemic	81%	18%	1%	0%
	Black	Pandemic	97%	3%	0%	0%
		Pre-Pandemic	90%	9%	0%	0%
	Latino/a/x	Pandemic	94%	6%	0%	0%
		Pre-Pandemic	86%	13%	1%	0%
	Asian	Pandemic	91%	8%	1%	0%
		Pre-Pandemic	72%	24%	4%	0%
	Other	Pandemic	93%	7%	0%	0%
		Pre-Pandemic	87%	13%	0%	0%
Partially Proficient	White	Pandemic	46%	47%	6%	0%
		Pre-Pandemic	31%	54%	13%	2%
	Black	Pandemic	70%	28%	2%	0%
		Pre-Pandemic	49%	44%	6%	0%
	Latino/a/x	Pandemic	57%	39%	3%	0%
		Pre-Pandemic	40%	50%	10%	1%
	Asian	Pandemic	40%	45%	11%	4%
		Pre-Pandemic	23%	54%	19%	4%
	Other	Pandemic	57%	39%	5%	0%
		Pre-Pandemic	38%	51%	11%	1%
Proficient	White	Pandemic	10%	50%	32%	8%
		Pre-Pandemic	4%	34%	44%	18%
	Black	Pandemic	25%	55%	17%	2%
		Pre-Pandemic	11%	48%	32%	9%
	Latino/a/x	Pandemic	13%	55%	27%	5%
		Pre-Pandemic	6%	41%	39%	13%
	Asian	Pandemic	7%	40%	33%	20%
		Pre-Pandemic	2%	19%	42%	37%
	Other	Pandemic	13%	52%	29%	7%
		Pre-Pandemic	5%	41%	40%	14%
Advanced	White	Pandemic	1%	13%	35%	51%
		Pre-Pandemic	0%	5%	26%	69%
	Black	Pandemic	7%	28%	34%	31%
		Pre-Pandemic	2%	14%	31%	52%
	Latino/a/x	Pandemic	3%	18%	39%	40%
		Pre-Pandemic	1%	8%	32%	59%
	Asian	Pandemic	0%	5%	19%	76%
		Pre-Pandemic	0%	1%	9%	90%
	Other	Pandemic	2%	14%	37%	47%
		Pre-Pandemic				

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort and racial/ethnic subgroup combination. Proficiency levels across the top row represents achievement levels two years later. The percentages in each row and column combination represent the share of students from a particular cohort, racial/ethnic subgroup, and base-year achievement level that

scored at a particular proficiency level two years later. For example, in the top-left corner of this table, among 4th-grade White pandemic cohort students who scored "Not Proficient" on the 2019 M-STEP Mathematics assessment, 91% also scored "Not Proficient" on the 6th-grade assessment in 2021.

Table 3.8.5. Two-Year M-STEP Mathematics Proficiency Level Trajectories between 2017-2019 and 2019-2021 by Race/Ethnicity						
5th-Grade Proficiency Level (2017, 2019)	Subgroup	Cohort	7th-Grade Proficiency Level (2019, 2021)			
			Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	White	Pandemic	82%	17%	1%	0%
		Pre-Pandemic	73%	25%	2%	0%
	Black	Pandemic	93%	6%	0%	0%
		Pre-Pandemic	85%	14%	1%	0%
	Latino/a/x	Pandemic	86%	13%	1%	0%
		Pre-Pandemic	77%	21%	2%	0%
	Asian	Pandemic	80%	19%	1%	0%
		Pre-Pandemic	66%	28%	5%	0%
	Other	Pandemic	85%	15%	1%	0%
		Pre-Pandemic	77%	21%	2%	0%
Partially Proficient	White	Pandemic	35%	50%	14%	1%
		Pre-Pandemic	23%	54%	21%	2%
	Black	Pandemic	53%	40%	6%	1%
		Pre-Pandemic	35%	49%	15%	2%
	Latino/a/x	Pandemic	41%	48%	10%	1%
		Pre-Pandemic	28%	51%	19%	2%
	Asian	Pandemic	29%	48%	19%	4%
		Pre-Pandemic	16%	48%	29%	7%
	Other	Pandemic	41%	47%	11%	1%
		Pre-Pandemic	30%	51%	17%	2%
Proficient	White	Pandemic	8%	38%	44%	11%
		Pre-Pandemic	3%	27%	49%	21%
	Black	Pandemic	14%	46%	33%	7%
		Pre-Pandemic	9%	31%	43%	17%
	Latino/a/x	Pandemic	9%	41%	42%	8%
		Pre-Pandemic	4%	31%	46%	19%
	Asian	Pandemic	5%	24%	48%	24%
		Pre-Pandemic	1%	15%	42%	42%
	Other	Pandemic	9%	43%	38%	10%
		Pre-Pandemic	4%	32%	45%	19%
Advanced	White	Pandemic	1%	10%	37%	53%
		Pre-Pandemic	0%	4%	25%	70%
	Black	Pandemic	3%	19%	45%	33%
		Pre-Pandemic	1%	8%	30%	61%
	Latino/a/x	Pandemic	1%	13%	39%	46%
		Pre-Pandemic	0%	6%	30%	63%
	Asian	Pandemic	0%	3%	15%	81%
		Pre-Pandemic	0%	1%	10%	90%
	Other	Pandemic	2%	11%	33%	54%
		Pre-Pandemic	1%	5%	23%	71%

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort and racial/ethnic subgroup combination. Proficiency levels across the top row represents achievement levels two years later. The percentages in each row and column combination represent the share of students from a particular cohort, racial/ethnic subgroup, and base-year achievement level that

scored at a particular proficiency level two years later. For example, in the top-left corner of this table, among 5th-grade White pandemic cohort students who scored "Not Proficient" on the 2019 M-STEP Mathematics assessment, 82% also scored "Not Proficient" on the 7th-grade assessment in 2021.

Table 3.8.6. Two-Year M-STEP ELA Proficiency Level Trajectories between 2017-2019 and 2019-2021 by Race/Ethnicity						
3rd-Grade Performance Level (2017, 2019)	Subgroup	Cohort	5th-Grade Performance Level (2019, 2021)			
			Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	White	Pandemic	76%	19%	5%	0%
		Pre-Pandemic	68%	24%	8%	0%
	Black	Pandemic	89%	9%	1%	0%
		Pre-Pandemic	82%	14%	3%	0%
	Latino/a/x	Pandemic	82%	14%	4%	0%
		Pre-Pandemic	72%	22%	6%	0%
	Asian	Pandemic	64%	22%	12%	1%
		Pre-Pandemic	59%	25%	15%	1%
	Other	Pandemic	81%	14%	4%	0%
		Pre-Pandemic	72%	21%	6%	0%
Partially Proficient	White	Pandemic	38%	38%	22%	2%
		Pre-Pandemic	28%	38%	31%	3%
	Black	Pandemic	53%	34%	13%	1%
		Pre-Pandemic	41%	36%	21%	2%
	Latino/a/x	Pandemic	42%	37%	19%	2%
		Pre-Pandemic	32%	38%	28%	2%
	Asian	Pandemic	25%	35%	35%	5%
		Pre-Pandemic	15%	33%	44%	8%
	Other	Pandemic	43%	37%	18%	2%
		Pre-Pandemic	30%	40%	27%	3%
Proficient	White	Pandemic	11%	27%	50%	12%
		Pre-Pandemic	7%	22%	54%	17%
	Black	Pandemic	21%	33%	40%	6%
		Pre-Pandemic	14%	26%	50%	10%
	Latino/a/x	Pandemic	13%	30%	48%	10%
		Pre-Pandemic	8%	24%	55%	13%
	Asian	Pandemic	6%	17%	54%	23%
		Pre-Pandemic	4%	14%	53%	29%
	Other	Pandemic	15%	27%	46%	13%
		Pre-Pandemic	10%	24%	52%	14%
Advanced	White	Pandemic	2%	6%	38%	54%
		Pre-Pandemic	1%	4%	34%	61%
	Black	Pandemic	5%	14%	46%	36%
		Pre-Pandemic	3%	8%	42%	47%
	Latino/a/x	Pandemic	3%	7%	41%	49%
		Pre-Pandemic	1%	5%	41%	52%
	Asian	Pandemic	0%	2%	25%	72%
		Pre-Pandemic	0%	2%	19%	79%
	Other	Pandemic	3%	7%	41%	49%
		Pre-Pandemic	2%	4%	36%	58%

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort and racial/ethnic subgroup combination. Proficiency levels across the top row represents achievement levels two years later. The percentages in each row and column combination represent the share of students from a particular cohort, racial/ethnic subgroup, and baseyear achievement level that

scored at a particular proficiency level two years later. For example, in the top- left corner of this table, among 3rd-grade White pandemic cohort students who scored "Not Proficient" on the 2019 M-STEP ELA assessment, 76% also scored "Not Proficient" on the 5th-grade assessment in 2021.

