



Michigan K-12 Education: Learning During the Pandemic

**Presented at the IPPSR Forum on
COVID-19 and K-12 Education**

November 17, 2021

Katharine O. Strunk, Ph.D.

*Clifford E. Erickson Distinguished Professor of Education and
Economics & Director of EPIC*

College of Education | Michigan State University

Michigan K-12 Education: Learning During the Pandemic

AGENDA

- Michigan student growth on benchmark assessments during the 2020-21 school year
- Michigan student performance on the M-STEP in 2021
- Michigan student performance on the third-grade ELA M-STEP in 2021 with implications for retention under the Read by Grade Three Law

Michigan Student Growth on Benchmark Assessments During the 2020-21 School Year

Testing Requirements in the "Return to Learn" Law

- Districts were required to administer benchmark assessments to K-8 students in both the fall and spring of the 2020-21 school year and to provide data from these assessments by June 30.
- The legislation allowed districts to choose between four approved assessment providers or use another assessment that meets certain criteria.
- 91% of Michigan districts provided some form of benchmark assessment data, and 74% are represented in our analysis.
- Students in the analysis differ from the state K-8 population and differ across vendors. Economically disadvantaged, Black, and special education students are underrepresented.
- The report was required to "identify the number and percentage of students in the state that are significantly behind grade level."

Students in the Analysis Differ from the State K-8 Population and Differ Across Vendors. Low Income, Black, and Special Education Students are Underrepresented.

| | Statewide | Analytic Sample | | | |
|--------------------------------|-----------|-----------------|---------|--------|-------|
| | | NWEA | i-Ready | Star | DRC |
| Number of K-8 students | | | | | |
| Total included in analysis | 590,819 | 443,645 | 104,123 | 40,409 | 7,275 |
| Percent of K-8 enrollment | 61% | 78% | 81% | 58%* | 49%* |
| Student characteristics | | | | | |
| Economically disadvantaged | 62% | 51% | 59% | 47% | 37% |
| Black | 19% | 16% | 37% | 5% | 1% |
| Hispanic or Latino/a/x | 7% | 8% | 10% | 9% | 4% |
| Special education | 19% | 12% | 12% | 13% | 11% |
| English learners | 5% | 7% | 11% | 3% | 1% |



* More than 20% of districts that used Star or DRC also used a second assessment for some grades, subjects, and/or student groups. In districts that used two assessments, 78% of students are included in the analysis for one of the two.

“Significantly Behind Grade Level” Score Thresholds are Based on Vendors’ Recommendations. They are Defined and Interpreted Differently for Each Assessment.

| Assessment | Grade range | “Significantly behind grade level” interpretation | Type of standard |
|-------------------------------|--------------------|--|-----------------------------------|
| NWEA MAP Growth | K-1 | At-risk of having severe learning difficulties and in need of intensive intervention (30 th percentile) | norm-referenced, national |
| | 2-8 | Projected to be in the “Not Proficient” category on the end-of-year M-STEP | criterion-referenced, MI-specific |
| Curriculum Associates i-Ready | K-1 | Performing at the “Emerging Kindergarten” level | criterion-referenced, national |
| | 2-8 | Performing two or more grade levels below their actual grade | Criterion-referenced, national |
| Renaissance Star 360 | K-8 | Performing below grade-level expectations & in need of intervention (24 th percentile) | norm-referenced, national |
| Smarter Balanced ICA | 3-8 | Has not met the achievement standard and needs substantial improvement | criterion-referenced, national |
| K-2s | K-2 | Significantly behind grade level | criterion-referenced, MI-specific |

In the Fall, M-STEP Projections Were Similar to 2019 Results. This was no Longer True in the Spring.

**K-1st: Screened for intervention (30th percentile)
2nd-8th: Projected M-STEP "not proficient"**

| | | K-1st: Screened for intervention (30th percentile) 2nd-8th: Projected M-STEP "not proficient" | | | Statewide M-STEP | |
|--|---|--|---------------|---------------|-------------------------|-------------|
| | | Fall | Spring | Change | 2019 | 2021 |
| NWEA MAP Growth Mathematics | K | 11% | 21% | +10% | | |
| | 1 | 22% | 27% | +5% | | |
| | 2 | 27% | 34% | +7% | | |
| | 3 | 35% | 39% | +4% | 28% | 32% |
| | 4 | 27% | 33% | +6% | 25% | 30% |
| | 5 | 38% | 46% | +8% | 37% | 43% |
| | 6 | 34% | 41% | +7% | 34% | 39% |
| | 7 | 35% | 41% | +6% | 36% | 40% |
| | 8 | 27% | 34% | +7% | 27% | 30% |
| NWEA MAP Growth Reading | K | 7% | 24% | +17% | | |
| | 1 | 23% | 29% | +6% | | |
| | 2 | 31% | 33% | +2% | | |
| | 3 | 29% | 35% | +6% | 30% | 32% |
| | 4 | 29% | 36% | +7% | 33% | 35% |
| | 5 | 29% | 37% | +8% | 32% | 35% |
| | 6 | 27% | 35% | +8% | 32% | 34% |
| | 7 | 27% | 34% | +7% | 30% | 31% |
| | 8 | 22% | 30% | +8% | 22% | 21% |

