



2021-22

District Data Overview

Prepared for the Milton School Committee
December 2021

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Context

- The disruption of the Covid-19 global pandemic has upended our lives in many ways, including how public education was delivered in the past 20 months.
- In this presentation, we share an overview of key data or updates from the four listed focus areas to help anchor our district work going forward.
- Please be reminded that data is constantly evolving as new metrics take root and systems are improved.
 - The MCAS was adjusted in multiple ways by the state to accommodate the reality of teaching and learning during a pandemic.
 - The District implemented new K-8 math and K-12 SEL screeners last spring to help us identify immediate student needs.
 - The District is revamping our incident reporting system district-wide to ensure it reflects the data we want to collect.
 - The District is implementing a common data platform for assessment data.



MPS Principles of Effective Data Use

- Data is a tool to help illuminate patterns, trends, and potential discrepancies. It guides inquiry and action.
- Where possible, data will be disaggregated to show the experiences of different subgroups by racial/ethnic identities, socioeconomic status, special education status, English learner status, and gender identities.
- Data can be used to address inequities or to perpetuate biases. Intentionality of how to interpret and act on the data is just as important as having the data.
- Multiple interpretations of the same data are possible.
- Multiple sources of data have to be used to provide a more holistic view of individual students.
- Transparency and access to data are important to involve students and families in decision-making.

DISPROPORTIONALITY



Context

- In 2017 and 2018, the District was identified by DESE as being “At Risk” for two disproportionalities in Special Education (based on previous multi-years of data)
 - Disproportional identification of students who identify as African American/Black in the special education category of Communication Disability
 - Disproportional School Discipline Removals of students in Special Education who identify as African American/Black
- The following slides share data used by DESE to determine the disproportionalities. **DESE calculates these ratios based on data finalized at the end of year.**
- The District has plans in place to address the disproportionalities as presented by our Administrator of Pupil Personnel Services and Director of Educational Equity in previous meetings.
- These data ratios will get updated by DESE as they process the information we submit to them at the end of a school year.

Special Education – Communication Disability

Identification as a Student with a Communication Disability

| | School Year 2020-21 | | | | School Year 2019-20 | | | | School Year 2018-19 | | | |
|--|--|------------------------|--|--|--|------------------------|--|--|--|------------------------|--|--|
| | Risk Ratio (Or alternate risk ratio* if applicable) | Total # of Students | Total # of Students with a Communication Disability | % of Students with a Communication Disability | Risk Ratio (Or alternate risk ratio* if applicable) | Total # of Students | Total # of Students with a Communication Disability | % of Students with a Communication Disability | Risk Ratio (Or alternate risk ratio* if applicable) | Total # of Students | Total # of Students with a Communication Disability | % of Students with a Communication Disability |
| African American/Black | 3.80 | 581 | 30 | 5.2% | 4.45 | 624 | 31 | 5.0% | 3.75 | 617 | 35 | 5.7% |
| Asian | 0.97 | 330 | 6 | 1.8% | -- | 318 | -- | -- | -- | 309 | -- | -- |
| Hispanic or Latino | 1.50 | 220 | 6 | 2.7% | -- | 212 | -- | -- | 1.54 | 190 | 6 | 3.2% |
| Multiracial | -- | 238 | -- | -- | -- | 220 | -- | -- | -- | 198 | -- | -- |
| Native American or American Indian or Alaskan Native | -- | 6 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Native Hawaiian or Pacific Islander | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| White | 0.34 | 3,025 | 35 | 1.2% | 0.30 | 3,096 | 30 | 1.0% | 0.40 | 2,998 | 43 | 1.4% |
| District Total | | 4,403 | 82 | 1.9% | | 4,478 | 74 | 1.7% | | 4,322 | 91 | 2.1% |
| State Total | | 921,712 | 23,460 | 2.6% | | 959,394 | 24,418 | 2.6% | | 962,297 | 24,938 | 2.6% |

A risk ratio represents the likelihood that students in one racial/ethnic group will experience an outcome, compared to the likelihood that students in all other racial/ethnic groups in the district will experience the same outcome. **A risk ratio of 1.0 indicates that students across racial/ethnic groups have the same likelihood of identification.**

Special Education – Disciplinary Removals

All Disciplinary Removals

| | School Year 2019-20 | | | | School Year 2018-19 | | | | School Year 2017-18 | | | |
|--|--|-------------------------------------|--|--|--|-------------------------------------|--|--|--|-------------------------------------|--|--|
| | Risk Ratio (Or alternate risk ratio* if applicable) | Total # of Students with IEPs | Total # of Students with IEPs Receiving a Disciplinary Removal | % of Students with IEPs Receiving a Disciplinary Removal | Risk Ratio (Or alternate risk ratio* if applicable) | Total # of Students with IEPs | Total # of Students with IEPs Receiving a Disciplinary Removal | % of Students with IEPs Receiving a Disciplinary Removal | Risk Ratio (Or alternate risk ratio* if applicable) | Total # of Students with IEPs | Total # of Students with IEPs Receiving a Disciplinary Removal | % of Students with IEPs Receiving a Disciplinary Removal |
| African American/Black | 4.57 | 145 | 12 | 8.3% | 3.31 | 152 | 17 | 11.2% | 2.73 | 164 | 10 | 6.1% |
| Asian | -- | 25 | -- | -- | -- | 22 | -- | -- | -- | 23 | -- | -- |
| Hispanic or Latino | -- | 33 | -- | -- | -- | 32 | -- | -- | -- | 35 | -- | -- |
| Multiracial | -- | 26 | -- | -- | -- | 21 | -- | -- | -- | 17 | -- | -- |
| Native American or American Indian or Alaskan Native | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Native Hawaiian or Pacific Islander | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| White | 0.28 | 413 | 7 | 1.7% | 0.42 | 398 | 14 | 3.5% | 0.52 | 417 | 10 | 2.4% |
| District Total | | 642 | 21 | 3.3% | | 626 | 33 | 5.3% | | 657 | 21 | 3.2% |
| State Total | | 176,741 | 10,425 | 5.9% | | 173,843 | 14,590 | 8.4% | | 171,061 | 14,444 | 8.4% |

A risk ratio represents the likelihood that students in one racial/ethnic group will experience an outcome, compared to the likelihood that students in all other racial/ethnic groups in the district will experience the same outcome. **A risk ratio of 1.0 indicates that students with IEPs across racial/ethnic groups have the same likelihood of experiencing the discipline outcome.**

ACHIEVEMENT GAPS

STANDARDIZED ASSESSMENTS: 2020-21 MCAS

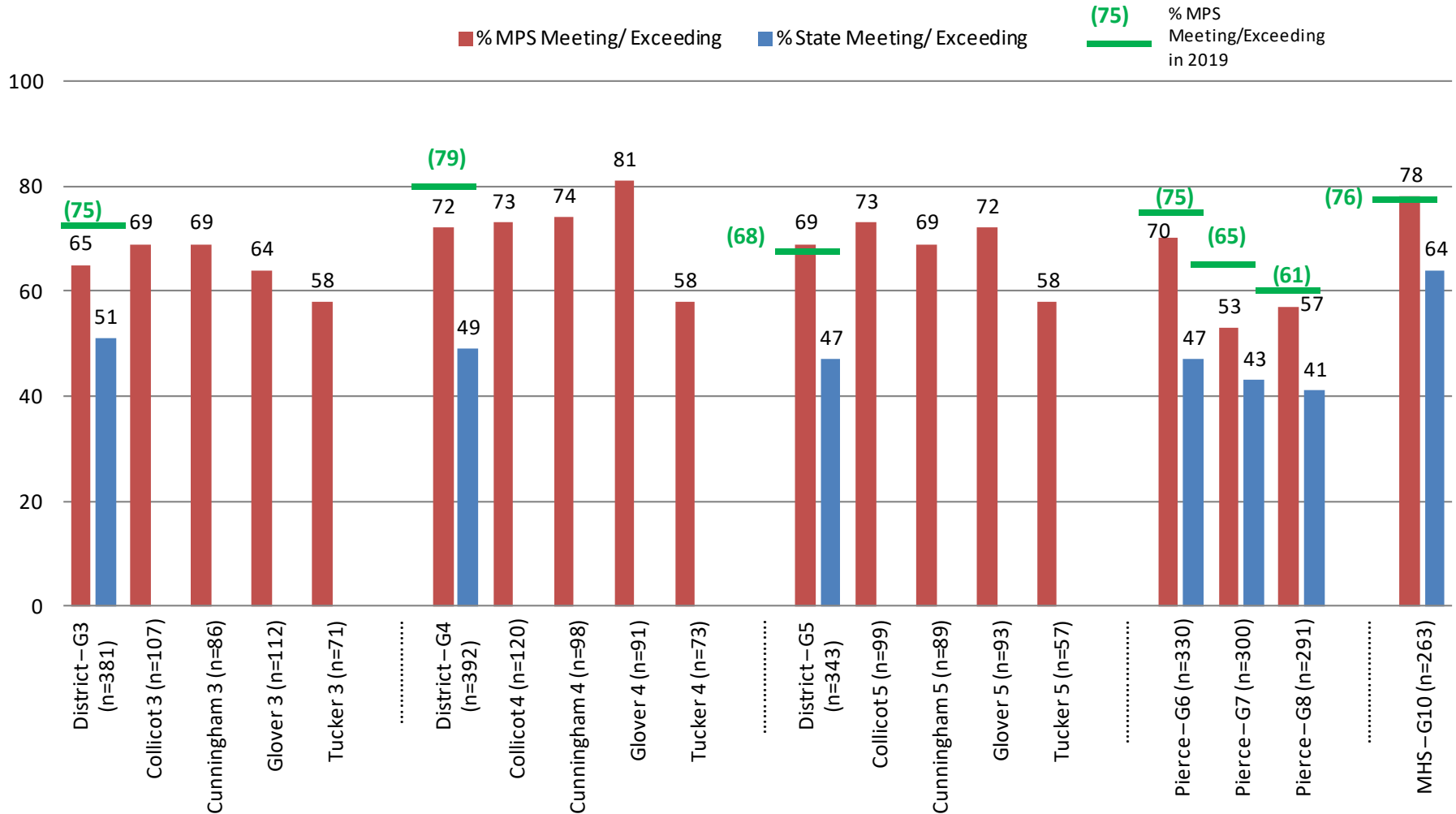


Context

- Due to the disruptions of the pandemic, DESE has urged us to use the MCAS results for diagnostic purposes only, and not to compare performance with other districts, who may have had different instructional models and situations.
- Students in grades 3-8 were offered the opportunity to test remotely from home and about 9% of our students took this option.
- They also took only one session of the MCAS, whereas in previous years, they would have taken two sessions for each subject. This shortened test can cause individual student performance to vary more than usual as compared to previous years.
 - Therefore, at the individual level, results are not necessarily indicative of a student's grade-level performance and should be paired with other assessments for a fuller picture.
- High school students all took the MCAS in person and took the full length MCAS test, similar to the one given in 2019.