Table 3.8.7. Two-Year M-STEP ELA Proficiency Level Trajectories between 2017-2019 and 2019-2021 by Race/Ethnicity						
4th-Grade Performance Level (2017, 2019)	Subgroup	Cohort	6th-Grade Performance Level (2019, 2021)			
			Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	White	Pandemic	73%	23%	3%	0%
		Pre-Pandemic	64%	29%	6%	0%
	Black	Pandemic	84%	15%	1%	0%
		Pre-Pandemic	76%	21%	3%	0%
	Latino/a/x	Pandemic	78%	20%	3%	0%
		Pre-Pandemic	71%	25%	4%	0%
	Asian	Pandemic	64%	28%	8%	0%
		Pre-Pandemic	51%	35%	13%	1%
	Other	Pandemic	77%	20%	3%	0%
		Pre-Pandemic	70%	25%	5%	0%
Partially Proficient	White	Pandemic	36%	46%	18%	0%
		Pre-Pandemic	24%	46%	28%	2%
	Black	Pandemic	48%	41%	11%	0%
		Pre-Pandemic	32%	47%	20%	1%
	Latino/a/x	Pandemic	40%	46%	14%	0%
		Pre-Pandemic	30%	46%	24%	1%
	Asian	Pandemic	23%	47%	28%	1%
		Pre-Pandemic	11%	42%	41%	5%
	Other	Pandemic	42%	41%	17%	1%
		Pre-Pandemic	31%	44%	24%	1%
Proficient	White	Pandemic	13%	38%	44%	5%
		Pre-Pandemic	7%	30%	54%	9%
	Black	Pandemic	19%	45%	32%	3%
		Pre-Pandemic	11%	34%	48%	7%
	Latino/a/x	Pandemic	18%	39%	38%	4%
		Pre-Pandemic	7%	34%	50%	9%
	Asian	Pandemic	4%	31%	55%	10%
		Pre-Pandemic	2%	17%	61%	21%
	Other	Pandemic	15%	39%	42%	4%
		Pre-Pandemic	8%	32%	53%	7%
Advanced	White	Pandemic	2%	12%	48%	38%
		Pre-Pandemic	1%	6%	42%	50%
	Black	Pandemic	5%	18%	51%	25%
		Pre-Pandemic	3%	12%	50%	36%
	Latino/a/x	Pandemic	3%	15%	52%	30%
		Pre-Pandemic	2%	8%	47%	43%
	Asian	Pandemic	1%	7%	39%	53%
		Pre-Pandemic	0%	2%	28%	70%
	Other	Pandemic	4%	14%	47%	35%
		Pre-Pandemic	1%	8%	43%	48%

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort and racial/ethnic subgroup combination. Proficiency levels across the top row represents achievement levels two years later. The percentages in each row and column combination represent the share of students from a particular cohort, racial/ethnic subgroup, and base-year achievement level that

scored at a particular proficiency level two years later. For example, in the top-left corner of this table, among 4th-grade White pandemic cohort students who scored "Not Proficient" on the 2019 M-STEP ELA assessment, 73% also scored "Not Proficient" on the 6th-grade assessment in 2021.

Table 3.8.8. Two-Year M-STEP ELA Proficiency Level Trajectories between 2017-2019 and 2019-2021 by Race/Ethnicity						
5th-Grade Performance Level (2017, 2019)	Subgroup	Cohort	7th-Grade Performance Level (2019, 2021)			
			Not Proficient	Partially Proficient	Proficient	Advanced
Not Proficient	White	Pandemic	70%	26%	4%	0%
		Pre-Pandemic	70%	25%	4%	0%
	Black	Pandemic	81%	17%	1%	0%
		Pre-Pandemic	80%	18%	2%	0%
	Latino/a/x	Pandemic	75%	23%	2%	0%
		Pre-Pandemic	73%	24%	3%	0%
	Asian	Pandemic	62%	31%	7%	0%
		Pre-Pandemic	59%	32%	9%	0%
	Other	Pandemic	76%	21%	3%	0%
		Pre-Pandemic	72%	24%	3%	0%
Partially Proficient	White	Pandemic	32%	48%	19%	0%
		Pre-Pandemic	31%	49%	20%	1%
	Black	Pandemic	39%	47%	14%	0%
		Pre-Pandemic	39%	45%	15%	0%
	Latino/a/x	Pandemic	38%	46%	16%	0%
		Pre-Pandemic	35%	48%	17%	1%
	Asian	Pandemic	21%	49%	28%	2%
		Pre-Pandemic	14%	48%	36%	2%
	Other	Pandemic	36%	45%	18%	1%
		Pre-Pandemic	37%	44%	18%	0%
Proficient	White	Pandemic	9%	33%	53%	6%
		Pre-Pandemic	7%	31%	53%	8%
	Black	Pandemic	12%	39%	45%	4%
		Pre-Pandemic	12%	37%	45%	6%
	Latino/a/x	Pandemic	10%	37%	48%	5%
		Pre-Pandemic	9%	35%	50%	6%
	Asian	Pandemic	4%	24%	62%	10%
		Pre-Pandemic	2%	19%	60%	19%
	Other	Pandemic	11%	34%	48%	6%
		Pre-Pandemic	10%	32%	50%	7%
Advanced	White	Pandemic	1%	7%	49%	43%
		Pre-Pandemic	1%	6%	45%	49%
	Black	Pandemic	3%	7%	55%	35%
		Pre-Pandemic	3%	9%	53%	36%
	Latino/a/x	Pandemic	2%	11%	52%	35%
		Pre-Pandemic	1%	7%	49%	43%
	Asian	Pandemic	0%	2%	35%	63%
		Pre-Pandemic	0%	2%	29%	69%
	Other	Pandemic	2%	6%	47%	44%
		Pre-Pandemic	1%	7%	44%	48%

Notes: "Not Proficient," "Partially Proficient," "Proficient," and "Advanced" are the four proficiency levels from Michigan's summative M-STEP Mathematics and ELA assessments. The proficiency levels in the left-most column represent base-year achievement levels for students in each cohort and racial/ethnic subgroup combination. Proficiency levels across the top row represents achievement levels two years later. The percentages in each row and column combination represent the share of students from a particular cohort, racial/ethnic subgroup, and base-year achievement level that

scored at a particular proficiency level two years later. For example, in the top-left corner of this table, among 5th-grade White pandemic cohort students who scored "Not Proficient" on the 2019 M-STEP ELA assessment, 70% also scored "Not Proficient" on the 6th-grade assessment in 2021.

REGRESSION ANALYSIS: BENCHMARK & M-STEP ASSESSMENT OUTCOMES

Benchmark Assessment Regressions

Table 3.9.1 and Table 3.9.2 provide regression output estimating the relationship between the fall and spring percentages of students who scored "significantly behind grade level" (Table 3.9.1), or average scale scores (Table 3.9.2). The purpose of these tables is to show how students from different backgrounds and those who need specialized instruction (e.g., special education and English language learners) performed during the pandemic. Since each observation is a district-grade, we use the percent of students in a district as a proxy for student characteristics. These include gender, race/ethnicity, economically disadvantaged status, special education status, and English learner status. In these models, we include a separate coefficient for the percent of students who are "Two or more races," rather than combine this group with the American Indian or Alaska Native and Native Hawaiian or Pacific Islander groups as part of the "Other" category as we do for the other analyses in this report. We grouped these three categories together for the subgroup-specific analyses because there were too few students to report outcomes in some assessment provider and grade combinations, but the number of students is large enough for us to include a separate category for "Two or more races" in the regression models. We also include a logged measure of total enrollment, indicators for district urbanicity, and an indicator for each grade level. The tables present mathematics (columns 1 through 3) and reading/ELA results (columns 4 through 6) for NWEA MAP Growth, i-Ready, and Star 360 districts. Since very few Michigan districts offered students the Smarter Balanced ICA and K-2 benchmark assessments, we do not include results from these assessments.