Michigan's 2020-21 Benchmark Assessments > i-Ready Results

Students Made Progress Throughout the Year, but at a Slower Rate Than Students in 2018-19

| | | K-1 st : "Emerging K" level 2 nd -8 th : 2+grade levels behind | | | 2018-19 i-Ready results for Michigan students* | | |
|---|---|--|--------|--------|--|--------|--------|
| | | Fall | Spring | Change | Fall | Spring | Change |
| Curriculum Associates i-Ready Mathematics | K | 58% | 32% | -26% | | | |
| | 1 | 14% | 7% | -7% | 15% | 2% | -13% |
| | 2 | 34% | 19% | -15% | 32% | 8% | -24% |
| | 3 | 40% | 25% | -15% | 40% | 14% | -26% |
| | 4 | 43% | 30% | -13% | 40% | 17% | -23% |
| | 5 | 43% | 33% | -10% | 37% | 19% | -18% |
| | 6 | 46% | 37% | -9% | 48% | 29% | -19% |
| | 7 | 48% | 41% | -7% | 50% | 35% | -15% |
| | 8 | 51% | 45% | -6% | 55% | 42% | -13% |
| Curriculum Associates i-Ready Reading | K | 49% | 19% | -30% | | | |
| | 1 | 9% | 4% | -5% | 10% | 2% | -8% |
| | 2 | 32% | 19% | -14% | 33% | 12% | -21% |
| | 3 | 39% | 28% | -11% | 40% | 20% | -20% |
| | 4 | 35% | 26% | -9% | 36% | 20% | -16% |
| | 5 | 48% | 39% | -9% | 49% | 32% | -17% |
| | 6 | 50% | 44% | -6% | 58% | 44% | -14% |
| | 7 | 52% | 46% | -6% | 58% | 44% | -14% |
| | 8 | 51% | 45% | -6% | 56% | 43% | -13% |

*Note: 2018-19 i-Ready results provided by Curriculum Associates for all active MI accounts

On Average, Fall Performance was Lower Than Pre-COVID National Norms. K-5 Students' Relative Performance Improved From Fall to Spring.

| | | Below grade level expectations | | |
|---|-----|--------------------------------|--------|--------|
| | | Fall | Spring | Change |
| Renaissance Learning Star Math | 1 | 16% | 12% | -4% |
| | 2 | 28% | 17% | -11% |
| | 3 | 22% | 21% | -1% |
| | 4 | 24% | 20% | -4% |
| | 5 | 26% | 23% | -3% |
| | 6 | 29% | 31% | +2% |
| | 7 | 29% | 27% | -2% |
| | 8 | 27% | 28% | +1% |
| Renaissance Learning Star Reading/ Early Literacy | K | 24% | 17% | -7% |
| | 1 | 30% | 17% | -13% |
| | 2 | 35% | 22% | -13% |
| | 3 | 31% | 22% | -9% |
| | 4 | 26% | 21% | -5% |
| | 5 | 29% | 27% | -2% |
| | 6 | 34% | 34% | 0% |
| | 7 | 33% | 33% | 0% |
| 8 | 34% | 38% | +4% | |

The “significantly behind grade level” threshold for Star 360 assessments is the **24th percentile**.

This means that, before COVID, **24% of students** from the nationally representative norming sample scored below this threshold.



Compared to Other Grade Levels, 3rd and 4th Grade Students Were Most Likely to be Behind in the Fall but Made the Most Progress From Fall to Spring.

| | | "Did not meet standard" | | |
|--|-------|-------------------------|--------|--------|
| | | Fall | Spring | Change |
| Smarter Balanced ICA Math | DRC 3 | 64% | 30% | -34% |
| | 4 | 49% | 24% | -25% |
| | 5 | 35% | 19% | -16% |
| | 6 | 43% | 22% | -21% |
| | 7 | 31% | 25% | -6% |
| | 8 | 45% | 37% | -8% |
| | DRC 3 | 50% | 28% | -22% |
| | 4 | 48% | 30% | -18% |
| Smarter Balanced ICA ELA | 5 | 24% | 14% | -10% |
| | 6 | 17% | 11% | -6% |
| | 7 | 19% | 14% | -5% |
| | 8 | 15% | 17% | +2% |

| | | Significantly behind grade level | | |
|------------------------------------|-------|----------------------------------|--------|--------|
| | | Fall | Spring | Change |
| MDE K-2 Mathematics | K | 4% | 0% | -4% |
| | 1 | 1% | 0% | -1% |
| | 2 | 3% | 0% | -3% |
| | MDE K | 1% | 0% | -1% |
| | 1 | 1% | 0% | -1% |
| | 2 | 1% | 0% | -1% |

Across All Grades and Subjects, Michigan Students Appeared to Make Less Than Normal Progress Toward Learning Goals as Measured by the Four Available Benchmark Assessments

- While students did learn over the course of the year, the rate of learning appeared to be slower than in a typical pre-pandemic school year.
- Students who are non-White, economically disadvantaged, and/or eligible for special education were less likely to have comparable benchmark assessment data for the fall and spring and are therefore underrepresented in the analysis.
- Recent studies consistently show larger, negative effects of the pandemic on student achievement and growth for these same student groups.
- Many of the reasons why a student would not participate in testing are also likely to negatively affect student learning.
- Thus, it is likely that the results of this analysis overestimate the average performance and learning growth of MI students.

Michigan Student Performance on the M-STEP in 2021



Note: These data and results are made available by the Michigan Department of Education

Testing Requirements and Participation Rates For the 2020-21 School Year

- In 2019-20 and 2020-21 the federal government waived accountability requirements under the Every Student Succeeds Act (ESSA), but the Michigan legislature did not wave the state's A-F ratings
- In 2019-20 the federal and state government waived standardized assessment requirements, but districts were required to administer tests in spring 2021
 - Michigan students were administered the M-STEP (state summative assessments) in spring 2021 to measure their progress toward meeting Michigan's state standards.
- The resulting M-STEP data must be taken in context and used with caution:
 - Challenging pandemic circumstances for all students, families, and educators; particularly difficult for traditionally underserved communities
 - Participation rates in spring 2021 were very low: Approximately 70% of eligible students participated in M-STEP testing for ELA and Mathematics
 - Participation rates varied substantially across districts and schools; difficult to compare performance over time or across districts

Proficiency Rates on the 2021 M-STEP Were Slightly Below 2019 Rates, Although Fewer Students Tested in 2021

| | Grade 3 | Grade 4 | Grade 5 | Grade 6 | Grade 7 |
|--------------------------|----------------|----------------|----------------|----------------|----------------|
| ELA | | | | | |
| 2019 Proficient or Above | 45.1% | 45.8% | 46.2% | 41.7% | 42.7% |
| 2021 Proficient or Above | 42.8% | 44.2% | 43.7% | 38.6% | 40.7% |
| Mathematics | | | | | |
| 2019 Proficient or Above | 46.7% | 41.8% | 34.8% | 41.7% | 35.7% |
| 2021 Proficient or Above | 42.3% | 36.5% | 29.6% | 38.6% | 32.3% |



Source: Michigan Department of Education Spring 2021 M-STEP scores.