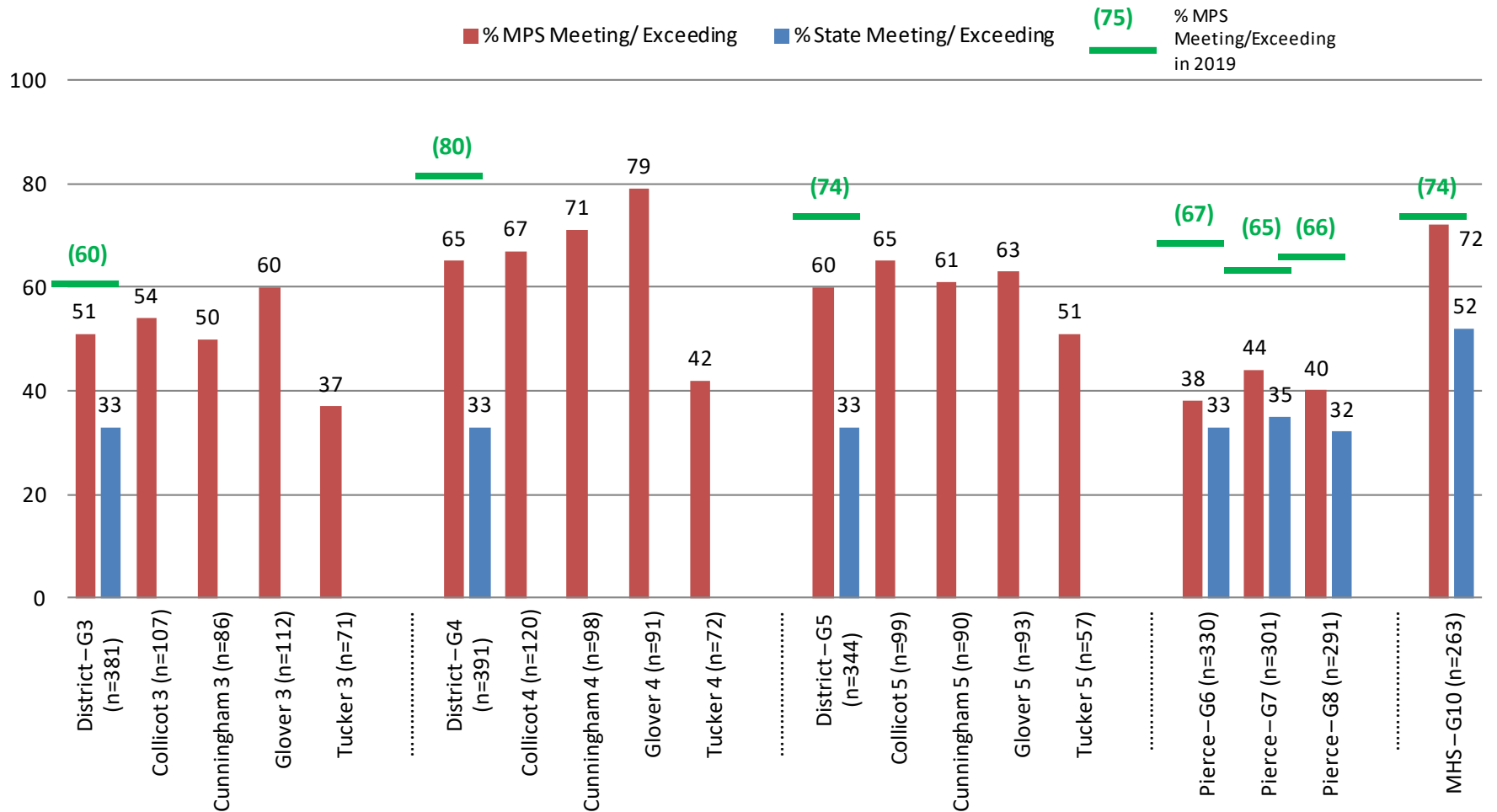
2021 District ELA MCAS

2021: Percentage of MPS Students Meeting/Exceeding Expectations on ELA MCAS G3-10



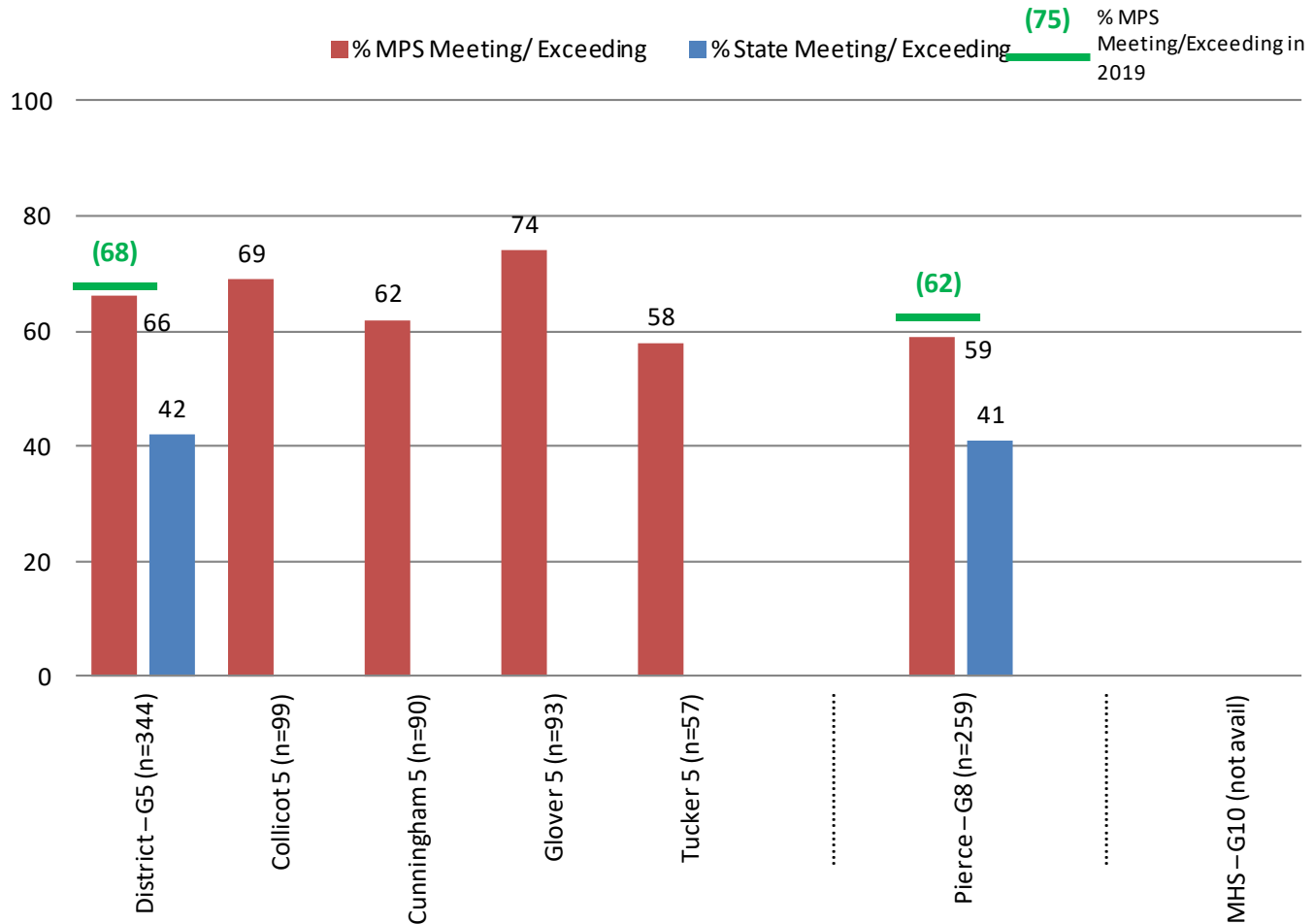
2021 District Math MCAS

2021: Percentage of MPS Students Meeting/Exceeding Expectations on Math MCAS G3-10



2021 District Science MCAS

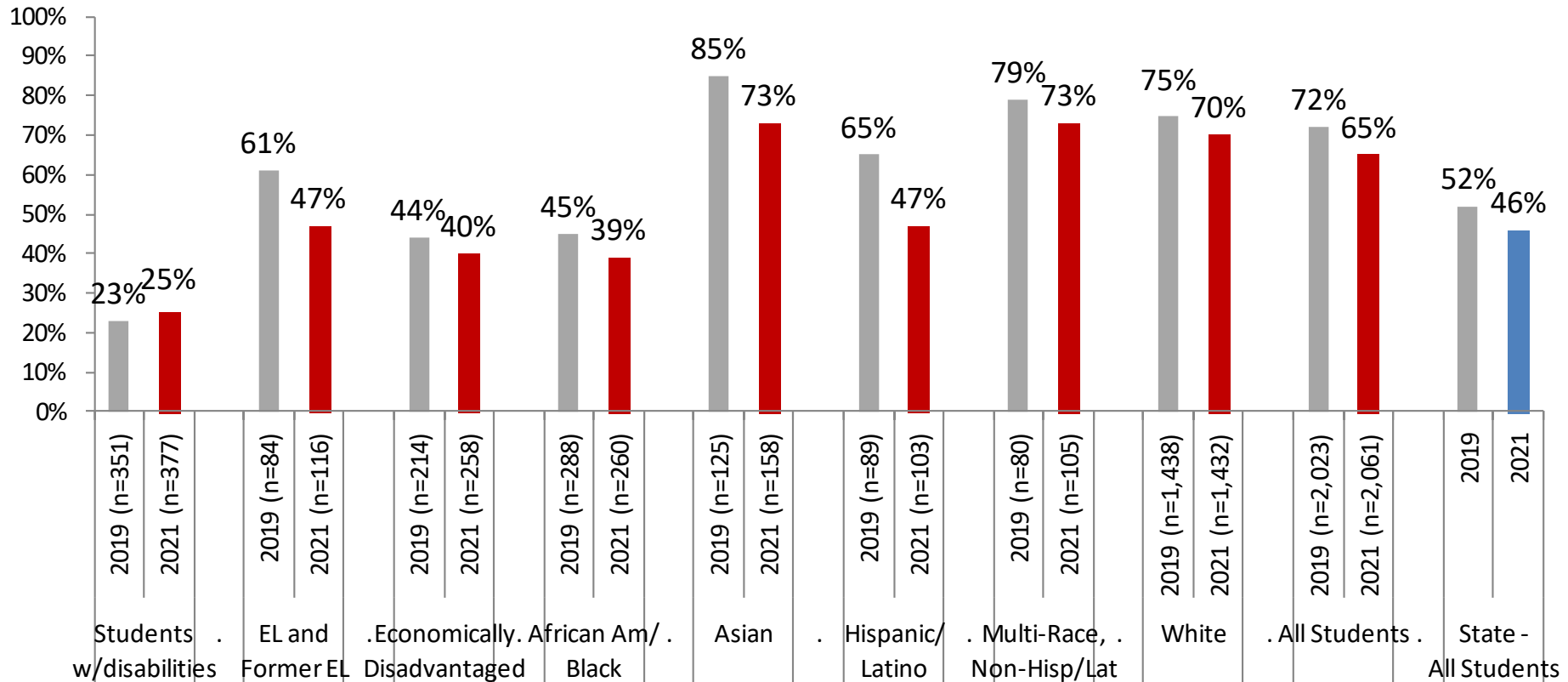
2021: Percentage of Students Meeting/Exceeding Expectations on Science MCAS G5 & G8



District G3-8 ELA MCAS by Subgroups

G3-8 ELA MCAS: % of Student Subgroups Meeting/Exceeding Expectations

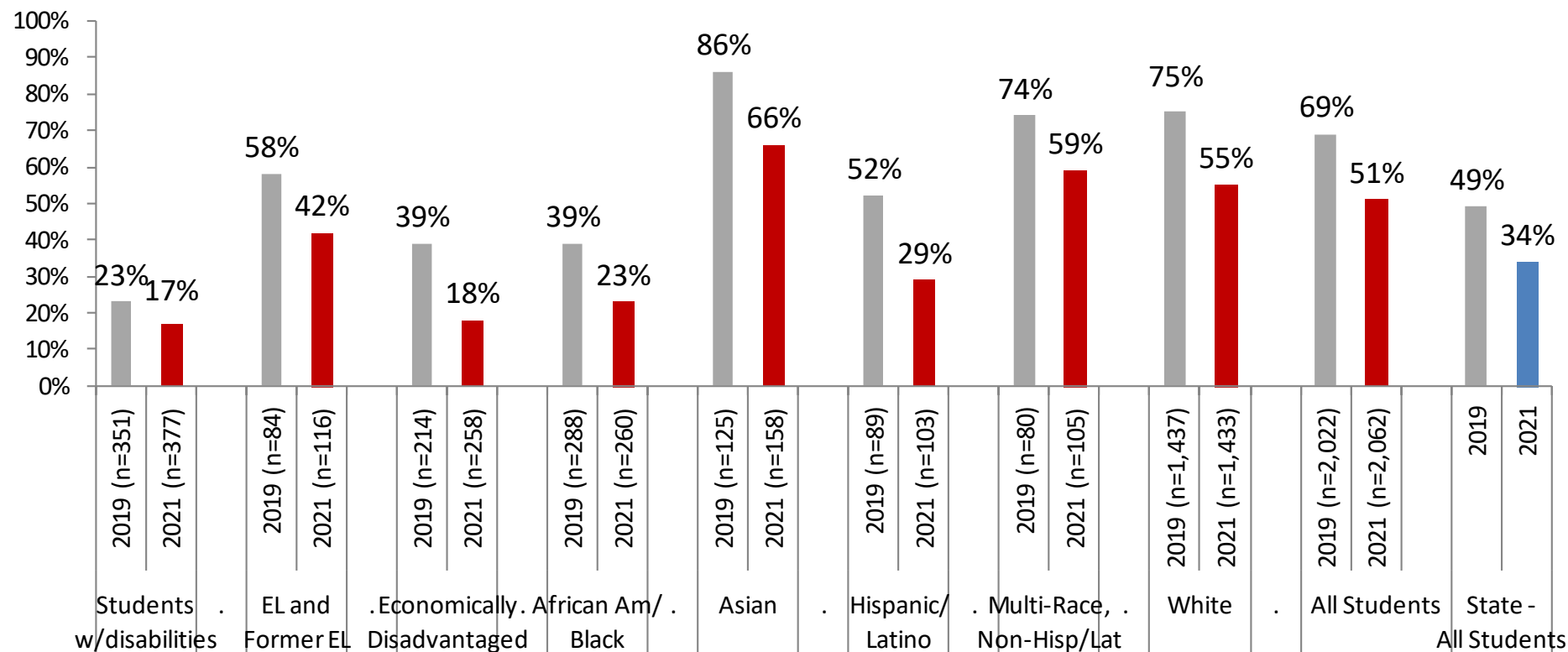
(% not available where n is 10 or less)