The regression coefficients associated with each variable in the model tell us how a particular spring benchmark outcome would change given a one-unit change in fall benchmark outcomes or a particular district characteristic. For example, in Table 3.9.1 column 1, the coefficient on the percent of students in the district who are female in mathematics is 0.176. This number tells us that a 10 percentage point increase in the female student population in a district is associated with an increase of 1.76 percentage point increase in the proportion of students scoring "significantly behind grade level" in mathematics in the spring of 2021. Because the model controls for the

average rate of students scoring “significantly behind grade level” in fall 2021, the estimates can be interpreted as correlations with average achievement growth relative to students in districts with similar characteristics.

As seen in Table 3.9.1, the coefficients on the fall percentage of students scoring “significantly behind grade level” in mathematics or reading are relatively similar for each assessment provider. Specifically, for each percentage point increase in the proportion of NWEA MAP Growth, Curriculum Associates i-Ready, and Renaissance Learning Star 360 students scoring “significantly behind grade level” in mathematics or reading in the fall, we expect, on average, the proportion of students scoring “significantly behind grade level” to increase by between 0.43 and 0.71 percentage points in the same subject and assessment in the spring. Thus, as expected, each of these results indicate that there is a positive correlation between fall and spring benchmark assessment outcomes and those districts that started the year with a high percentage of students scoring “significantly behind grade level” will also have a high percentage in the spring.

Turning to district characteristics, the signs on the estimated relationship between spring percentages of students who scored “significantly behind grade level” and each district characteristic for the most part confirm the results discussed earlier in this report. For example, the percentage of Black and Latino/a/x students in a district are positively correlated with the percentage of students scoring “significantly behind grade level” on the spring benchmark assessments in both mathematics and reading while the share of Asian students is negatively correlated. Since the percent of White students is the reference category, these estimates are relative to a similar change in percent of students in a district who are White. For example, looking at column 1 where we show NWEA MAP Growth in mathematics, the estimates show that a district with 10 percentage points more Black students has a 1.57 percentage point higher proportion of students scoring “significantly below grade level,” while for Latino/a/x, that rate is 0.68 percentage points higher relative to a similar increase in the percent of White students. A 10 percentage point increase in Asian student enrollment is correlated with a 0.8 percentage point lower rate of students scoring “significantly below grade level” on the NWEA MAP assessment relative to a similar increase in White enrollment rates. Estimates for reading are broadly similar.

Economically disadvantaged and special education status also are both positively correlated with spring percentages of students scoring “significantly behind grade level” in mathematics and reading, and these relationships are typically larger in magnitude than the relationships between the proportions of students of different races/ethnicities and spring outcomes. English learner status is negatively correlated with the percentages of students scoring “significantly behind grade level” in

mathematics and reading for some districts (i.e., Curriculum Associates i-Ready for mathematics and NWEA MAP Growth for reading) and positively correlated with outcomes for Renaissance Learning Star 360 districts. This is likely due to differences in the student populations that took the test in the districts that offered different assessments.

The estimates on total enrollment and each urbanicity indicator likely reflect differences in other unobserved student characteristics not included in the model and the types of instructional modality offered in the different districts throughout the school year. For example, large, urban districts were considerably more likely to offer only remote instruction throughout the school year than were smaller or rural school districts (see Hopkins et al., 2021). Also, the literature discussed in our August report shows a growing body of research describing the negative relationship between academic outcomes and remote instruction over the last year and a half. We explore this relationship using benchmark and M-STEP assessment data later in this report.

Table 3.9.2 provides estimates of the relationship between fall and spring average scale scores on mathematics and reading benchmark assessments while controlling for the same district-level characteristics found in Table 3.9.1. The structure for this table is similar to that in Table 3.9.1. The outcome variable is average scale scores for each specific assessment provider and subject combination. Hence, for example, we can interpret the coefficient on the proportion of female students in a district in column (1) as follows: a 10 percentage point increase in the share of female students is associated with a (statistically insignificant) decrease in NWEA MAP Growth scores of 0.2 scale score points.

As seen in the first row of the table, across both subjects and all three assessment providers, fall and spring average scale scores are positively correlated, and we would expect districts that started the year with higher average scale scores in the fall to also have higher scores in the spring compared to districts with worse outcomes to start the school year. Notably, the estimates in column 6 show that the relationship between fall and spring average reading scale scores among students in Renaissance Learning Star 360 districts is not only positively correlated, but greater than one. This means that a one-scale score unit increase in fall average reading scores is associated with a 1.025 point increase in spring average reading scale scores.

Before discussing the relationships between student characteristics and benchmark scores for this model, it is important to understand the connection between movement in the percentage of students scoring "significantly behind grade level" and changes in average scale scores. Specifically, given the relationships provided in Table 3.9.1, any increase in the proportion of students scoring "significantly below grade level" on a specific benchmark assessment implies that assessment scale scores for at

least some students in that population are also decreasing. Thus, any *increase* in the proportion of students scoring "significantly below grade level" on a given benchmark assessment is likely to be accompanied by a *decrease* in average scale scores for the same population of students, and specific regression coefficients in Table 3.9.1and Table 3.9.2 should be opposite signed.

This is exactly what we see for most of the characteristics in Table 3.9.2. Consistent with the results in Table 3.9.1, the percentage of Black students in a district is negatively correlated with average scale scores in both mathematics and reading while the share of Asian students is positively correlated. Similarly, the proportions of economically disadvantaged and special education students are both negatively correlated with spring average scale scores in mathematics and reading, and again, the relationship for special education is typically larger in magnitude than relationships between the racial/ethnic composition of districts and the same outcomes. Finally, smaller and more rural districts also saw higher average scale scores in spring 2021. Specifically, the estimated relationship between total enrollment and average scale scores in both mathematics and reading was typically negative, and the relationships for "rural" and "town" districts were positive.

Table 3.9.3 extend the models seen in the previous two tables to consider instructional modality. Using monthly data on school modality MDE collected, we calculate the number of months each modality—in-person, hybrid, or remote—was *offered* by the district during the 2020-21 school year. Hence, a district can have months where it offers multiple modalities to the students. We created three variables—*months in-person, months hybrid,* and *months remote*—which describe the total number of months a district offered a particular type of modality during the 2020-21 school year (maximum of 9). The coefficients on these variables describe the relationship between students receiving an additional month of hybrid or remote instruction instead of in-person instruction on benchmark mathematics and reading outcomes. Notably, this does not necessarily reflect actual take-up of given modalities by students, though presumably offering a specific modality will increase take-up (for more on this, see the monthly EPIC reports on this topic). Since the estimates for the district characteristics are similar to estimates in the previous two tables, we focus on the modality estimates here. Further, since there was little variation in the modality of districts that used Curriculum Associates i-Ready or Renaissance Learning Star 360 assessments, estimates for those benchmark exams were very imprecise. Hence, we only provide the MAP Growth estimates here.

The first panel of Table 3.9.3 shows these results from regression using as the outcome the proportion of students who score "significantly below grade level" in mathematics (column 1) and reading (column 2). Columns 3 and 4 show the same

results for average scale scores. For mathematics, the *months remote* variable is statistically significant and indicates that a district offering an additional month of remote schooling has a 0.9 percentage point higher rate of students scoring "significantly below grade level." Similarly, for reading, an additional month of in-person instruction is associated with a 0.5 percentage point lower rate of students scoring "significantly below grade level". It is important to reiterate, however, that districts with characteristics that correlate with low achievement tended to be less likely to offer in-person schooling and so these estimates do not necessarily reflect causal effects of instructional modality. Columns 3 and 4 show similar patterns. An additional month of remote schooling is associated with 0.42 and 0.27 points lower scale scores for mathematics and reading, respectively. The estimates for in-person months are positive but not statistically significant.