Performance on the Grade 3 2021 ELA M-STEP:

Implications for Retention Under the Read by Grade Three Law

Outcomes for Students Under Michigan's Read by Grade Three Law

- Under Michigan's Read by Grade Three law, third-grade students are subject to different outcomes based on their ELA M-STEP scores.
 - **1272 or above:** Students who score a 1272 or above are **promoted** to fourth grade;
 - **1253 to 1271:** Students who score between a 1253 and a 1271 are promoted to fourth grade, but **with recommended extra reading support**;
 - **1252 or below:** Students who score a 1252 or below are **retained** in third grade or promoted to fourth grade with a good cause exemption;
 - **Not tested:** Students who did not take the third-grade ELA M-STEP cannot be retained based on their test score and are therefore not subject to the Read by Grade Three retention policy.
- The retention policy was set to begin in 2020 but was waived due to COVID-19. Instead, the policy went into effect when state testing resumed in 2021.
- However, not all students were required to take the M-STEP, and many did not.

Good Cause Exemptions Under Michigan's Read by Grade Three Law

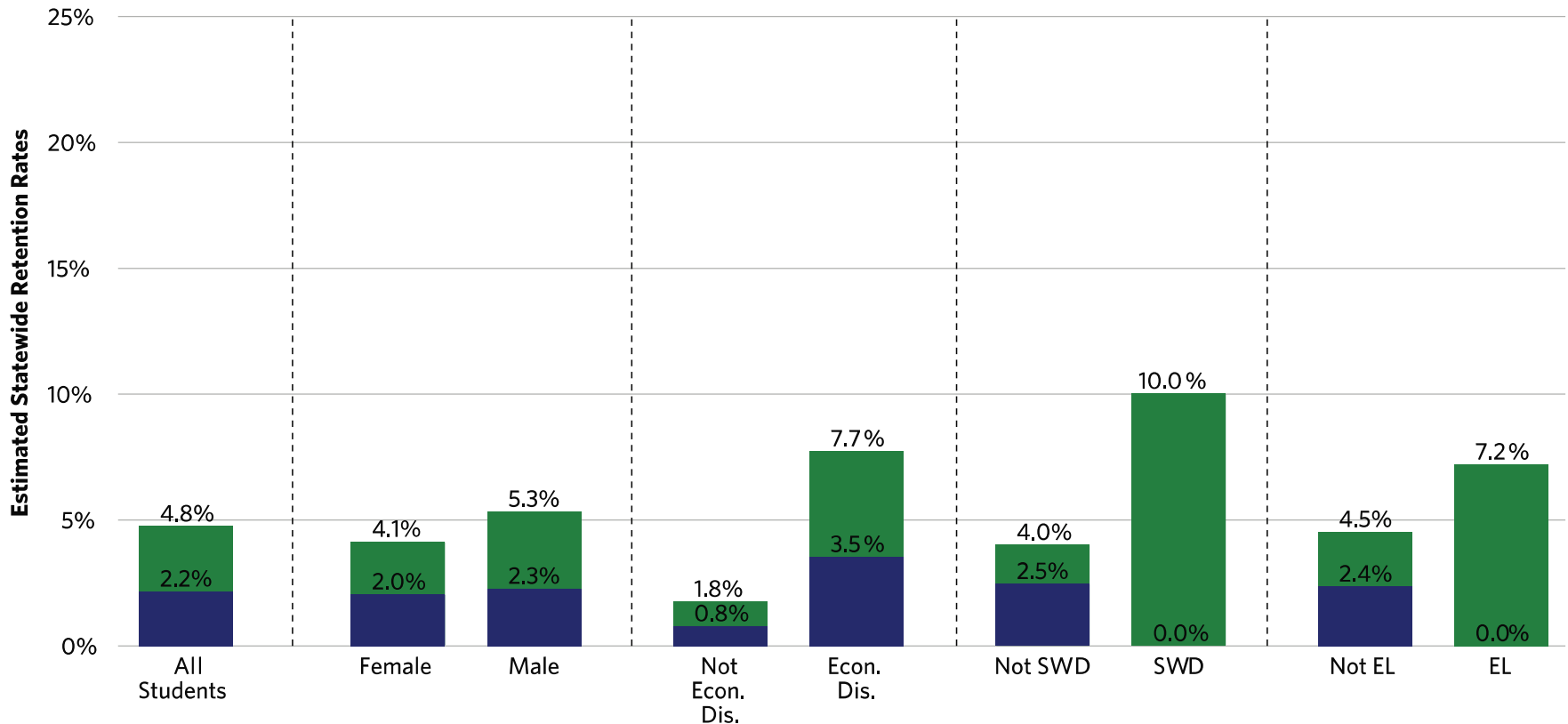
- Some students may be promoted to 4th grade through a **good cause exemption**:
 - English learners with fewer than 3 years of English language instruction
 - Students with an IEP or Section 504 Plan
 - Previously retained and received intensive reading interventions for 2+ years
 - Enrolled in current district for less than 2 years and previous district did not provide an appropriate individual reading improvement plan
 - Demonstrated proficiency in other subject areas
 - Parent request with superintendent's approval

Third Grade ELA Test Participation Rates Were Far Lower Than Usual and Varied Widely by Subgroup