District G3-8 Math MCAS by Subgroups

G3-8 Math MCAS: % of Student Subgroups Meeting/Exceeding Expectations

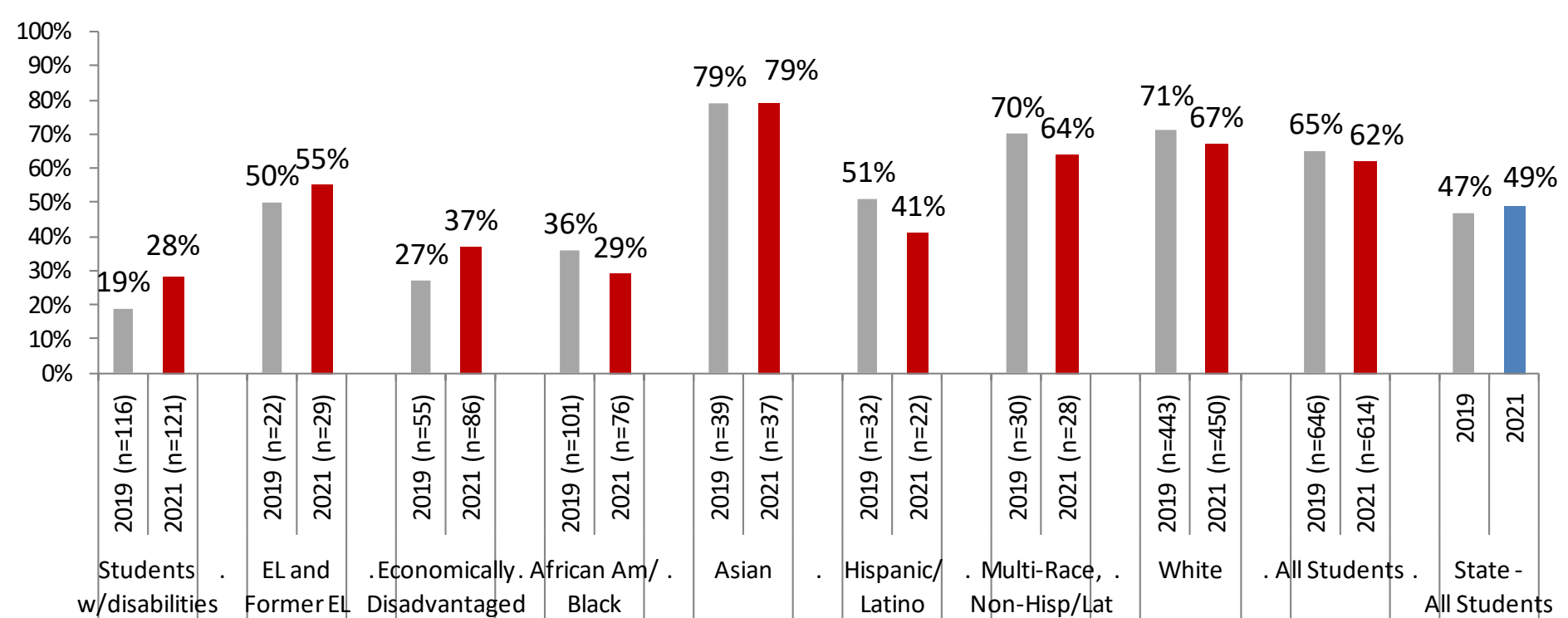
(% not available where n is 10 or less)



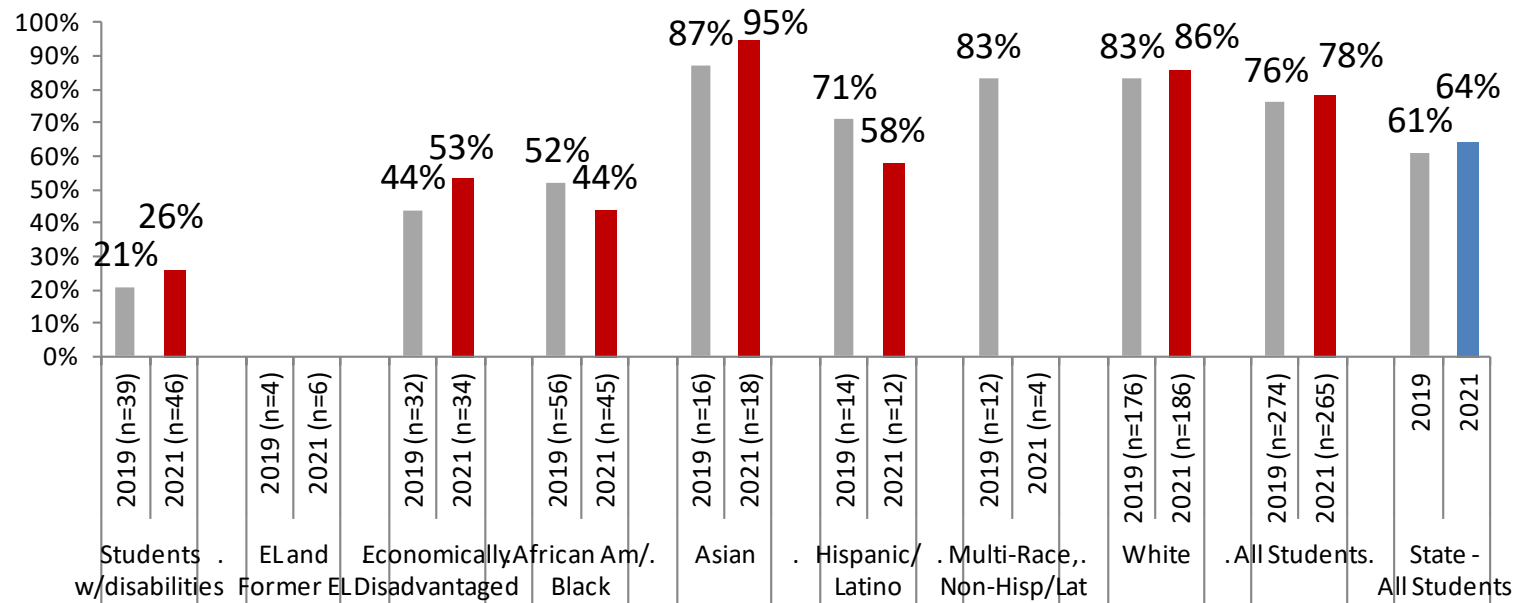
District G5 & 8 Science MCAS by Subgroups

G5 & 8 Science MCAS: % of Student Subgroups Meeting/Exceeding Expectations

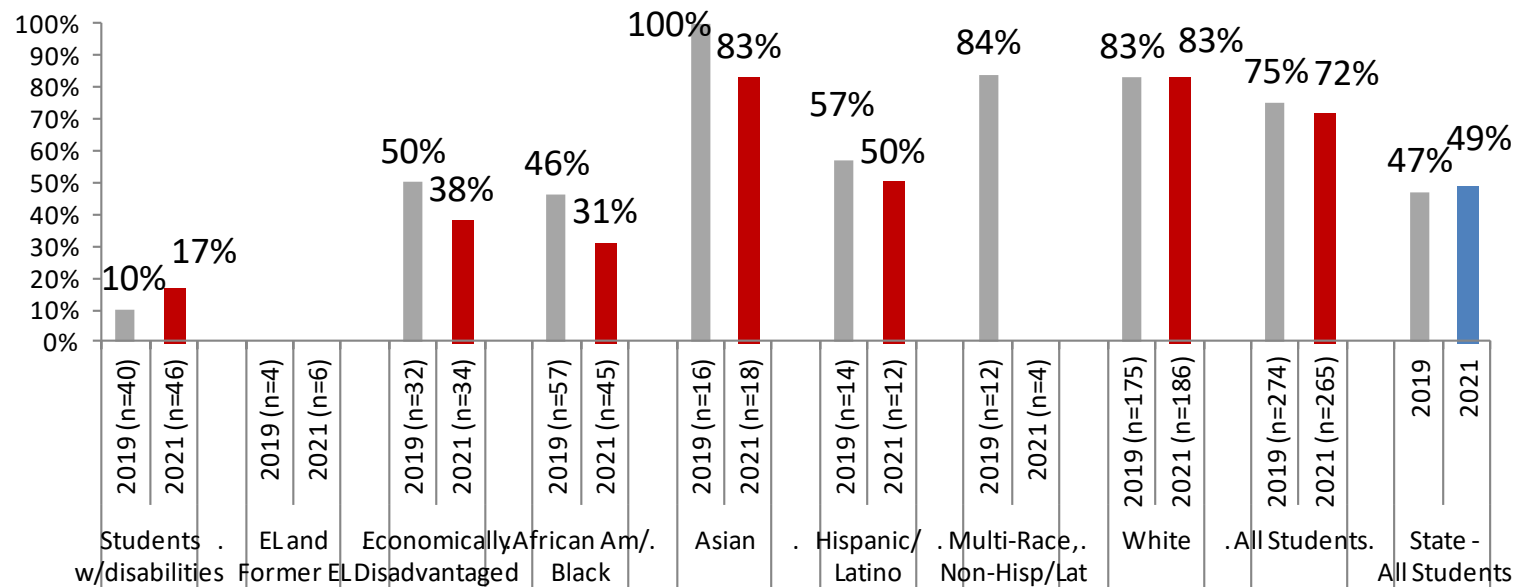
(% not available where n is 10 or less)



G10 MCAS by Subgroups



G10 ELA MCAS:
% of Student Subgroups Meeting/Exceeding Expectations
 (% not available where n is 10 or less; 2019 is first year of MCAS 2.0)



G10 Math MCAS:
% of Student Subgroups Meeting/Exceeding Expectations
 (% not available where n is 10 or less; 2019 is first year of MCAS 2.0)

NOTE: Grade 10 results for spring 2021 STE are not provided because students in the class of 2023 were not required to take the STE test.

Subgroups performance change between 2019 and 2021

| | G3-8 ELA | G3-8 Math | G5 & G8 Science | G10 ELA | G10 Math |
|-------------------------------|-------------|--------------|--------------------|------------|-------------|
| Students w/ disabilities | +2% | -6% | +9% | +5% | +7% |
| EL and former EL | -14% | -16% | +5% | n/a | n/a |
| Economically Disadvantaged | -4% | -21% | +10% | +9% | -12% |
| African Am/Black | -6% | -16% | -7% | -8% | -15% |
| Asian | -12% | -20% | 0 | +8% | -17% |
| Hispanic/Latino | -18% | -23% | -10% | -13% | -7% |
| Multi-Race | -6% | -15% | -6% | n/a | n/a |
| White | -5% | -20% | -4% | +3% | 0 |
| All Students | -7% | -18% | -3% | +2% | -3% |

MCAS Observations

- Overall, Math declined more than ELA, similar to state and national trends.
- There are still performance gaps between subgroups. Those subgroups experiencing the lowest outcomes include: Students with disabilities, Economically disadvantaged, African American/Black, English learners, and Hispanic/Latino students.
- Students with disabilities is the only subgroup that consistently improved (or declined the least) this past year across all grade levels and content in Milton.
- Statewide and similarly in Milton, growth scores decreased significantly due to the pandemic impeding the regular pattern of educational progress and growth. The state even adjusted their growth (SGP) calculation to account for the new reality.
 - Previously, there's 20% of students in each of the 5 growth categories statewide – from very low, low, moderate, high, and very high. Now, depending on grade level, there could be up to 50% of students in the very low growth categories and another 20% in the low growth category.
- We will continue to monitor MCAS data in the next few years to determine the extent of the pandemic's impact on student achievement.