Table 3.9.1. Relationship Between District Demographic Characteristics and Changes in the Percent of Students "Significantly Behind Grade Level" on the MI 2020-21 Mathematics and Reading Benchmark Assessments; NWEA MAP Growth, Curriculum Associates i-Ready, Renaissance Learning Star 360 Districts

	Mathematics			Reading		
	MAP Growth	i-Ready	Star 360	MAP Growth	i-Ready	Star 360
Outcome Mean	41.25	28.17	28.94	38.01	28.32	35.02
Outcome Standard Deviation	24.06	23.63	20.95	20.69	23.70	20.21
	(1)	(2)	(3)	(4)	(5)	(6)
Fall Percent SBGL	0.634***	0.709***	0.541***	0.575***	0.608***	0.553***
	(0.028)	(0.056)	(0.098)	(0.029)	(0.104)	(0.106)
District Characteristics						
Female (%)	0.176	0.174	-0.293	-0.013	-0.107	0.553***
	(0.159)	(0.398)	(0.318)	(0.170)	(0.391)	(0.106)
Black (%)	0.157***	0.094*	0.169	0.100***	0.088+	0.246
	(0.014)	(0.042)	(0.219)	(0.013)	(0.048)	(0.283)
Latino/a/x (%)	0.068+	0.175*	-0.054	0.066*	0.088	-0.137
	(0.036)	(0.071)	(0.130)	(0.032)	(0.122)	(0.222)
Asian (%)	-0.082**	0.117	-0.631	-0.081***	0.119	-0.014
	(0.029)	(0.081)	(0.515)	(0.022)	(0.103)	(0.124)
Two or more races (%)	-0.061	0.270	0.211	-0.158*	0.603	-0.255
	(0.113)	(0.160)	(0.325)	(0.077)	(0.350)	(0.529)
Other race (%)	-0.137*	-0.346	-0.301***	-0.078	-1.111	0.359*
	(0.052)	(0.705)	(0.064)	(0.086)	(0.740)	(0.163)
Economically disadvantaged (%)	0.192***	0.073	0.147*	0.231***	0.119+	-0.049
	(0.019)	(0.047)	(0.060)	(0.019)	(0.063)	(0.054)
English learner (%)	-0.019	-0.082+	0.535***	-0.077*	-0.001	0.194*
	(0.028)	(0.045)	(0.113)	(0.029)	(0.072)	(0.073)
Special education (%)	0.326**	-0.174	0.060	0.108	-0.191	0.339*
	(0.101)	(0.166)	(0.264)	(0.100)	(0.278)	(0.135)
Log total enrollment	0.729**	0.059	-0.203	0.439	0.589	0.132
	(0.270)	(0.478)	(1.908)	(0.311)	(0.792)	(0.207)

Urban	-0.049	-3.278	-4.572	-0.744	-1.492	-0.094
	(0.521)	(2.219)	(4.516)	(0.633)	(1.596)	(1.294)
Rural	-2.230**	-3.677*	-1.448	-1.394+	-2.914	-0.607
	(0.800)	(1.606)	(4.010)	(0.781)	(2.461)	(3.660)
Town	-1.784*	-4.762+	-3.794	-1.573+	-0.942	-1.189
	(0.834)	(2.328)	(2.299)	(0.917)	(1.963)	(2.556)
Grade Fixed Effects	Y	Y	Y	Y	Y	Y
Observations	4084	400	386	4065	370	382
R^2	0.771	0.850	0.697	0.662	0.818	0.690

*Notes: "Other race" includes students identified as American Indian, Alaskan Native, Native Hawaiian, or Pacific Islander. Both the fall and spring percentages of students scoring "significantly below grade level," as well as each district-level student demographic percentage, are measured from 0 to 100. Aggregate student enrollment data are from the 2020-21 MI School Data Student Headcount report. District-level data are linked with publicly available characteristics from the EEM database to estimate the relationship between urbanicity and benchmark outcomes. Each model also includes grade-level indicators for each assessment grade level to control for differences in learning between younger and older students. Robust standard errors, clustered at the district level, are listed in parentheses. + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 3.9.2. Relationship between District Demographic Characteristics and Changes in Average Scale Scores on the MI 2020-21 Mathematics and Reading Benchmark Assessments; NWEA MAP Growth, Curriculum Associates i-Ready, Renaissance Learning Star 360 Districts

	Mathematics			Reading		
	MAP Growth	i-Ready	Star 360	MAP Growth	i-Ready	Star 360
Outcome Mean	199.98	444.08	624.34	195.64	515.37	554.75
Outcome Standard Deviation	21.54	41.48	134.18	20.59	65.67	191.16
	(1)	(2)	(3)	(4)	(5)	(6)
Fall Average Scale Score	0.797***	0.801***	0.952***	0.709***	0.834***	1.025***
	(0.028)	(0.036)	(0.084)	(0.029)	(0.035)	(0.073)
District Characteristics						
Female (%)	-0.018	-0.664	-0.761	0.016	-0.593	-1.305
	(0.059)	(0.433)	(0.982)	(0.066)	(0.489)	(1.078)
Black (%)	-0.054***	-0.103**	0.035	-0.037***	-0.121	0.517
	(0.005)	(0.035)	(0.598)	(0.005)	(0.075)	(1.014)
Hispanic (%)	-0.020	-0.050	-0.031	-0.013	0.019	-0.481
	(0.015)	(0.123)	(0.370)	(0.012)	(0.171)	(0.519)
Asian (%)	0.037*	-0.028	0.331	0.036*	-0.013	1.331
	(0.015)	(0.120)	(1.279)	(0.013)	(0.194)	(2.507)
Two or More Races (%)	0.036	-0.587*	-2.672**	0.036	-0.688	-2.046**
	(0.042)	(0.251)	(0.931)	(0.028)	(0.830)	(0.654)
Other Race (%)	0.048*	0.646	0.217	0.035	1.828	0.112
	(0.024)	(0.746)	(0.217)	(0.028)	(1.705)	(0.257)
Economically Disadvantaged (%)	-0.058***	-0.129**	-0.037	-0.065***	-0.192*	-0.372
	(0.008)	(0.037)	(0.168)	(0.007)	(0.068)	(0.269)
English Learner (%)	0.008	-0.003	-2.266***	0.020+	-0.076	-0.037
	(0.012)	(0.057)	(0.324)	(0.010)	(0.121)	(0.590)
Special Education (%)	-0.102***	-0.159	0.927	-0.017	-0.056	1.343
	(0.029)	(0.170)	(0.880)	(0.037)	(0.356)	(0.844)
Log Total Enrollment	-0.438***	-0.072	1.392	-0.390***	-0.441	4.822
	(0.107)	(0.517)	(5.401)	(0.087)	(0.926)	(5.330)
Urban	-0.045	3.530	22.348+	0.236	2.855	-9.415
	(0.171)	(2.297)	(12.167)	(0.272)	(3.046)	(15.343)
Rural	0.973**	2.173	-1.264	0.775*	3.326	18.142+
	(0.321)	(2.050)	(10.191)	(0.307)	(3.100)	(10.127)
Town	0.657+	3.168	12.036+	0.639+	1.566	24.534*
	(0.363)	(3.015)	(6.826)	(0.342)	(3.900)	(10.164)
Grade Fixed Effects	Y	Y	Y	Y	Y	Y
Observations	4084	400	386	4065	370	398
R^2	0.967	0.961	0.944	0.965	0.968	0.932

Notes: "Other race" includes students identified as American Indian, Alaskan Native, Native Hawaiian, or Pacific Islander. Each district-level student demographic percentage is measured from 0 to 100. Aggregate student enrollment data are from the 2020-21 MI School Data Student Headcount report. District-level data are linked with publicly available characteristics from the EEM database to estimate the relationship between urbanicity and benchmark outcomes. Each model also includes grade-level indicators for each assessment grade level to control for differences in

*learning between younger and older students. Robust standard errors, clustered at the district level, are listed in parentheses. + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 3.9.3. Relationship between District-Level Instructional Modality and Changes in the Percent of Students "Significantly Behind Grade Level" or Average Scale Scores on the MI 2020-21 Mathematics and Reading Benchmark Assessments; NWEA MAP Growth Districts