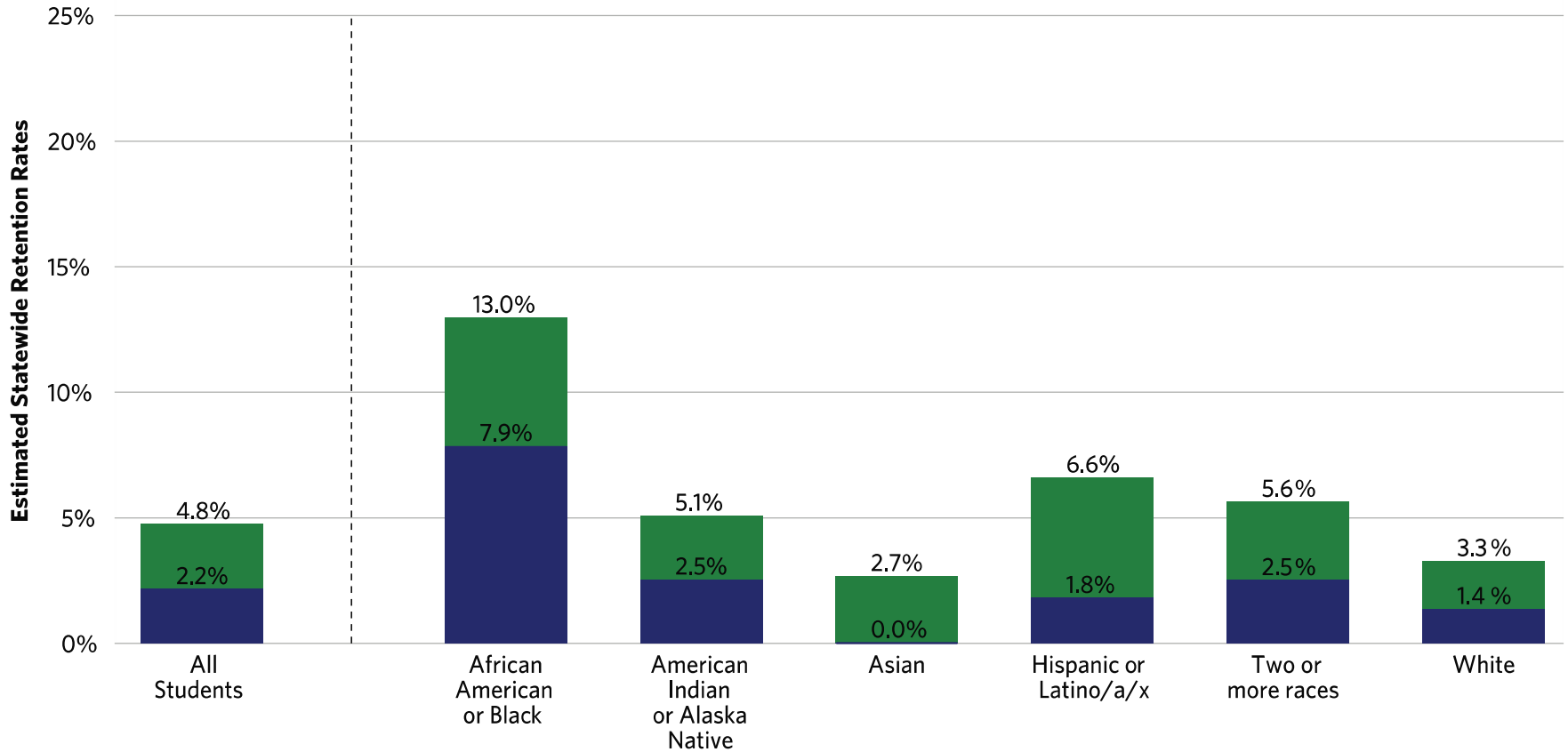
| Third grade ELA M-STEP Participation by District Modality, May 2021 | |
|---|------|
| Fully in-person only | 87.2 |
| Fully in-person option | 76.6 |
| Hybrid only | 79.3 |
| Hybrid option | 58.0 |
| Fully remote only | 22.1 |
| No modality data | 41.4 |

| Third grade ELA M-STEP Participation by Subgroup | 2021 | 2019 |
|--|-------------|-------------|
| All students | 71.2 | 96.5 |
| African American or Black | 43.3 | 94.6 |
| American Indian or Alaska Native | 78.5 | 94.0 |
| Asian | 65.0 | 92.2 |
| Hispanic or Latino/a/x | 62.3 | 94.6 |
| Native Hawaiian/Pacific Islander | 70.1 | 99.0 |
| Two or more races | 68.3 | 96.6 |
| White | 81.3 | 97.2 |
| Economically disadvantaged | 64.5 | 95.5 |
| Students with disabilities | 64.5 | 87.7 |
| English learners | 63.8 | 93.2 |
| Bottom 25% ELA districts (2019) | 35.9 | 93.8 |
| Top 25% ELA districts (2019) | 80.6 | 97.1 |