**STANDARDIZED ASSESSMENT:
2020-21 ADVANCED PLACEMENT**



Advanced Placements (AP) – Highlights


- MHS offered a total of 21 AP courses. AP classes are open enrollment to all juniors and seniors. Even some of our sophomores have the opportunity to take classes.
- Close to 60% of the graduating senior class have experienced success in at least one AP course during their high school career where they scored at least a 3.
- In SY2020-21, 72% of **all AP students** received a qualifying score* of 3, 4 or 5. Although this is a decline from the previous year's rate of 88%, we have more students than ever taking AP courses and more exams taken.
- Opportunity and achievement gaps
 - Opportunity for all students to experience rigorous coursework is important, and the District will continue working to remove barriers to access and achievement.
 - African American students are not participating in AP classes at their proportion of the population.
 - More so than any other subgroups, African American students were most impacted by the pandemic school year, as shown by the steep decline in the percentage of qualifying exams by African American students.

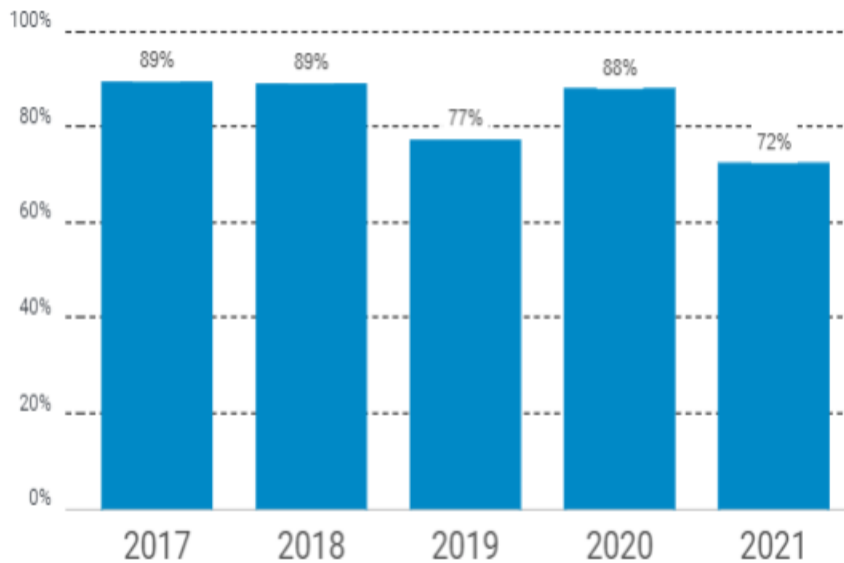
* A qualifying score means a student is qualified to receive college credit for that course/subject, although colleges make their own decisions about what scores they will accept for credit or placement.




Performance: Total AP Students with Scores 3+


Due to the pandemic, AP tests in 2020 were shortened from their full length versions and taken from home. In 2021, AP tests were reverted back to their full-length, but 50% of the exams was digital. MHS students took the AP tests in person in 2021, with the exception of very few students.

 % OF TOTAL AP STUDENTS WITH SCORES 3+



 SCHOOL SUMMARY

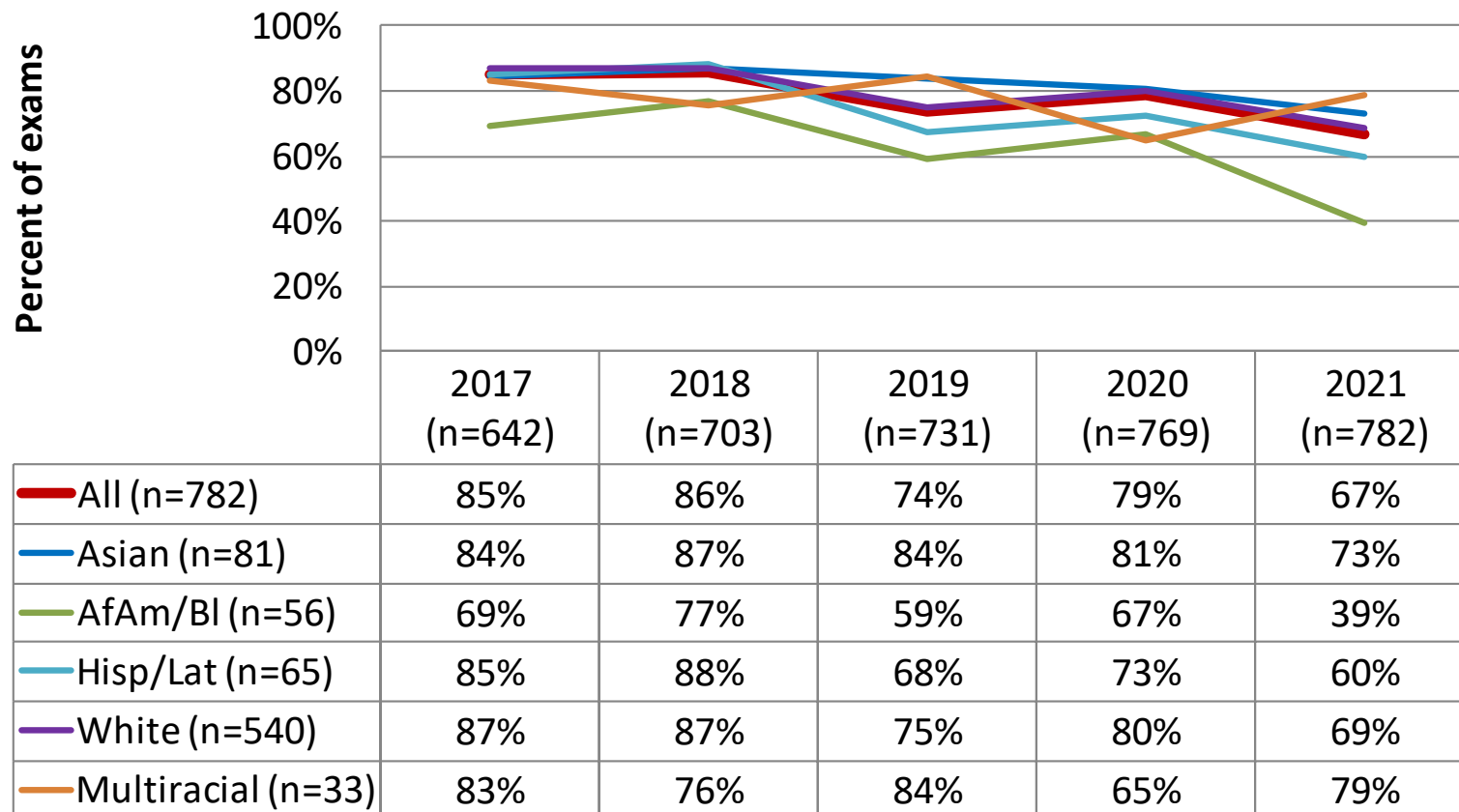
| | 2017 | 2018 | 2019 | 2020 | 2021 |
|---------------------------------------|-------|-------|-------|-------|-------|
| Total AP Students | 291 | 309 | 343 | 325 | 370 |
| Number of Exams | 642 | 703 | 731 | 769 | 782 |
| AP Students with Scores 3+ | 260 | 275 | 265 | 286 | 268 |
| % of Total AP Students with Scores 3+ | 89.35 | 89.00 | 77.26 | 88.00 | 72.43 |



Performance: Percent of Exams with Scores 3+ by Race

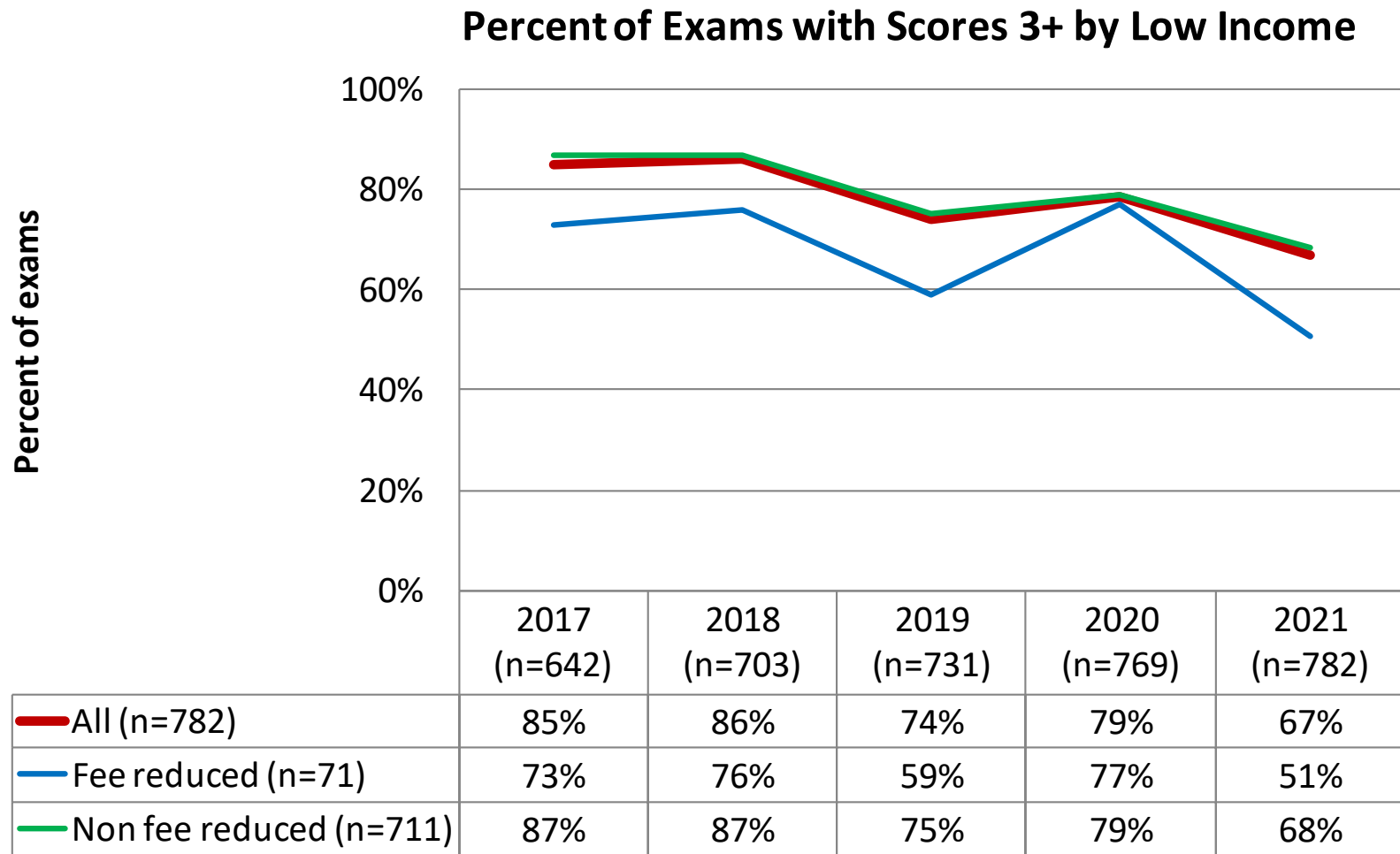
In 2021, the qualifying rate at the national level is 54% for all students, and 62% statewide. In Milton, we are at 67%.