	Significantly Behind Grade Level		Average Scale Scores	
	Mathematics	Reading	Mathematics	Reading
Outcome Mean	41.25	38.01	199.98	195.64
Outcome Standard Deviation	24.06	20.69	21.54	20.59
	(1)	(2)	(3)	(4)
Fall %SGBL	0.637***	0.574***		
	(0.029)	(0.029)		
Fall average scale score			0.805***	0.712***
			(0.030)	(0.031)
Months in-person	-0.189	-0.464*	0.093	0.123
	(0.254)	(0.180)	(0.114)	(0.075)
Months hybrid	0.385	0.113	-0.139	-0.094
	(0.276)	(0.203)	(0.126)	(0.085)
Months remote	0.907*	0.332	-0.420**	-0.268*
	(0.359)	(0.277)	(0.154)	(0.111)
District Characteristics				
Female (%)	0.170	-0.010	-0.012	0.020
	(0.153)	(0.159)	(0.057)	(0.064)
Black (%)	0.108***	0.061***	-0.032***	-0.019***
	(0.014)	(0.015)	(0.006)	(0.005)
Latino/a/x (%)	0.087**	0.083**	-0.029*	-0.020*
	(0.026)	(0.025)	(0.011)	(0.009)
Asian (%)	-0.090***	-0.086***	0.040***	0.038***
	(0.021)	(0.016)	(0.010)	(0.009)
Two or More Races (%)	-0.046	-0.160**	0.025	0.031
	(0.088)	(0.058)	(0.031)	(0.027)
Other Races (%)	-0.159*	-0.093	0.059*	0.043
	(0.063)	(0.094)	(0.030)	(0.032)
Economically Disadvantaged (%)	0.187***	0.228***	-0.054***	-0.063***
	(0.018)	(0.019)	(0.007)	(0.007)
English Learner (%)	-0.077**	-0.127***	0.033*	0.041***
	(0.023)	(0.024)	(0.013)	(0.009)
Special Education (%)	0.304***	0.094	-0.091**	-0.008
	(0.084)	(0.078)	(0.027)	(0.030)
Log Total Enrollment	0.270	0.021	-0.238**	-0.220*
	(0.242)	(0.313)	(0.084)	(0.091)
Urban	0.111	-0.505	-0.114	0.161
	(0.636)	(0.696)	(0.215)	(0.287)
Rural	-1.216	-0.736	0.496+	0.399
	(0.841)	(0.861)	(0.294)	(0.358)
Town	-0.432	-0.647	0.029	0.150
	(0.775)	(0.928)	(0.327)	(0.369)
Grade Fixed Effects				
Observations	4038	4019	4038	4019
R^2	0.780	0.670	0.969	0.966

Notes: Additional information for the table can be found in Report Note 7 at the end of this report.
*+ p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

M-STEP Assessment Regressions

Table 3.10.1 through Table 3.10.6 provide regression output estimating differences in learning trajectories between our pre-pandemic and pandemic M-STEP cohorts (Table 3.10.1), as well as differences across student groups in the pandemic cohort (Table 3.10.6). As a reminder, the pre-pandemic cohort completed either the M-STEP Mathematics or ELA assessment in two time periods before the start of the pandemic (i.e., spring 2017 and spring 2019), and the pandemic cohort completed one iteration of the M-STEP before the pandemic and the first administration of the assessment since the pandemic (i.e., spring 2019 and spring 2021).

The use of the M-STEP has both advantages and disadvantages relative to the benchmark assessments. In terms of advantages, the M-STEP data is recorded at the individual student level both before and after the start of the COVID-19 pandemic. This gives us the ability to control for additional factors as well as many of the characteristics included in the benchmark analysis for individual students, rather than district-grade averages. Hence, while the resulting estimates are still correlational, they bring us closer to what is likely to be the actual effect of the pandemic and modality on students than do the district-grade aggregate benchmark exams. However, since M-STEPs were not administered in 2020, we must use two-year periods to measure achievement growth, and thus the pandemic cohort includes some instruction in 2019 before the start of the pandemic. Moreover, many students did not take the M-STEP in 2021 and this was particularly the case for students enrolled in districts that offered remote schooling. As such, there are likely important differences in the types of students who took the exam in 2021 relative to earlier years and these differences may affect the accuracy of the regression-based estimates.

The variables included in these models are slightly different than those included in the benchmark regression analyses discussed above. First, M-STEP Mathematics and ELA scores have been standardized within each cohort to enable a comparison of student achievement over time. Specifically, we calculate the mean and standard deviation of M-STEP Mathematics and ELA scores separately for each grade level in the base year for each cohort (i.e., 2017 and 2019 for the pre-pandemic and pandemic cohorts, respectively), then use these grade- and year-specific means to standardize M-STEP Mathematics and ELA scores for the same grade levels relative to the base year for each cohort (e.g., for the pre-pandemic cohort, in both 2017 and 2019, we subtract the 2017 3rd-grade mathematics mean from each observation and divide by the 2017 3rd-grade mathematics standard deviation). The other controls included in the regression models are created using student-level data, hence, each variable is a binary indicator

that describes a student's gender, race/ethnicity, and eligibility for certain school resources (i.e., economically disadvantaged, special education, English learner, homeless, and migrant status).

The structure of these variables also requires different interpretations of regression coefficients. The most important variable in the following regressions is the binary indicator, *pandemic cohort*, which identifies students who completed M-STEP assessments in 2019 and 2021. The coefficient on this variable summarizes the differences in academic growth for a given subject between the pre-pandemic and pandemic cohorts. For example, as seen in Table 3.10.1 column 1, the coefficient on *pandemic cohort* is -0.218 and should be interpreted as follows: average M-STEP Mathematics score growth among students in the pandemic cohort was -0.218 standard deviations less than M-STEP Mathematics score growth among students in the pre-pandemic cohort. Other than the base year variable, which controls for academic achievement in the base year for each cohort, all other variables in each model are binary indicators and their coefficients help summarize achievement gaps within a specific demographic characteristic, regardless of the student's inclusion in the pre-pandemic or pandemic cohort. Again, looking to Table 3.10.1 column 1, the coefficient on *female* shows that, on average across both cohorts, female students scored 0.010 standard deviations below their male counterparts on the M-STEP Mathematics assessments.

For Table 3.10.1, we provide estimates from two different model specifications for each subject. The first column in each panel (columns 1 and 3), estimates the differences in learning trajectories between our pre-pandemic and pandemic M-STEP cohorts while controlling for differences across student demographic characteristics (i.e., gender, race/ethnicity, and eligibility for school resources) and grade levels. The second column in each panel also includes district fixed effects which control for potentially unobservable differences across district that do not change over time and may affect student achievement (e.g., resources, administrator quality, etc.). Given the similarities in the coefficient estimates across models, we only discuss estimates for the district fixed-effect models for each subject (columns 2 and 4).

Regardless of the specification, we find that mathematics and reading achievement among students in the pandemic cohort consistently lagged that of students in the pre-pandemic cohort (Table 3.10.1). Specifically, mathematics growth among students in the pandemic cohort was roughly two-tenths of a standard deviations behind students in the pre-pandemic cohort, while ELA growth trailed by a bit less than a tenth of a standard deviation. While not large, these effect sizes are quite substantial and suggest that Michigan students made slower gains during the pandemic than in the years prior. The larger disparity in mathematics is expected given the large literature

documenting the benefits of school-based interventions on mathematics achievement compared to reading outcomes, and the pandemic certainly limited opportunities for instruction among students in the pandemic cohort for at least a portion of the 2019-2020 and 2020-21 academic years.

Coefficients on each student demographic characteristics also show clear gaps in achievement between student subgroups that are broadly similar to those we see in the benchmark assessments. First, mathematics scores for female students lagged their male counterparts by a tenth of a standard deviation, however, ELA scores for female students were 0.06 standard deviations higher than for male students. We also find clear differences by race/ethnicity. Except for Asian students, mathematics and ELA achievement for all non-White subgroups trailed White achievement. The gaps between Black and White students in both subjects were particularly large, at -0.14 and -0.10 standard deviations in mathematics and ELA, respectively. Finally, mathematics and ELA achievement among most students eligible for additional school resources (i.e., economically disadvantaged, special education, English learner, and homeless students) trailed that of students who did not qualify for additional services or supports.