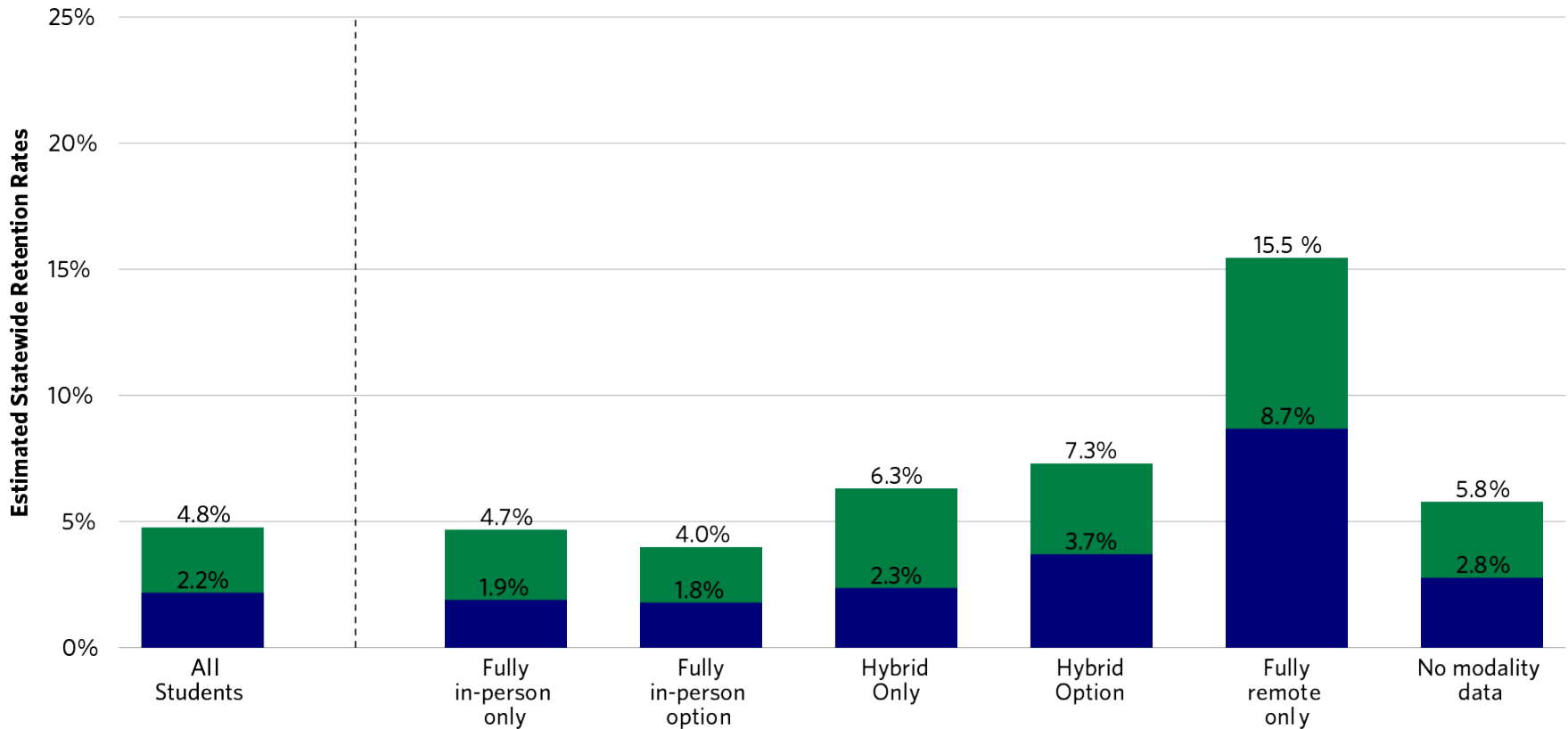
Rates of Retention Eligibility Varied Dramatically Across Groups of Students



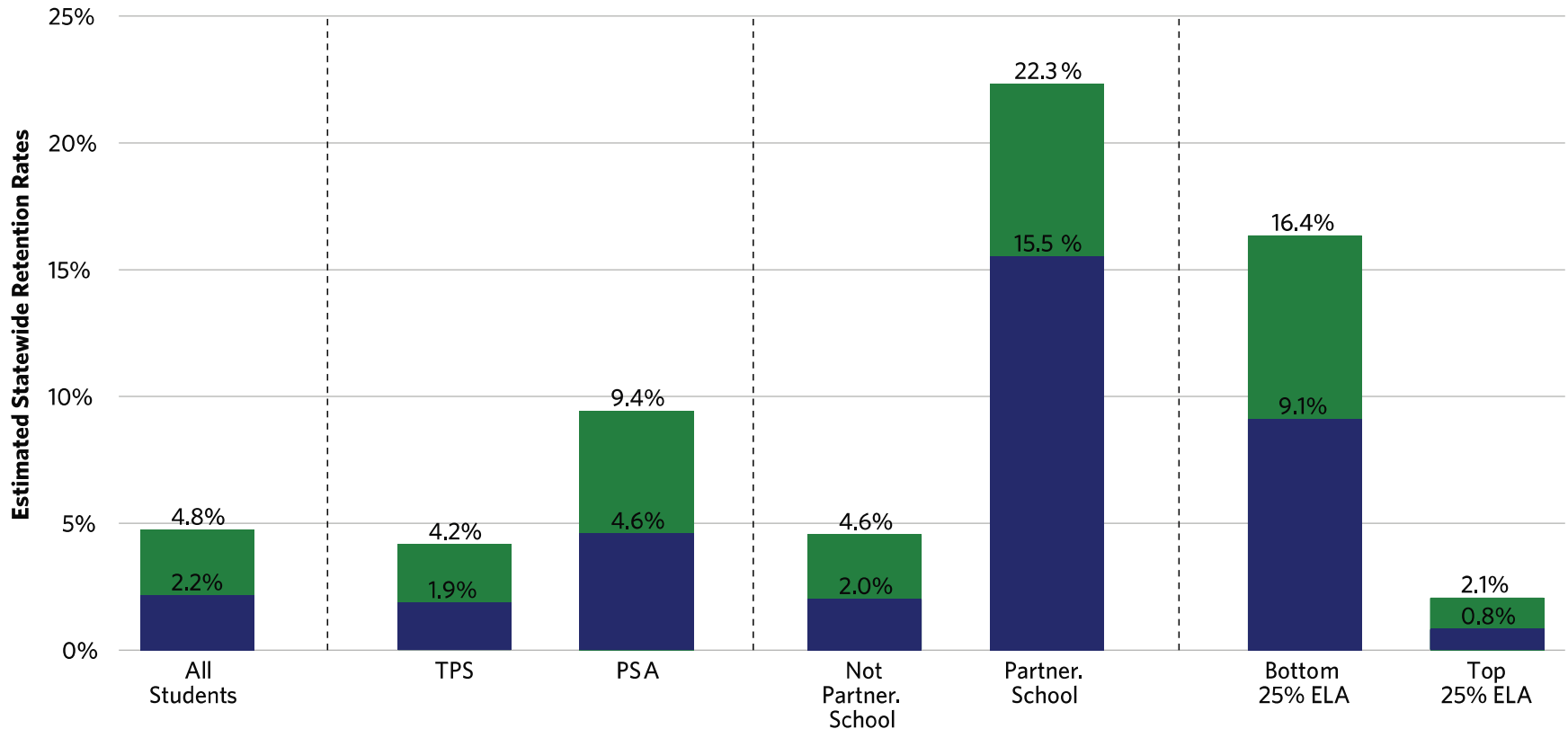
Rates of Retention Eligibility Varied Dramatically by Race and Ethnicity of Students