Percent of Exams with Scores 3+ by Race





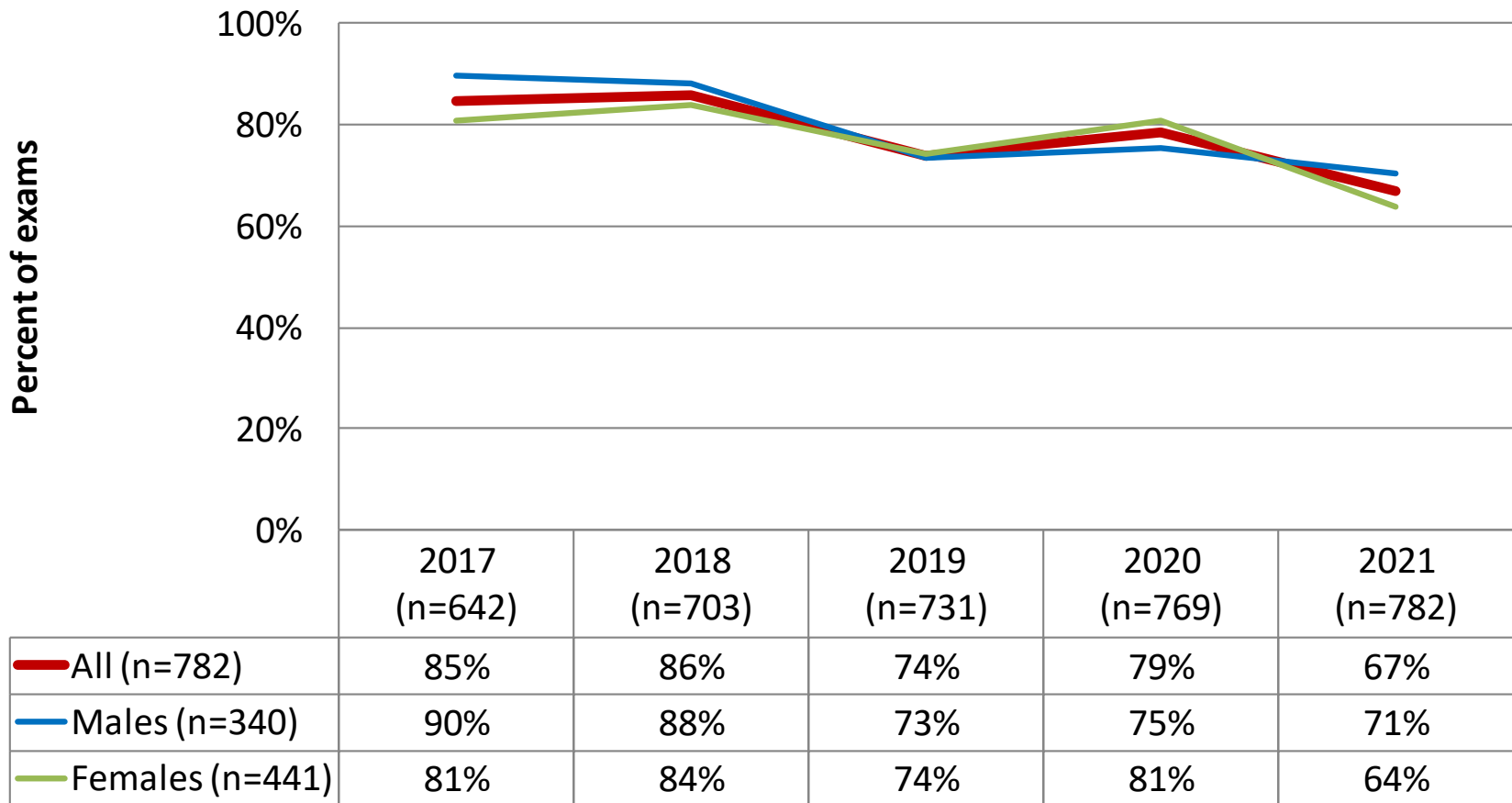
Performance: **Percent of Exams** with Scores 3+ by Low Income





Performance: Percent of Exams with Scores 3+ by Gender

Percent of Exams with Scores 3+ by Gender

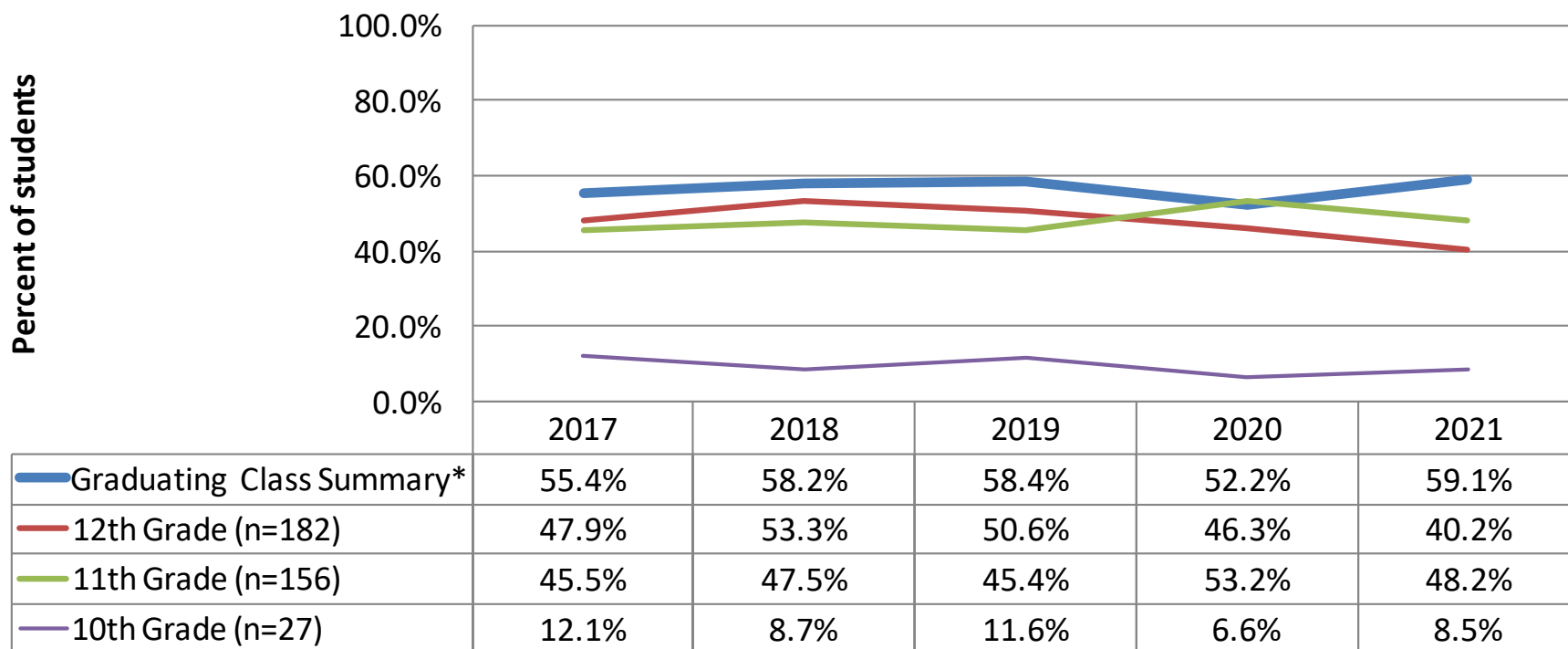




Performance: Percent of Students with Scores 3+ by Grade Level

This graph shows the proportion of the school's entire senior class who scored a 3 or higher on an AP Exam at any point during high school. Additionally, you can see what percentage of the school's entire tenth, eleventh, and twelfth grade classes took and scored a 3 or higher on at least one AP Exam in May 2021. In this calculation, students who score a 3 or higher on an AP Exam are counted only once, regardless of how many AP Exams they took and were successful in.

Percent of MHS students scoring a 3 or higher by grade



* Number of your school's seniors who scored 3 or higher on at least one AP Exam at any point during high school divided by the total number of your school's seniors.



Performance: Percent of Students with Scores 3+ by Grade Level

This chart shows the proportion of AP students who scored a 3 or higher on at least one AP Exam in May 2021. In this calculation, students who score a 3 or higher on an AP Exam are counted only once, regardless of how many AP Exams they took and were successful in.

| SY2020-21 | 10th grade | 11th grade | 12th grade |
|---|-------------------|-------------------|-------------------|
| # of students at MHS | 269 | 278 | 274 |
| # of students in AP courses | 27 | 157 | 182 |
| # of students with at least one qualifying score (3+) | 23 | 134 | 111 |
| % of AP students with at least one qualifying score | 85.2% | 85.4% | 61.0% |
| % of MHS students with at least one qualifying score | 8.6% | 48.2% | 40.5% |

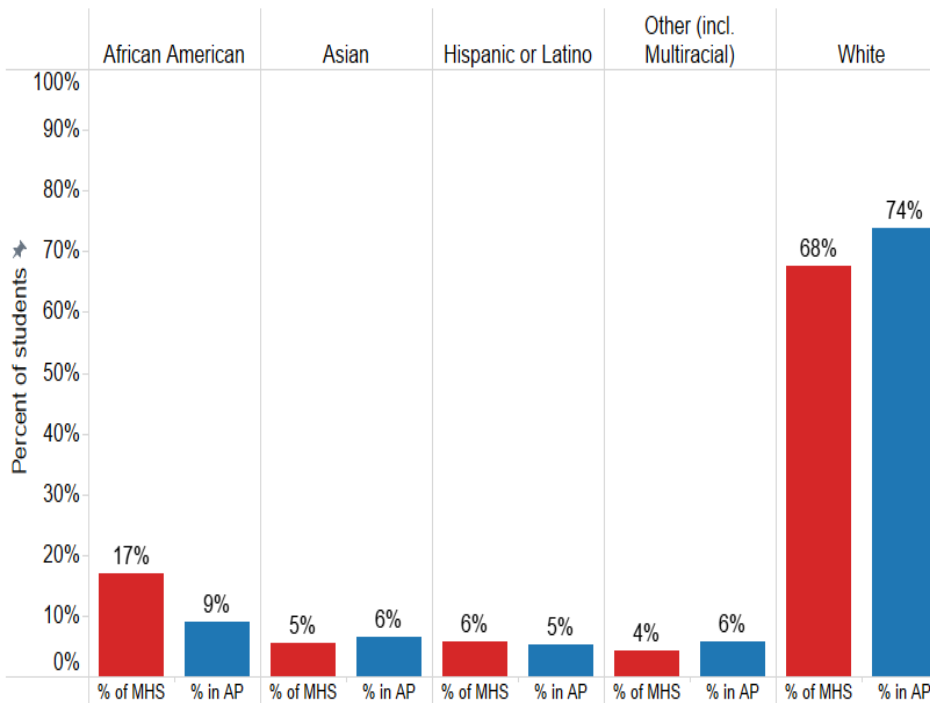


Grade 11 & 12

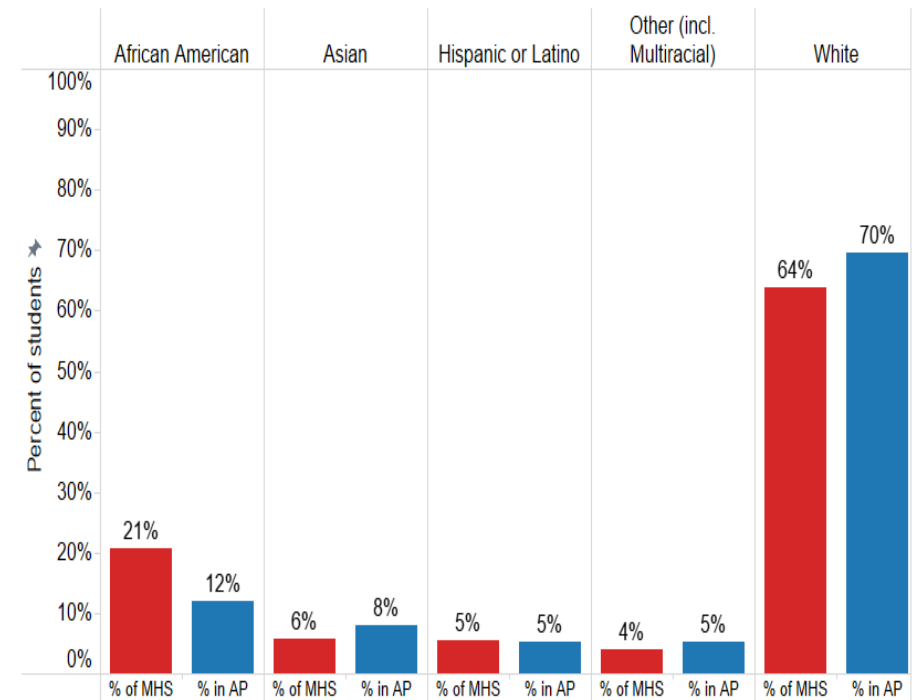
AP Participation by Race

The red bar represents a subgroup's share of the student population in this grade level. The blue bar represents the subgroup's share of the population that participated in AP testing. African American students are not participating in AP at the same rate as their share of the grade level population.