In Table 3.10.2 through Table 3.10.6, we extend the models estimated in Table 3.10.1 to examine how achievement differences by student demographic characteristics changed from the pre-pandemic to the pandemic cohort. These results provide some insight into whether students with different characteristics or backgrounds fared better or worse during the pandemic, though we note that these differences may not be caused by the pandemic and could be due to other factors such as differences in who opted into testing. For this analysis, we multiply the pandemic cohort indicator by one or more of the student demographic characteristic indicators and include all these new interactions in the regression models. Including these new interaction terms again changes the interpretation of specific coefficients in each model. For example, Table 3.10.2 column 1, includes a new interaction term between *pandemic cohort* and *female*. In this specification, the coefficient on *pandemic cohort* represents the change in mathematics growth for male pandemic cohort students relative to pre-pandemic male students. The coefficient on *female*pandemic cohort* represents any additional changes in achievement for pandemic cohort female students relative to pre-pandemic female students. Although not shown here, each specification in Table 3.10.2 through Table 3.10.6 continues to include the full set of student demographic indicators shown in Table 3.10.1.

Table 3.10.2 shows that both mathematics and ELA achievement for male and female students in the pandemic cohort lagged achievement among students in the pre-pandemic cohort. Specifically, mathematics growth among male students in the

pandemic cohort was 0.21 standard deviations behind students in the pre-pandemic cohort. For female students, the reduction in growth during the pandemic cohort was 0.03 standard deviations larger, leading to a 0.24 standard deviation lower growth rate (where 0.24 = 0.21 + 0.03). We find a similar relationship in ELA, where ELA growth for male students in the pandemic cohort dropped by 0.075 standard deviations relative to the pre-pandemic cohort while the decrease for female students was a slightly larger 0.087 standard deviations (0.087 = 0.075 + 0.012).

Table 3.10.3 provides results from models estimating racial/ethnic differences in mathematics and ELA growth for pandemic cohort students. For mathematics, White students in the pandemic cohort experienced 0.213 standard deviations less growth relative to students in the pre-pandemic cohort. Black student achievement grew at a lower rate (-0.054 standard deviations) as did Asian students (-0.044 standard deviations). Latino/a/x student achievement growth reductions were not statistically significantly different from White student growth while American Indian or Alaskan Native and Native Hawaiian or Pacific Islander students in the pandemic cohort were the only subgroup that grew at a faster rate than White students (0.048 standard deviations), though this estimate is only marginally significant. For ELA, we find no statistically significant differences in M-STEP ELA growth across racial/ethnic subgroups in the pandemic cohort relative to the pre-pandemic cohort.

Models in Table 3.10.4 and Table 3.10.5 show differences by economically disadvantaged and special education status, respectively. In both mathematics and ELA, economically disadvantaged students saw slower achievement growth than did advantaged students. While special education students experienced reductions in achievement growth throughout the pandemic relative to pre-pandemic, these were not as large as the reductions for general education students. It is unclear why this is the case, but it may have to do with more special education students being given in-person options and differences in who opted out of testing between special education and general education students.

Finally, Table 3.10.6 provides output from models estimating differences in mathematics and ELA growth by instruction modality for pandemic cohort students. For each of these models, the coefficient estimates on *pandemic cohort* on its own is not meaningful as it indicates pandemic achievement growth for schools that offered zero months of any modality. This did not occur in practice as every district offered instruction in at least one modality in each month. Coefficients on the hybrid and remote instruction interaction terms, *months in-person*pandemic cohort, months hybrid*pandemic cohort,* and *months remote*pandemic cohort,* describe how mathematics and ELA outcomes varied when students in the pandemic cohort were offered an additional month instruction in the given modality. As seen in columns 2

and 4, mathematics and ELA growth for pandemic cohort students who attended school in districts offering in-person instruction for the entire 2020-21 school year were 0.166 (0.154 + 0.001*9) and 0.051 (0.036 + 0.002*9) standard deviations behind growth for students in the pre-pandemic cohort. Note that the estimate for reading, while negative, is not statistically significantly different from zero.

If instead a district offered only hybrid instruction throughout the entire year, math achievement growth was 0.271 standard deviations lower than the pre-pandemic cohort while reading growth was 0.108 standard deviations lower. Finally, districts that offered only remote instruction throughout the 2020-21 school year saw a reduction in mathematics growth of 0.361 standard deviations, about twice the drop for entirely in-person districts. For reading, entirely remote districts saw ELA growth fall by 0.144 standard deviations during the pandemic.

Table 3.10.1. Differences in Learning Trajectories between Pre-Pandemic and Pandemic M-STEP Cohorts; 2017-2019 and 2019-21 M-STEP Mathematics and ELA Assessments

	Mathematics		ELA	
	Achievement 2 Years Later (1)	Achievement 2 Years Later (2)	Achievement 2 Years Later (3)	Achievement 2 Years Later (4)
Pandemic Cohort	-0.218***	-0.223***	-0.078***	-0.081***
	(0.008)	(0.008)	(0.007)	(0.007)
Base-Year Achievement	0.775***	0.764***	0.744***	0.736***
	(0.005)	(0.004)	(0.003)	(0.002)
Female	-0.010***	-0.012***	0.059***	0.059***
	(0.002)	(0.002)	(0.002)	(0.002)
Black	-0.182***	-0.142***	-0.100***	-0.100***
	(0.009)	(0.006)	(0.008)	(0.006)
Latino/a/x	-0.040***	-0.024***	-0.023***	-0.013*
	(0.008)	(0.006)	(0.006)	(0.006)
Asian	0.245***	0.212***	0.231***	0.192***
	(0.021)	(0.013)	(0.010)	(0.008)
Two or More Races	-0.052***	-0.039***	-0.024**	-0.023***
	(0.008)	(0.005)	(0.008)	(0.005)
Other Races	-0.046***	-0.061***	-0.037**	-0.046***
	(0.014)	(0.012)	(0.012)	(0.013)
Economically Disadvantaged	-0.172***	-0.128***	-0.157***	-0.122***
	(0.006)	(0.003)	(0.005)	(0.003)
Special Education	-0.151***	-0.162***	-0.108***	-0.114***
	(0.006)	(0.005)	(0.004)	(0.004)
English Learner	-0.031**	-0.033*	0.002	-0.022+
	(0.012)	(0.013)	(0.011)	(0.013)
Homeless	-0.040***	-0.035***	-0.055***	-0.047***
	(0.007)	(0.006)	(0.008)	(0.007)
Migrant	0.034	0.038	-0.037	-0.016
	(0.026)	(0.027)	(0.028)	(0.026)
Grade Fixed Effects	Y	Y	Y	Y
District Fixed Effects	N	Y	N	Y
Observations	503841	503841	503660	503660
R^2	0.694	0.705	0.641	0.652

*Notes: "Other race" includes students identified as American Indian, Alaskan Native, Native Hawaiian, or Pacific Islander. Each model also includes grade-level indicators for each sub-cohort to control for differences in learning trajectories between younger and older students. Columns 2 and 4 include binary indicators for each district to control for time-invariant, unobservable characteristics of each district that may influence learning trajectories. Robust standard errors, clustered at the district level, are in parentheses. + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 3.10.2. Differences in Learning Trajectories between Pre-Pandemic and Pandemic M-STEP Cohorts by Gender; 2017-2019 and 2019-21 M-STEP Mathematics and ELA Assessments

	Mathematics		ELA	
	Achievement 2 Years Later (1)	Achievement 2 Years Later (2)	Achievement 2 Years Later (3)	Achievement 2 Years Later (4)
Pandemic Cohort	-0.203***	-0.208***	-0.073***	-0.075***
	(0.009)	(0.008)	(0.008)	(0.007)
Female*Pandemic Cohort	-0.031***	-0.031***	-0.012**	-0.012**
	(0.003)	(0.003)	(0.004)	(0.004)
BaseYear Achievement	0.775***	0.763***	0.744***	0.736***
	(0.005)	(0.004)	(0.003)	(0.002)
Female	0.003	0.000	0.063***	0.063***
	(0.002)	(0.002)	(0.002)	(0.002)
All Student Characteristics	Y	Y	Y	Y
Grade Fixed Effects	Y	Y	Y	Y
District Fixed Effects	N	Y	N	Y
Observations	503841	503841	503660	503660
R^2	0.694	0.705	0.641	0.652