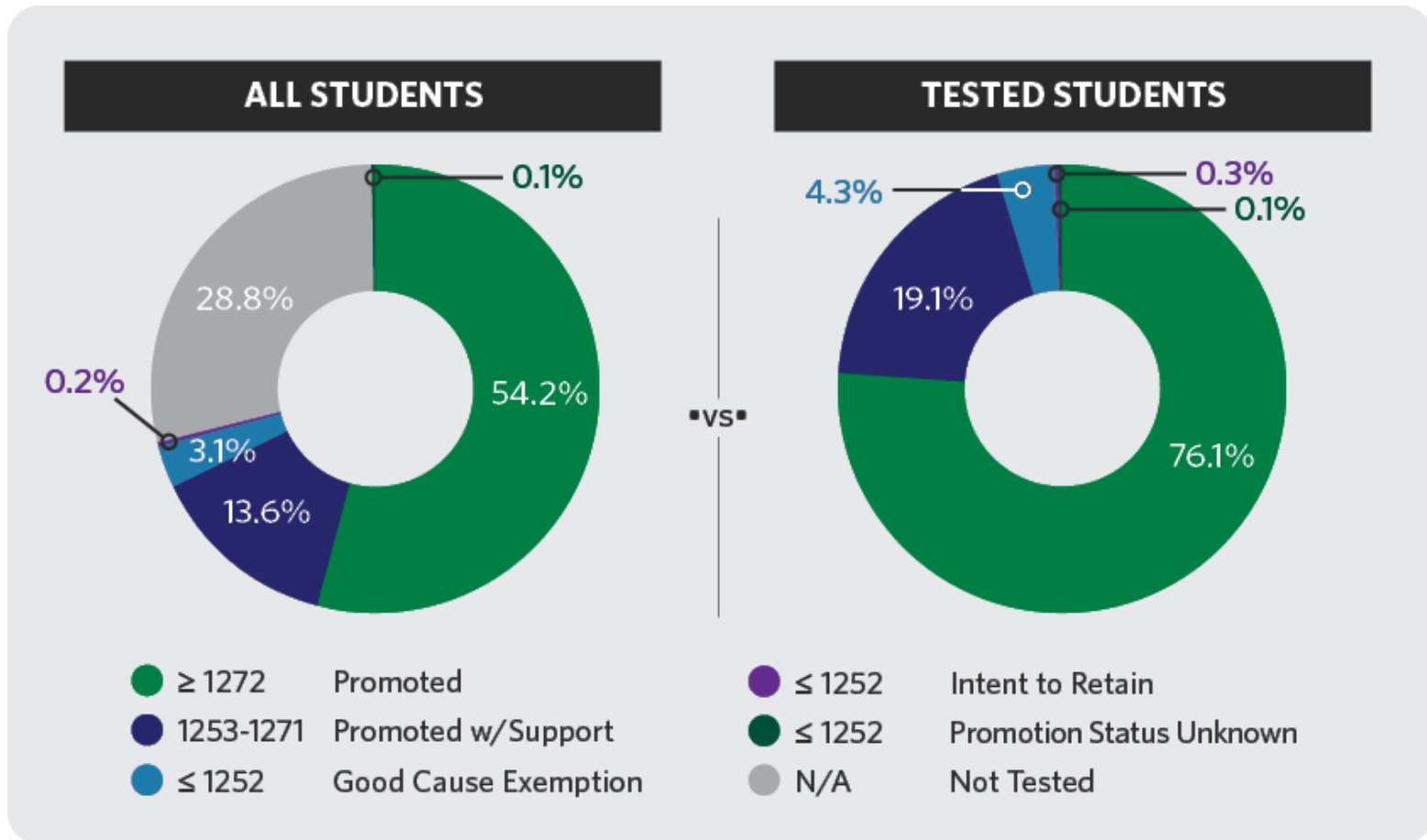
Rates of Retention Eligibility Were Far Greater in Remote Districts