Grade 11: AP participation by race



Grade 12: AP participation by race



STANDARDIZED ASSESSMENT: CLASS OF 2021 SAT



SAT Highlights

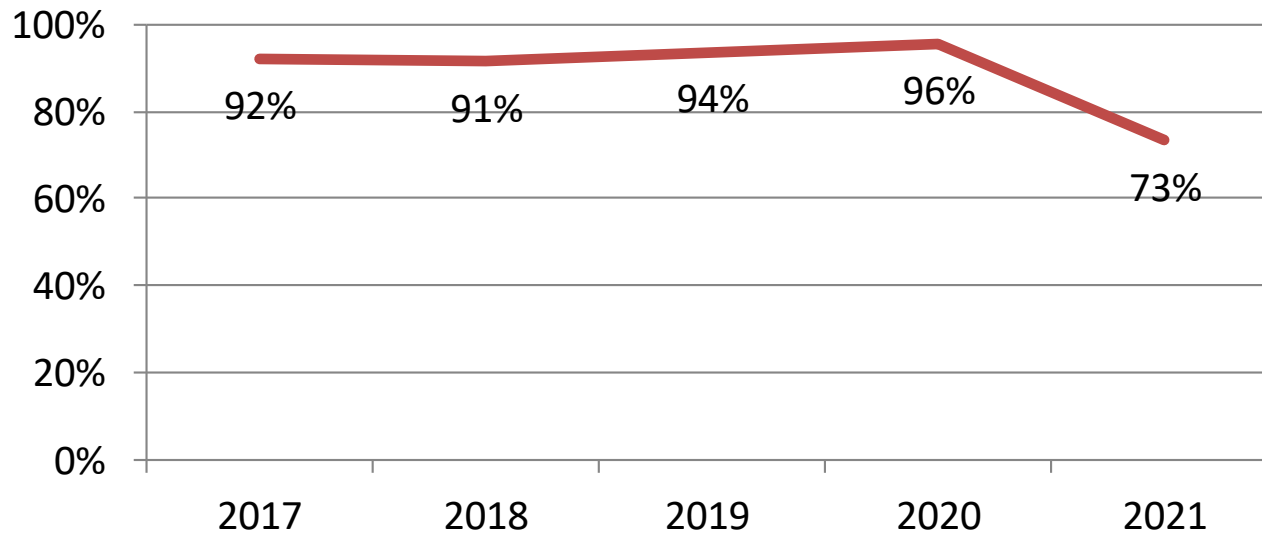
- In 2017, the College Board redesigned and implemented a **new suite of SAT assessments** aligned to research on what students need to be college and career ready.
- The College Board's **SAT College and Career Readiness Benchmarks** are the minimum SAT scores that studies show are necessary for students to be ready for college and career.
 - Based on actual student success in entry-level college courses.
 - Specifically, the benchmark score represents a 75% likelihood of a student achieving at least a “C” grade in a first-semester, credit-bearing college course in a related subject.
- **Overall college and career readiness is defined as achieving both of the benchmarks—Evidence-based Reading and Writing (ERW) and Math.**
- Whereas we usually have around 95% of our high school seniors taking the SAT, this past year, we only had 73% participating in the test due to the pandemic.
 - Testing centers were closed in Spring 2020, their junior year.
 - Many colleges did not require SAT's for the Class of 2021.
- For those students who did take the SAT, 75% of them met the SAT College and Career Readiness Benchmarks for Evidence-based Reading and Writing and Math.



Overall SAT Participation of Graduating Cohort

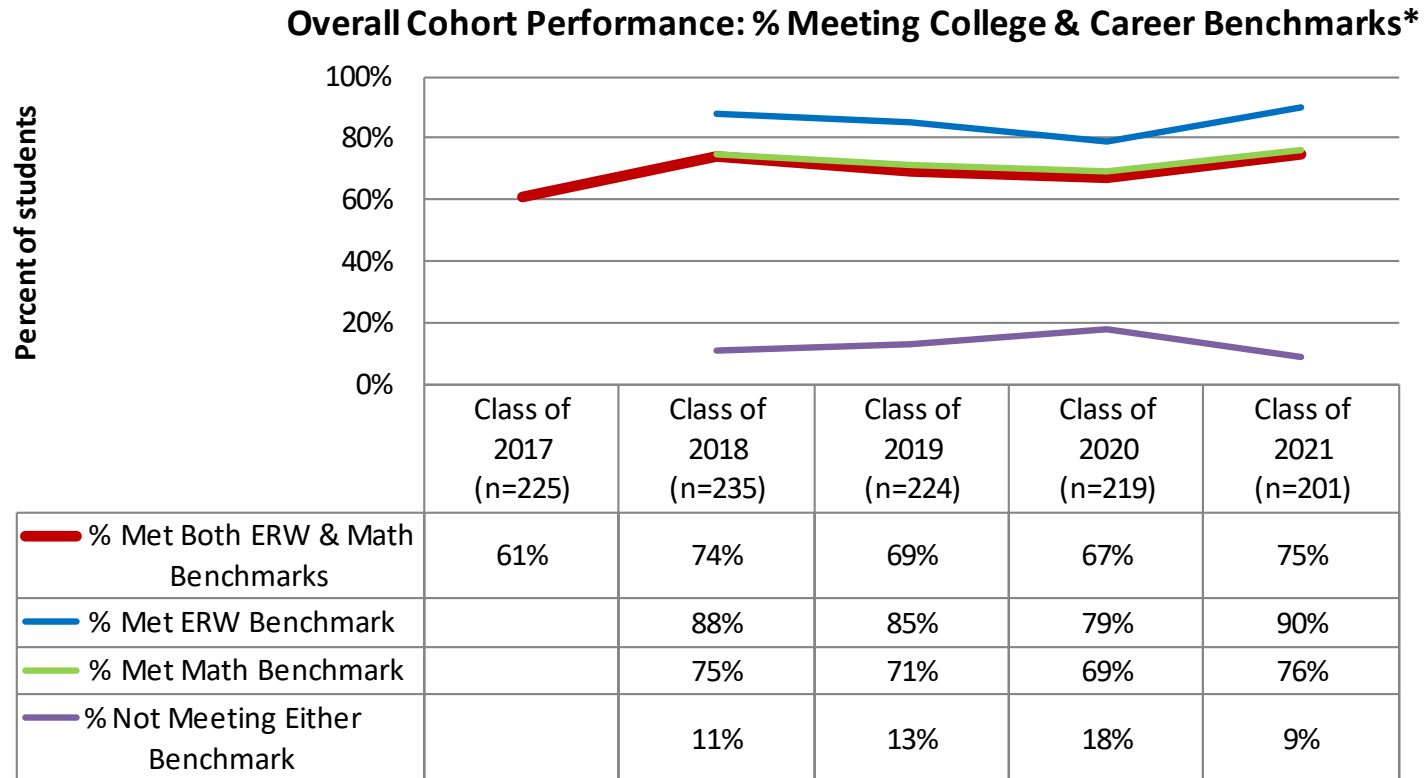
For the class of 2021, there were limited opportunities to take the SAT due to COVID. Test centers were closed for the entire spring of their junior year, and most places did not offer Saturday testing of their senior year. The high school was able to offer one in-school testing day for seniors. Most colleges did NOT require SATs for the class of 2021 and are continuing that practice.

2021 SAT Overall Participation Rate of Graduating Cohort





Overall SAT Performance of Graduating Cohort



* The College Board's SAT College and Career Readiness Benchmarks are the minimum SAT scores that studies show are necessary for students to be ready for college and career. Specifically, the benchmark score represents a 75% likelihood of a student achieving at least a "C" grade in a first-semester, credit-bearing college course in a related subject. Overall college and career readiness is defined as achieving both of the benchmarks – Evidence-based Reading and Writing (ERW) and Math. Performance in ERW is higher than Math for all students and subgroups.

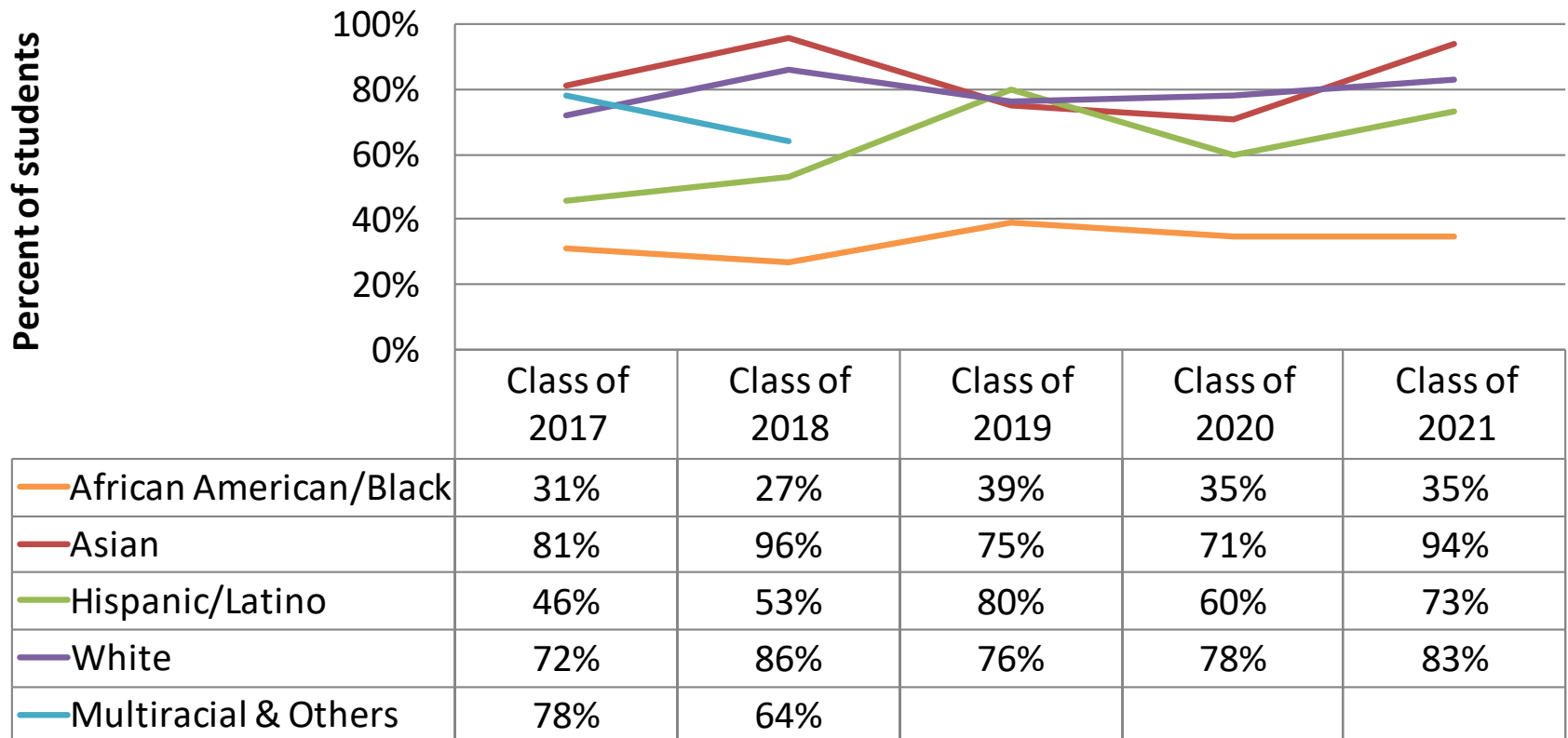
Note: Data for slide taken from 2021 SAT Cohort Final Report



Class of 2021 SAT: Performance by Race

For this administration of the SAT, all subgroups improved in their performance, except for African American students.