*Notes: Although not shown, all models include controls for race/ethnicity, as well as economically disadvantaged, special education, English learner, homeless, and migrant status. Each model also includes grade-level indicators for each sub-cohort to control for differences in learning trajectories between younger and older students. Columns 2 and 4 include binary indicators for each district to control for time-invariant, unobservable characteristics of each district that may influence learning trajectories. Robust standard errors, clustered at the district level, are in parentheses. + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 3.10.3. Differences in Learning Trajectories between Pre-Pandemic and Pandemic M-STEP Cohorts by Race/Ethnicity; 2017-2019 and 2019-21 M-STEP Mathematics and ELA Assessments

	Mathematics		ELA	
	Achievement 2 Years Later (1)	Achievement 2 Years Later (2)	Achievement 2 Years Later (3)	Achievement 2 Years Later (4)
Pandemic Cohort	-0.207***	-0.213***	-0.076***	-0.078***
	(0.009)	(0.009)	(0.008)	(0.008)
Black* Pandemic Cohort	-0.056***	-0.054***	-0.011	-0.011
	(0.017)	(0.015)	(0.011)	(0.011)
Latino/a/x* Pandemic Cohort	-0.020	-0.023	0.000	-0.005
	(0.017)	(0.016)	(0.012)	(0.012)
Asian*Pandemic Cohort	-0.046*	-0.044*	-0.019	-0.018
	(0.020)	(0.017)	(0.018)	(0.017)
Two or More Races*Pandemic Cohort	-0.011	-0.012	0.001	0.001
	(0.012)	(0.011)	(0.013)	(0.011)
Other Race*Pandemic Cohort	0.049+	0.048+	-0.000	0.000
	(0.026)	(0.027)	(0.024)	(0.024)
Base-Year Achievement	0.776***	0.764***	0.744***	0.736***
	(0.004)	(0.004)	(0.003)	(0.002)
Black	-0.163***	-0.123***	-0.096***	-0.096***
	(0.011)	(0.008)	(0.009)	(0.007)
Latino/a/x	-0.033**	-0.015+	-0.023**	-0.011
	(0.010)	(0.009)	(0.008)	(0.007)
Asian	0.263***	0.229***	0.239***	0.199***
	(0.023)	(0.015)	(0.012)	(0.010)
Two or More Races	-0.047***	-0.033***	-0.024*	-0.023**
	(0.010)	(0.007)	(0.010)	(0.007)
Other Races	-0.066***	-0.080***	-0.037*	-0.046**
	(0.017)	(0.015)	(0.015)	(0.015)
All Student Characteristics	Y	Y	Y	Y
Grade Fixed Effects	Y	Y	Y	Y
District Fixed Effects	N	Y	N	Y
Observations	503841	503841	503660	503660
R^2	0.694	0.705	0.641	0.652

*Notes: Although not shown, all models include controls for gender, as well as economically disadvantaged, special education, English learner, homeless, and migrant status. "Other race" includes students identified as American Indian, Alaskan Native, Native Hawaiian, Pacific Islander students. Each model also includes grade-level indicators for each sub-cohort to control for differences in learning trajectories between younger and older students. Columns 2 and 4 include binary indicators for each district to control for time-invariant, unobservable characteristics of each district that may influence learning trajectories. Robust standard errors, clustered at the district level, are in parentheses. + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 3.10.4. Differences in Learning Trajectories between Pre-Pandemic and Pandemic M-STEP Cohorts by Economically Disadvantaged Status; 2017-2019 and 2019-21 M-STEP Mathematics and ELA Assessments

	Mathematics		ELA	
	Achievement 2 Years Later (1)	Achievement 2 Years Later (2)	Achievement 2 Years Later (3)	Achievement 2 Years Later (4)
Pandemic Cohort	-0.202***	-0.206***	-0.064***	-0.066***
	(0.009)	(0.008)	(0.009)	(0.008)
Econ. Disad.*Pandemic Cohort	-0.033**	-0.033***	-0.029***	-0.031***
	(0.010)	(0.009)	(0.008)	(0.007)
Base-Year Achievement	0.775***	0.764***	0.744***	0.736***
	(0.005)	(0.004)	(0.003)	(0.002)
Economically Disadvantaged	-0.158***	-0.114***	-0.145***	-0.110***
	(0.007)	(0.005)	(0.007)	(0.004)
All Student Characteristics	Y	Y	Y	Y
Grade Fixed Effects	Y	Y	Y	Y
District Fixed Effects	N	Y	N	Y
Observations	503841	503841	503660	503660
R^2	0.694	0.705	0.641	0.652

*Notes: Although not shown, all models include controls for gender and race/ethnicity, as well as special education, English learner, homeless, and migrant status. Each model also includes grade-level indicators for each sub-cohort to control for differences in learning trajectories between younger and older students. Columns 2 and 4 include binary indicators for each district to control for time-invariant, unobservable characteristics of each district that may influence learning trajectories. Robust standard errors, clustered at the district level, are in parentheses. + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 3.10.5. Differences in Learning Trajectories between Pre-Pandemic and Pandemic M-STEP Cohorts by Special Education Status; 2017-2019 and 2019-21 M-STEP Mathematics and ELA Assessments

	Mathematics		ELA	
	Achievement 2 Years Later (1)	Achievement 2 Years Later (2)	Achievement 2 Years Later (3)	Achievement 2 Years Later (4)
Pandemic Cohort	-0.228***	-0.233***	-0.077***	-0.079***
	(0.008)	(0.008)	(0.008)	(0.007)
Spec. Educ.*Pandemic Cohort	0.083***	0.082***	-0.011	-0.010
	(0.008)	(0.008)	(0.007)	(0.007)
Base-Year Achievement	0.776***	0.764***	0.744***	0.736***
	(0.005)	(0.004)	(0.003)	(0.002)
Special Education	-0.184***	-0.195***	-0.104***	-0.110***
	(0.007)	(0.006)	(0.006)	(0.005)
All Student Characteristics	Y	Y	Y	Y
Grade Fixed Effects	Y	Y	Y	Y
District Fixed Effects	N	Y	N	Y
Observations	503841	503841	503660	503660
R^2	0.694	0.705	0.641	0.652

*Notes: Although not shown, all models include controls for gender and race/ethnicity, as well as economically disadvantaged, English learner, homeless, and migrant status. Each model also includes grade-level indicators for each sub-cohort to control for differences in learning trajectories between younger and older students. Columns 2 and 4 include binary indicators for each district to control for time-invariant, unobservable characteristics of each district that may influence learning trajectories. Robust standard errors, clustered at the district level, are in parentheses. + p < 0.10, * p < 0.05, ** p < 0.01, *** p < 0.001*

Table 3.10.6. Differences in Learning Trajectories between Pre-Pandemic and Pandemic M-STEP Cohorts by Instructional Modality; 2017-2019 and 2019-21 M-STEP Mathematics and ELA Assessments				
	Mathematics		ELA	
	Achievement 2 Years Later (1)	Achievement 2 Years Later (2)	Achievement 2 Years Later (3)	Achievement 2 Years Later (4)
Pandemic Cohort	-0.154**	-0.127*	-0.069	-0.036
	(0.056)	(0.062)	(0.049)	(0.060)
Months In-Person*Pandemic Cohort	-0.001	-0.004	0.002	-0.002
	(0.006)	(0.007)	(0.006)	(0.007)
Months Hybrid*Pandemic Cohort	-0.013*	-0.016*	-0.005	-0.008
	(0.007)	(0.007)	(0.006)	(0.007)
Months Remote*Pandemic Cohort	-0.023**	-0.026***	-0.007	-0.012+
	(0.007)	(0.008)	(0.007)	(0.008)
Base Year Achievement	0.776***	0.765***	0.745***	0.737***
	(0.005)	(0.004)	(0.003)	(0.002)
Months In-Person	0.006		0.001	
	(0.005)		(0.008)	
Months Hybrid	0.010+		0.002	
	(0.005)		(0.008)	
Months Remote	0.000		0.001	
	(0.005)		(0.009)	
All Student Characteristics	Y	Y	Y	Y
Grade Fixed Effects	Y	Y	Y	Y
District Fixed Effects	N	Y	N	Y
Observations	499311	499311	499111	499111
R^2	0.695	0.705	0.641	0.651

*Notes: Although not shown, all models include controls for gender and race/ethnicity, as well as economically disadvantaged, special education, English learner, homeless, and migrant status. Each model also includes grade-level indicators for each sub-cohort to control for differences in learning trajectories between younger and older students. Columns 2 and 4 include binary indicators for each district to control for time-invariant, unobservable characteristics of each district that may influence learning trajectories. Each modality variable counts the total number of months during the 2020-21 school year where a school district offered a particular instructional modality to students. Instructional modality data was collected through individual district responses to MDE's Reconfirmed COVID-19 Learning Plan Monthly Questionnaires between September 2020 and May 2021. In these surveys, districts were asked to describe the specific instruction modalities—in-person, hybrid, remote, or some combination of the three—they planned to offer students each month. Robust standard errors, clustered at the district level, are in parentheses. + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$*

SUMMARY

Overall, we find that all types of students made less than normal progress toward learning goals in 2020-21. However, not all student groups were affected equally. Our results suggest that disruptions to the 2020-21 school year may have exacerbated many pre-existing achievement gaps. In particular, Black, Latino/a/x, economically disadvantaged, and special education students were more likely to be "significantly behind grade level" than their peers at both the beginning and end of the year, and these gaps typically grew larger in magnitude over the course of the year.