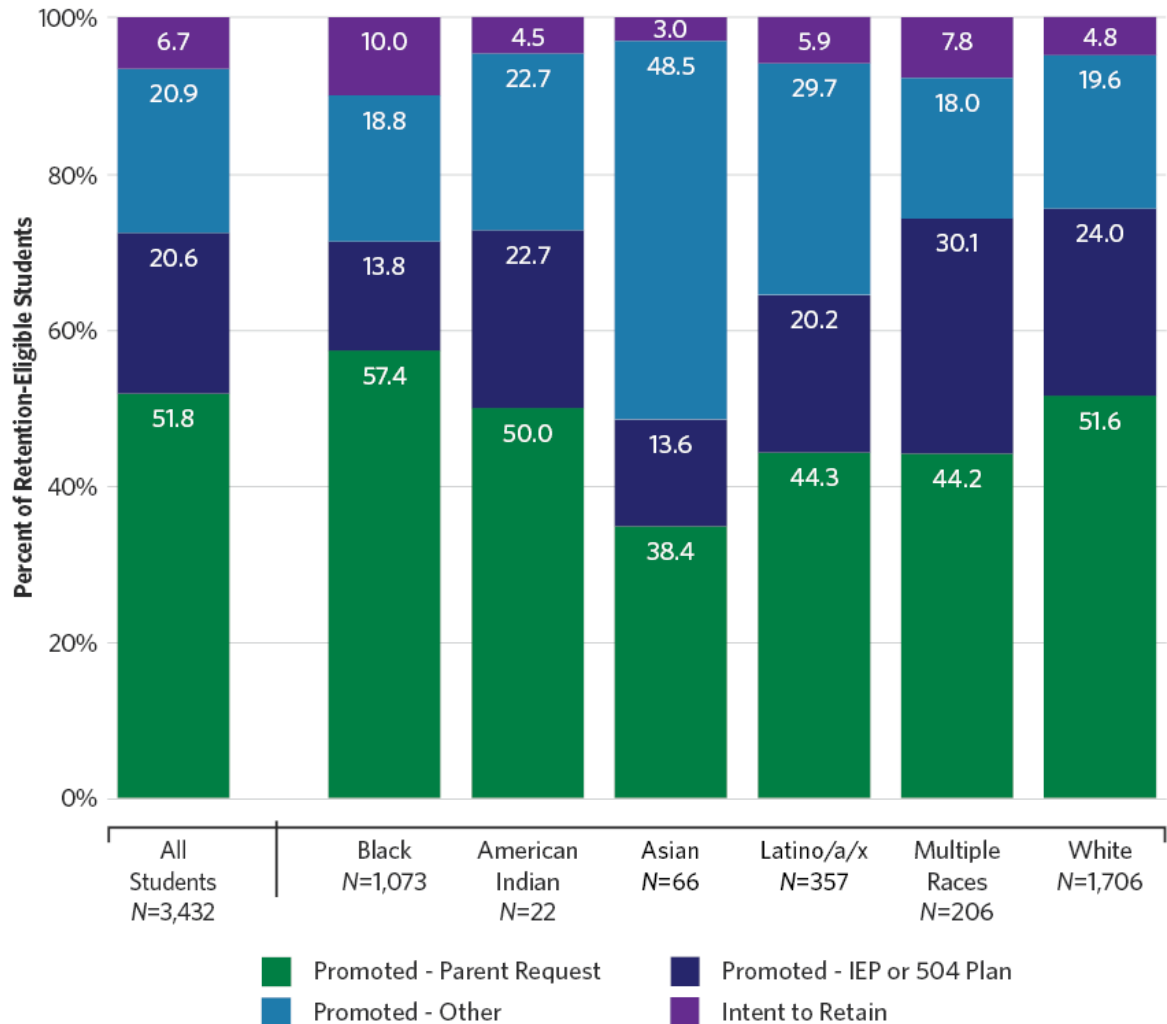
Rates of Retention Eligibility Were Higher in Low-Performing Schools and Districts and in PSAs



Only 0.3% of Tested Third-Grade Students Were Retained After the 2020-21 School Year



There Were Racial/Ethnic Disparities in Student Retention



Main Takeaways Regarding K-12 Student Learning During the 2020-21 School Year in Michigan

- Students made progress, but at a much slower rate than in a typical school year.
- Given differences in the characteristics of tested students and total K-12 population, these are likely overestimates of student learning gains.
- Evidence from third-grade ELA M-STEPs suggest broad inequities in student achievement and growth during the pandemic. Retention eligibility rates are highest for students who are Black, Hispanic or Latino/a/x, low-income, in the lowest performing schools and districts, or in districts that were fully remote in May 2020.
- This year and the coming years will be critical for learning recovery.
- We will need to pay particular attention to recovery for student populations who have been traditionally underserved in K-12 education and who were likely the most impacted by the pandemic.



Education Policy Innovation Collaborative

COLLEGE OF EDUCATION | MICHIGAN STATE UNIVERSITY

236 Erickson Hall, 620 Farm Lane, East Lansing, MI 48824 | (517) 884-0377 | EPICedpolicy@msu.edu

EXTRA SLIDES



We Examine Overall Rates of M-STEP Participation and Retention Eligibility and Compare Subgroup Rates by Student and District Characteristics

- **How many of Michigan's 3rd grade students participated in the 2021 M-STEP ELA, and was this group reflective of the overall population?**
 - We compare the population of 3rd grade students reported in the spring 2021 MSDS collection to the population who took the 3rd grade M-STEP.
- **How many students, and what kinds of students, were eligible for retention based on their preliminary scores?**
 - Students with preliminary scale scores of 1252 or below were flagged for retention and sent a certified letter.
- **After accounting for several types of good cause exemptions, how many students are likely to be retained and how do rates vary across student groups?**
 - We estimate retention rates assuming that all students with disabilities, English learners, and students who were previously retained, participated in a two-year kindergarten program, or have been enrolled in their current district for less than 2 years are promoted to 4th grade.