Percent Meeting College & Career Benchmarks by Race

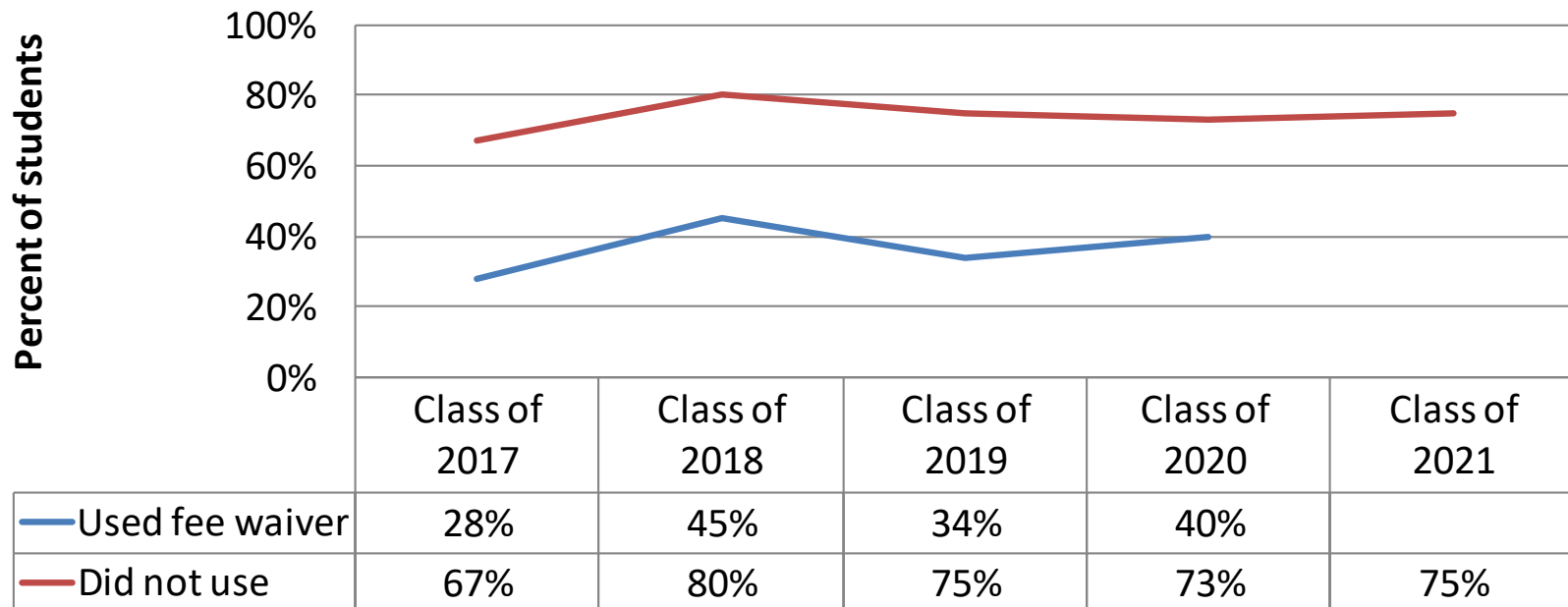




Class of 2021 SAT: Performance by Fee Waiver Status

The group that used fee waiver (a proxy for low-income in past years) has historically underperformed their counterpart. Only 2 students used fee waivers this year. Please note that, due to the high percentage of 2021 cohort students who took the SAT via School Day under a district or state contract, fee waiver usage should not be considered a representation of overall participation by low-income students.

**Percent Meeting College & Career Benchmarks by
Fee Waiver Status**

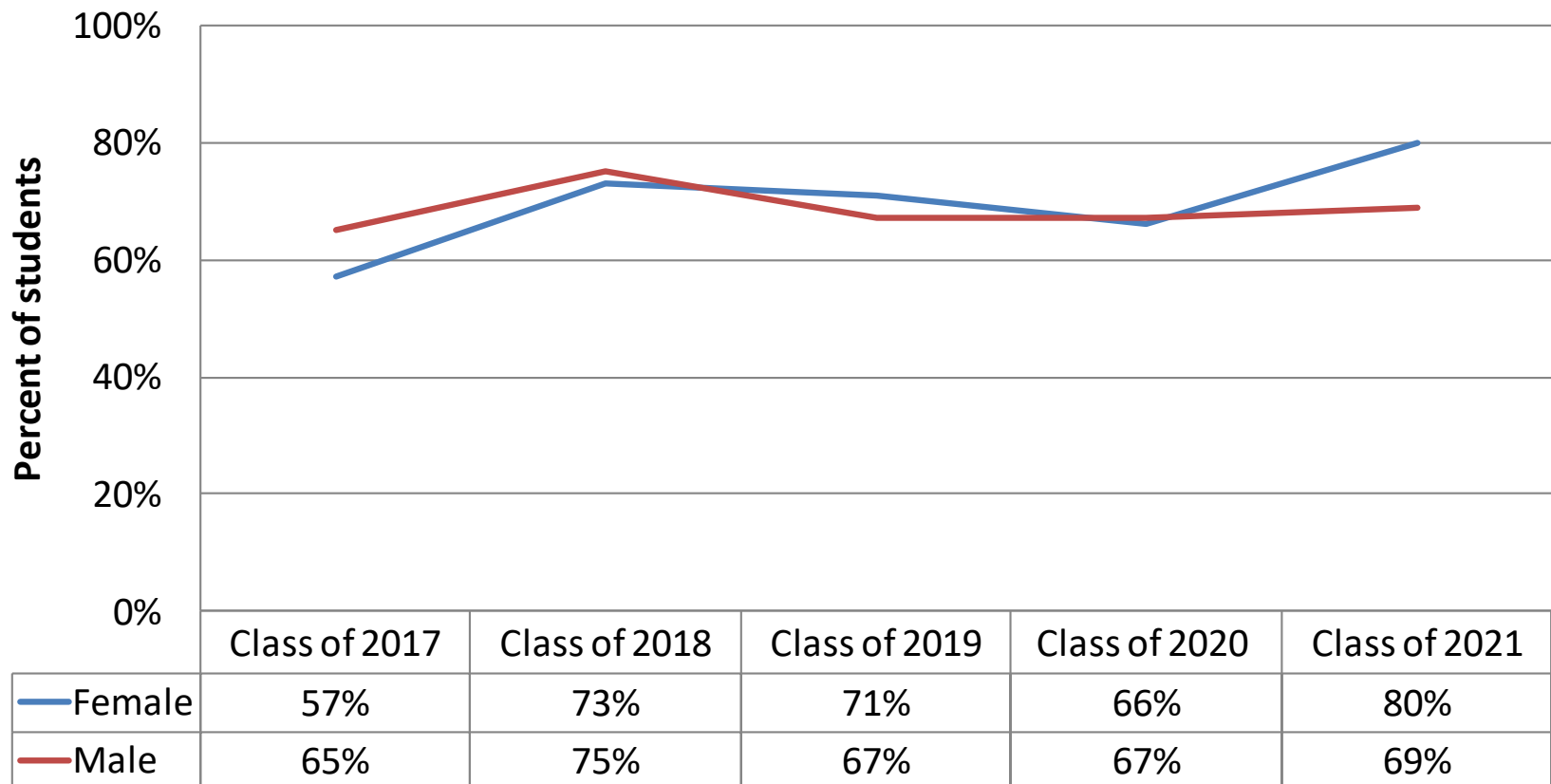




Class of 2021 SAT: Performance by Gender

For this administration of the SAT, we are seeing a wider gap between the performance of female and male students.

Percent Meeting College & Career Benchmarks by Gender



MONITORING UNFINISHED LEARNING

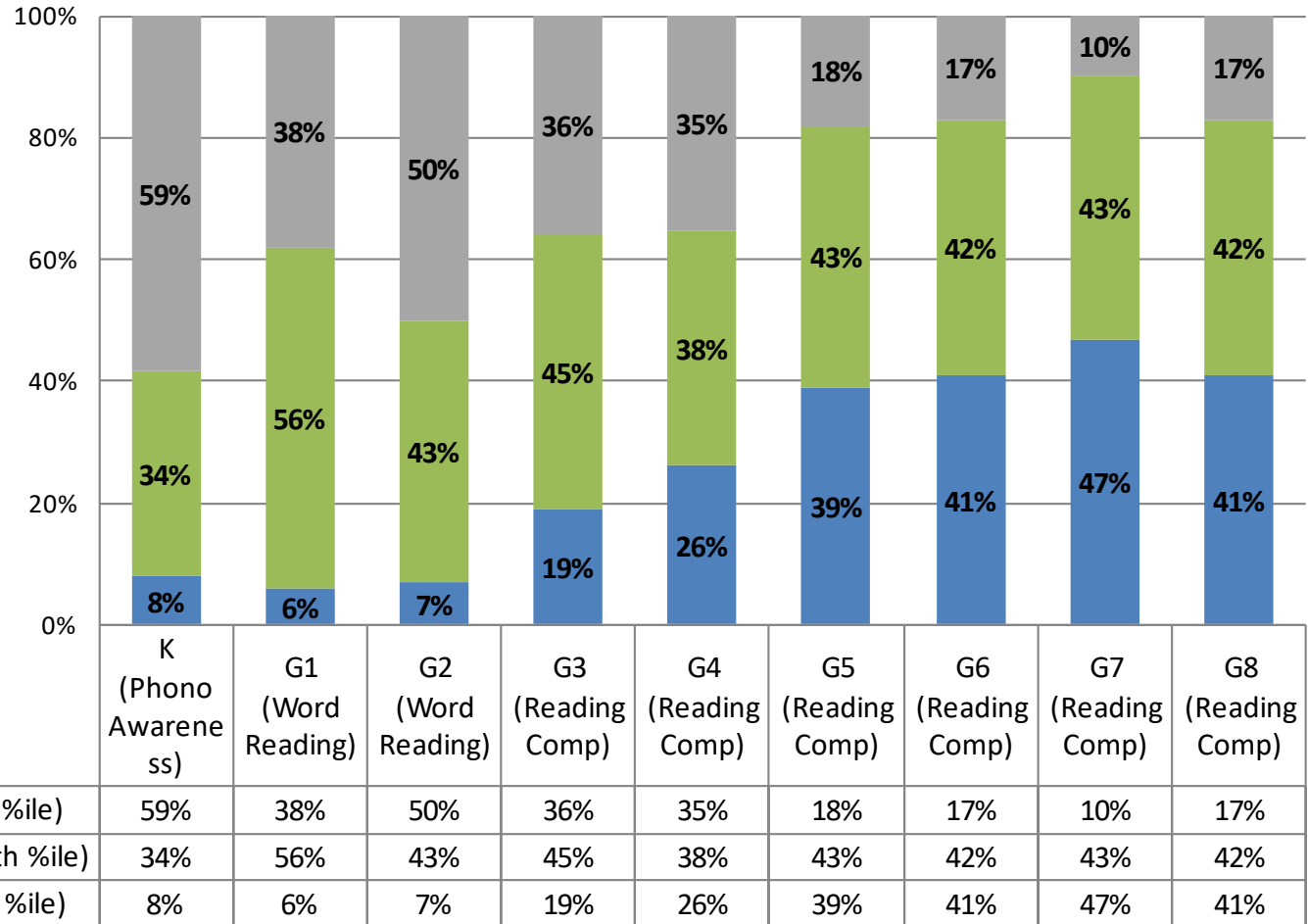


Context

- Lexia Rapid is a computer-adaptive literacy screener that provides data on grade-level skills to make instructional decisions for each student.
 - Piloted by the District in Spring 2019 to give us more information on students' literacy skills in K-8, irrespective of curriculum.
 - Although the screener has a handful of different subtests, for instructional “tiering” purposes, the Phonological Awareness subtest is used for grade K, Word Recognition is used for grades 1 & 2, and Reading Comprehension is used for grades 3 through 8.
- This assessment is one snapshot at a point in time. Teachers use this data in conjunction with other formative and curriculum-embedded assessments to determine students' progress in literacy.
 - It will be given by the District 3x this year – Fall, Winter, and Spring.
- Please note that while this screener helps us to measure and improve students' literacy skills, it doesn't necessarily have a direct correlation to the MCAS standards-based assessment, as they are different types of assessments.
- A subgroup analysis is given here for performance of grades 3-8 on the Reading Comprehension subtest. The pattern of achievement gaps mirrors that of the MCAS standardized assessment.
 - Students with disabilities, low income, English learners, African American/Black and Hispanic/Latino students are lagging behind their peers.