We also find that students whose districts offered fully in-person instruction all year typically fared better than students in districts that were either remote all year or switched between remote and hybrid modalities. In districts that switched between in-person and hybrid or remote instruction, on average, students started the year with higher average scores than those in districts that were in-person all year, however, these gaps diminished and, in some cases, even reversed over the course of the year. Results for districts that provided hybrid instruction all year were less consistent; this may point to the fact that districts structured their hybrid programs in vastly different ways, some of which were likely more effective than others.

Our analyses of 2021 M-STEP results affirm that student learning during the pandemic school years ending in spring 2021 occurred at a slower rate than before the pandemic. Compared to similar students who took the M-STEP in 2017 and 2019, students who took these assessments in 2019 and 2021 were less likely to maintain or advance to a higher proficiency level over a two-year period, particularly in math. Regression analyses confirm that student achievement in both math and ELA grew less during than before the pandemic, and this was especially the case for economically disadvantaged and Black students and students learning in districts that offered remote instruction for more of the year.

However, we stress that far fewer students participated in the M-STEP in 2021 than in previous years, and that there are qualitative differences between the pre-pandemic and pandemic cohorts as a result, as well as qualitative differences between students who were and were not tested in 2021. Similarly, not all districts administered one of the MDE-approved benchmark assessments included in our analyses, nor did all students within participating districts take both the fall and spring tests. Although neither assessment data source is complete or perfectly representative of the state, the M-STEP analyses are more representative of all districts in the state than are the benchmark assessment analyses, and the benchmark assessment analyses are more representative of the student population.

Section Four: Future Research

This report helps to deepen our understanding of how Michigan public school students progressed and learned during the 2020-21 school year. In particular, we are able to expand on the basic descriptive analyses from our initial report by examining differences in performance across subgroups of students and incorporating new data sources and analysis methods to gain insight beyond the districts and students that submitted fall and spring benchmark assessment data to MDH. However, this new analysis is still limited by the number of districts submitting benchmark data and limited participation in the 2021 end-of-year summative M-STEP assessments. Moreover, the benchmark testing data only encompass one school year while the pandemic will undoubtably have longer lasting effects on student achievement. To augment the work presented here and provide greater insights into student progress during the pandemic, EPIC—in partnership with MDE, CEPI, and MEDC—will release a series of additional reports over the next several years.

Our next full report, which will be released in spring 2022, will analyze benchmark assessment data collected during the fall 2021 semester and examine fall-to-fall changes in academic outcomes. After that, EPIC will release a report that will analyze the remaining benchmark data collected during the 2021-22 school year, summarizing trends in academic performance over two full school years (i.e., from the 2020-21 and 2021-22 school years). Additionally, to provide insight into how school districts promoted student learning amidst the pandemic, EPIC is engaging in a qualitative inquiry focused on six “best practice districts” that exhibited the largest increases, or in some cases the smallest decreases, in learning outcomes across the 2020-2021 school year for all Michigan students as well as various student subgroups. Districts will be selected within the instructional modalities offered during the 2020-21 school year (i.e., remote, hybrid, and in-person) and include some variation in school governance model (i.e., traditional public schools and charter schools). We will conduct a second set of case studies of districts that appear to be innovating during the 2021-22 school year, as well. Within each case, we will conduct interviews with district, school, and classroom leaders to explore their priorities for responding to the pandemic, strategies used to promote students' access to learning opportunities and

any challenges to implementation. Interviews will also include state-level policymakers and stakeholders to provide context for district-level findings. Findings will highlight promising strategies that may inform equitable approaches to supporting student learning in future years and build resilient school systems.

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REPORT NOTES

[1] Fall and spring benchmark assessment administration windows varied from district to district, and individual students within the same district often took these assessments on different days. Thus, students in the same district may be included in different modality subgroups if they were tested in different months, and their districts changed their instructional modality offerings between those two months.

[2] Notes for Table 2.3.1: Due to the low number of students identified as American Indian or Alaskan Native and Native Hawaiian or Pacific Islander, we combined these groups with students identified as two or more races, to create a single "Other" category. The "Enrolled" columns represent the total number of students from a specific racial/ethnic subgroup and grade level enrolled in districts that offered a particular benchmark assessment. The "% Tested" columns represent the percentage of students from each subgroup-grade-assessment provider combination with valid reading/ELA benchmark assessment scores and included in the reading/ELA analytic sample. Student demographic data were obtained from the MSDS. Enrollment data is from the Center for Educational Performance and Information, Student Count Report.

[3] See the MDE's "Spring 2021 Spring Summative Assessments: Frequently Asked Questions (FAQs)" memo here: https://www.michigan.gov/documents/mde/Spring_2021_Summative_Assessments_FAQ_721789_7.pdf

[4] Notes for Tables 3.1.1 through 3.1.6: All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

[5] Notes for Tables 3.1.7 through 3.1.12: All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

[6] Notes for Tables 3.5.1 through 3.5.8: The "Percentage Point Gap" panel shows the differences between the shares of students who are "significantly behind grade level" for a focal group and for a comparison (or reference) group. Similarly, The "Score Gap" panel shows the differences between the average scale scores for a focal group and for a comparison (or reference) group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. We use parentheses to denote gaps in which the reference group has a higher percentage than the focal group. Changes in these gaps reflect the change in the absolute value of the gap (e.g., a positive change indicates that the gap became larger in magnitude from fall to spring, regardless of the direction of the gap). Gaps that reverse in direction from fall to spring are denoted by the letter "R." All percentages, mean scale scores, fall-to-spring changes, and subgroup gaps shown in the "significantly behind grade level" and scale score tables are rounded to one decimal place. We calculated all fall-to-spring changes and subgroup gaps from the exact (unrounded) percentages and mean scale scores. This method ensures that our calculations are as precise as possible but means that some may be slightly different than calculations based on the rounded percentages and mean scale scores shown in the tables. Source: Student demographic data were obtained from the MSDS. School districts submitted benchmark assessment data directly to MDH, and these data were provided to EPIC through a collaboration between EPIC, MEDC, and MDE.

[7] Notes for Table 3.9.3: "Other race" includes students identified as American Indian, Alaskan Native, Native Hawaiian, or Pacific Islander. Both the fall and spring percentages of students scoring "significantly below grade level," as well as each district-level student demographic percentage, are measured from 0 to 100. Aggregate

student enrollment data are from the 2020-21 MI School Data Student Headcount report. District-level data are linked with publicly available characteristics from the EEM database to estimate the relationship between urbanicity and benchmark outcomes. Each model also includes grade-level indicators for each assessment grade level to control for differences in learning between younger and older students. Each modality variable counts the total number of months during the 2020-21 school year where a school district offered a particular instructional modality to students. Instructional modality data was collected through individual district responses to MDE's Reconfirmed COVID-19 Learning Plan Monthly Questionnaires between September 2020 and May 2021. In these surveys, districts were asked to describe the specific instruction modalities—in-person, hybrid, remote, or some combination of the three—they planned to offer students each month. Robust standard errors, clustered at the district level, are listed in parentheses.