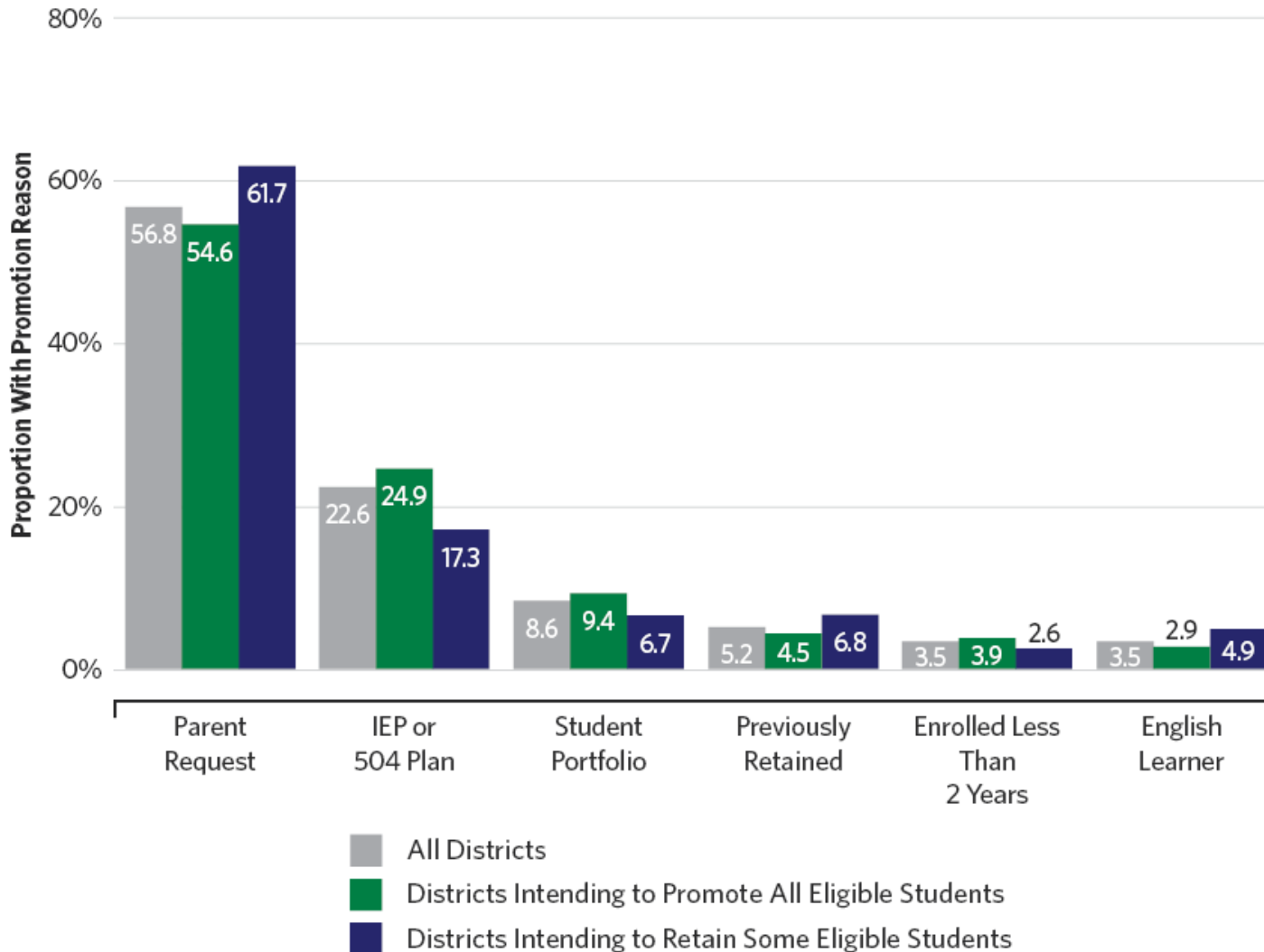
4.8% of Students Who Took the 3rd Grade M-STEP in 2021 are Eligible For Retention Under the Read by Grade Three Law

- This is slightly higher than the percentages of 3rd grade students who would have been eligible for retention in 2018 and 2019, if the policy were in effect at the time (4.4% in 2018 and 4.1% in 2019).
- Test participation rates fell from 96.5% to 71.2%; disparities between subgroups suggest retention eligibility rates are an underestimate of how many students are truly one or more grade levels behind in reading.
- Retention eligibility rates are highest for students who are Black, Hispanic or Latino/a/x, economically disadvantaged, in the lowest performing schools and districts in the state, or in districts that were fully remote in May 2020.
- After accounting for likely good cause exemptions, the estimated retention rate is 2.2% (up slightly from 2.0% in 2019).
 - These students could still receive exemptions by demonstrating mastery in other ways or through parent requests.

EPIC will release follow-up reports as more information about retention outcomes becomes available

- **Retention/promotion decisions**
 - How many students do districts intend to retain? Which students?
 - Which types of good cause exemptions were used?
- **Delivery status of retention eligibility notification letters**
 - How many retention notification letters were delivered successfully?
 - Is receipt of a notification letter associated with retention decisions?
- **Actual retention outcome**
 - Do students' reported grade levels for 2021-22 align with districts' reported retention/promotion decisions?
- **Impacts on student outcomes**
 - What was the effect of retention eligibility notification on student outcomes?
 - What was the effect of retention on retained student outcomes?

The Far Majority of Good Cause Exemptions Were by Parent Request



Testing Requirements in the "Return to Learn" Law

- Districts were required to administer benchmark assessments to K-8 students in both the fall and spring of the 2020-21 school year and to provide data from these assessments by June 30.
- The legislation allowed districts to choose between four approved assessment providers or use another assessment that meets certain criteria.
 - Results from the four approved assessment providers were submitted to the MI Data Hub (MDH), either at the student level (transferred directly from the vendor) or as a district-level aggregate dataset (prepared by the district).
 - Districts using other assessments provided information through a survey.
- MDE, CEPI, MDH, MEDC, and EPIC collaborated to compile all results provided by districts into a statewide report for the legislature, as required by law.
 - The report was required to “identify the number and percentage of students in the state that are significantly behind grade level.”

91% of Michigan districts provided some form of benchmark assessment data, and 74% are represented in our analysis

| Type of data provided by district | Total Districts | | Districts in Analysis | |
|---|---------------------|----------------|-----------------------|----------------|
| | Number of Districts | K-8 Enrollment | Number of Districts | K-8 Enrollment |
| Student-level for MEDC/EPIC aggregation | 633 | 762,796 | 627 | 759,313 |
| Aggregate file prepared by district | 21 | 71,838 | 2 | 7,238 |
| Survey data only | 120 | 92,901 | 0 | 0 |
| No data provided by deadline | 74 | 34,087 | 0 | 0 |
| Total Michigan school districts | 848 | 967,066 | 629 | 766,551 |

- The survey was not part of this analysis because it did not capture results from the four approved benchmark assessments
- 25 districts that provided benchmark assessment results could not be included in the analysis: 19 provided aggregate files that did not contain all necessary information, 5 provided student-level data for the fall or spring only, 1 provided student-level data in an incompatible format



EPIC will release follow-up reports further examining student performance and incorporating newly available data

- **Subgroup analyses:** differences in average learning gains across student demographic groups and across districts providing different modes of instruction (i.e., in-person, remote, hybrid)
- **Further examination of potential bias** due to differences between districts that chose different vendors, districts that did not use one of the 4 approved vendors, students who were and weren't tested
- **Survey responses** from districts that elected to use a progress monitoring assessment or locally-developed benchmark assessment
- **Qualitative work** studying a group of "best practice" districts that were successful in improving student learning outcomes during the pandemic