Grades K – 8 Lexia Fall Screener

Lexia Rapid, Fall 2021-22



G3-8 Lexia Reading Comp by Subgroups



Lexia Rapid ELA 2021-22 (Grades 3-8)

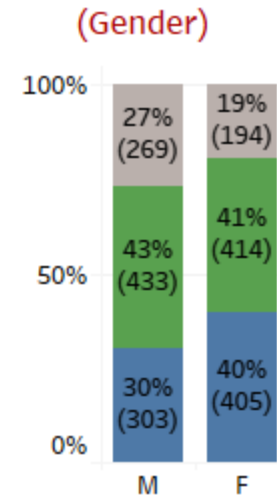
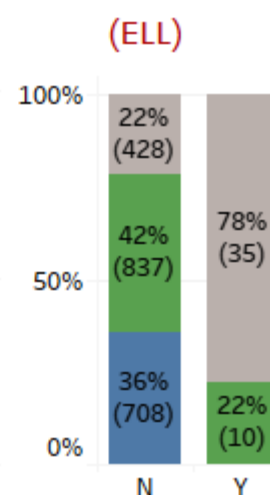
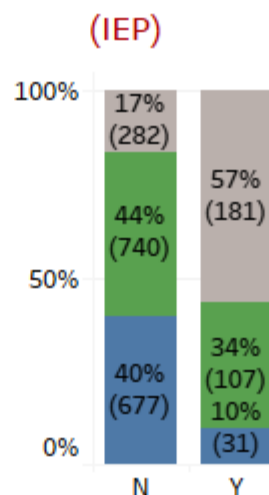
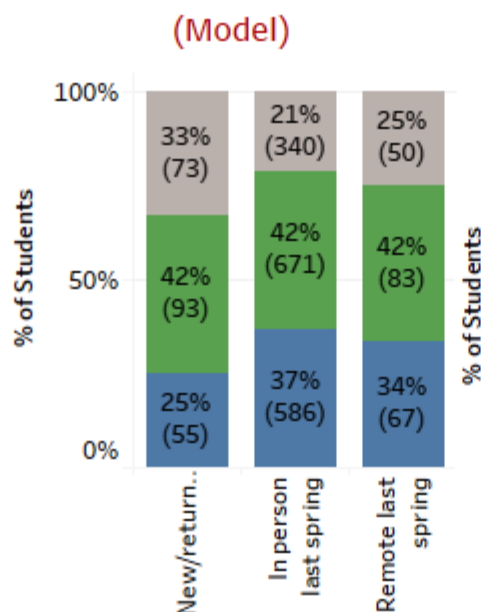
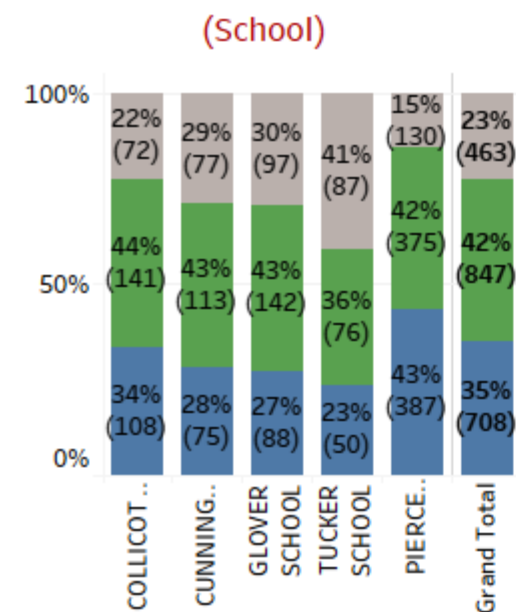
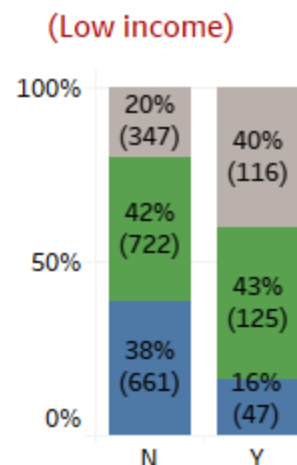
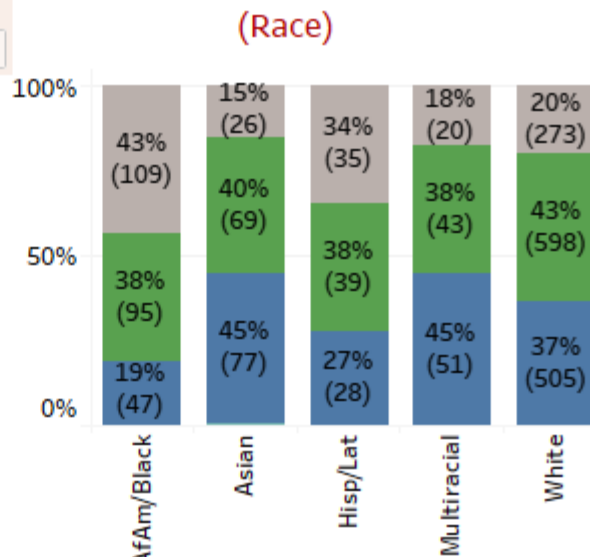
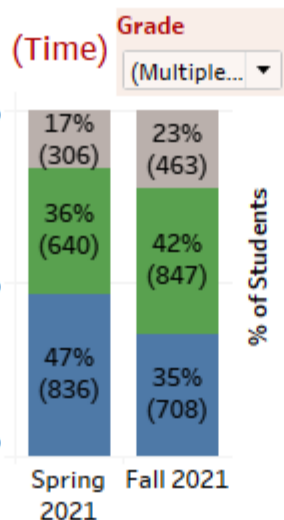
Choose Period
Fall 2021

Grade
(Multiple val...)

Reading Comp Percentile

- Below grade level (<25th %ile)
- On grade level (25th - 75th %ile)
- Above grade level (>75th %ile)

Note: Small sample sizes of subgroups can have outsized impact on the percentages.





Context

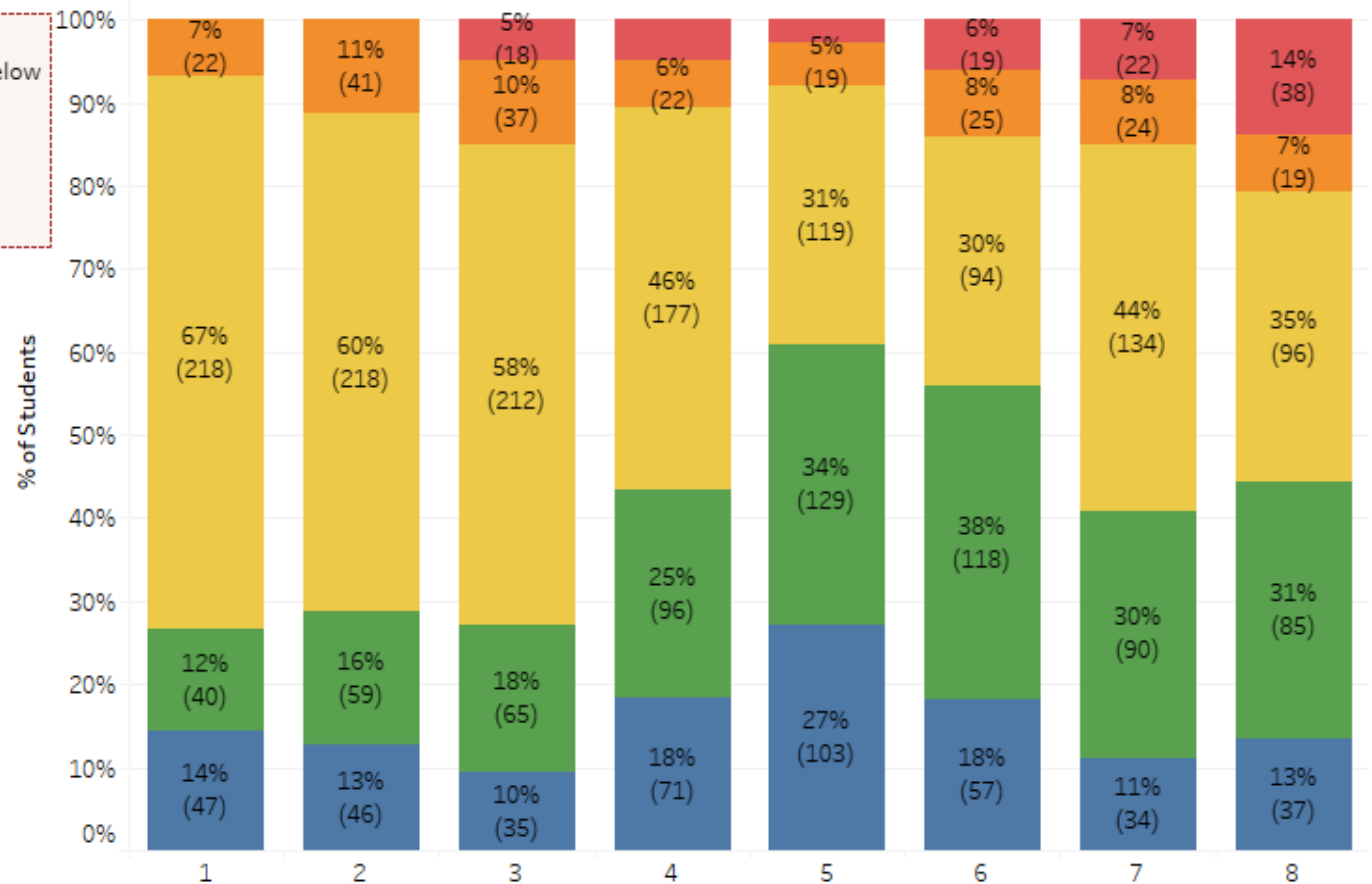
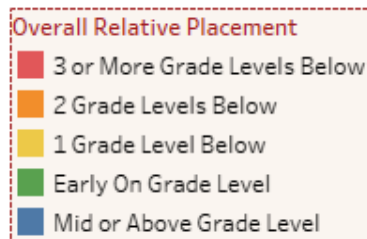
- i-Ready is a computer-adaptive math screener and personalized instructional program that uses interactive, engaging lessons to support each student's growth and path toward grade level proficiency.
 - Piloted by the District in Spring 2021 to give us more information on students' grade level math skills in K-8.
 - As this is a new assessment, we are still learning how best to use the data to support students.
- This assessment is one snapshot at a point in time. Teachers use this data in conjunction with other formative and curriculum-embedded assessments to determine students' progress in math.
 - It is not unexpected for the fall assessment to have lower placement as students are only starting to delve into grade-level material.
 - It will be given by the District 3x this year – Fall, Winter, and Spring.
- i-Ready Diagnostic has been found to have a high correlation to MCAS performance, at least pre-pandemic.
- A subgroup analysis for grades 1-8 shows a similar pattern of achievement gaps reflecting the historical gaps on other standardized assessments, such as the MCAS.
 - Students with disabilities, low income, English learners, African American/Black and Hispanic/Latino students are lagging behind their peers.

Grades 1 – 8 i-Ready Fall Screener



i-Ready Math
2021-22
Fall Assessment

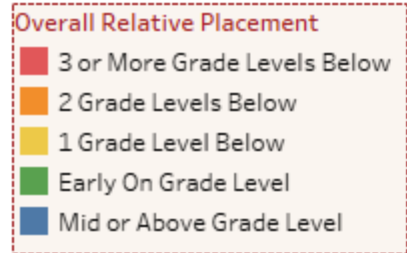
District by Grade



Grades 1 – 8 i-Ready Fall Screener by Subgroups



i-Ready Math
2021-22
Fall Assessment



Note: Small sample sizes of subgroups can have outsized impact on the percentages.



SEL



SEL Screener Update

- At this point, the District has started to administer the Intellispark/SEL screeners to students in K-12.
 - Screening window is between Dec. 7th and Dec. 17th. The goal is to collect all the data before the holiday break.
 - Students in grades 6-12 will receive the screeners via emails, and all students (except opt-outs) will have an opportunity to complete them during a block scheduled by the school.
 - Students in grades K-5 will access the screener via their Clever Portal during a class period.
- As stated in the Superintendent's communication to families, the purpose of these quick-check SEL screeners is to **get a pulse of students' SEL skills** to inform curriculum planning and support.
 - The questions on the screeners align with CASEL's 5 areas of competence: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.
 - These screeners **are not** designed to give a diagnosis on behavioral issues or mental health.
 - Not a progress monitoring tool
- We partnered with Intellispark last spring to develop and pilot the elementary screeners that our students will be taking.
 - We will continue to partner with Intellispark to develop aggregate summary reports for the elementary cohort.
- The goal is to implement a K-12 SEL screening system that can give us district-wide data on how students are doing on key SEL competencies to plan for curriculum and support.



What Now?

- To address Unfinished Learning, the District is taking the following steps:
 - Utilizing DESE's recommended Acceleration Framework of teaching to grade level standards and providing scaffolded supports
 - Revising the Strategic Plan with a focus on Safe and Supportive Schools and Learning Environments, Equity in Learning and Personalized Learning
 - Analyzing student academic data and SEL data to identify student needs
 - Conducting curriculum reviews
- General Education Teachers, Special Education Teachers, Reading Specialists and Early Learning Coaches will provide targeted instruction for students not meeting or partially meeting expectations on MCAs and scoring below grade level on screening and diagnostic assessments.
- Professional Development for Educators includes Data Analysis and Planning Instruction, Using Resources for Accelerated Learning, Personalized Learning and Restorative Justice.



What's Next?

Proposed Additional Supports:

- Adjustment Counselors
- BCBA
- Special Education Chair
- Math Interventionist
- Reading Specialist
- Kindergarten Aides
- PreK Coordinator
- World Language Teacher
- Exploratory Teacher
- Guidance Counselor/504 Coordinator
- Career Technology Teacher
- Math Teachers
- Science Teacher
- Restorative Justice Coach