

What End of Year Data Tells Us About MMSD in 2021-22

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Summary of Findings

1. District-level trends obscure important variation in results at particular schools
2. The quality and reliability of the data collected reflects the challenges of the pandemic
3. The focus on literacy may have helped buoy proficiency results amid pandemic challenges, while mathematics has lagged
4. In the first fully reopened school year since COVID-19, students reported positive, but somewhat nuanced, feelings of belonging and safety at school
5. The 2021-22 school year stressed MMSD staff, particularly teachers.
6. Post-pandemic, MMSD's equity imperative persists

Context & Purpose

The 2021-22 school year marked a return for all MMSD schools to full-year, in-person learning after two school years disrupted by the COVID-19 pandemic. With the onset of COVID-19 in March 2020, schools around the country including MMSD closed their doors and pivoted to virtual instruction. The unprecedented shift to virtual classrooms was not the only challenge faced by students, families, and staff during this period: many got ill, faced financial hardship, lost childcare, grieved loved ones, and found scarcity in the resources needed to thrive during the pandemic. We know that these hardships were not distributed equally, but rather were concentrated most heavily on the individuals underprivileged by existing systems. In 2021-22, the MMSD community came together to return to in-person schooling, face new challenges and work towards our vision for all scholars.

This report summarizes learnings gleaned from analyses of 2021-22 end-of-year data led by the MMSD Research & Innovation (R&I) department.. We recognize that there are many possible, valid interpretations and stories of the 2021-22 school year, of which this analysis is merely one. The findings contained in this report reflect the perspective of the R&I team and those with whom the team worked to analyze data throughout the spring of 2021-22.

Data and Methods

There are three main types of data summarized in MMSD end of year (EOY) reporting: 1) MMSD administrative data collected through district Student Information Systems (SIS); 2) summative assessment data from external vendors; and 3) novel data collected through district climate surveys.

To analyze the data, the R&I team planned and executed structured time to review the data in partnership with programmatic departments, called Data Dances. A list of the Data Dances is available in the [EOY Data Review](#) outline. From the Data Dances, R&I team members summarized notes, highlighted [key findings](#), and built an overarching data visualization tool from which to reference. This white paper reports reflects an aggregation and summary of key themes that emerged across multiple datasets.

Guiding Questions

This section outlines the key questions we will attempt to answer in the narrative:

- *To what extent and in what areas do we see variation in the district? Do trends in data tend to hold across the district?*
- *What does the data itself tell us about the experiences in MMSD this year? How confident are we that the data tells a reliable story?*
- *What can we deduce from MMSD's results in the areas of student achievement, culture & climate, and staff experiences, relative to prior years and to current nationwide trends?*

Findings

This section highlights themes emerging from analysis across the full EOY dataset, supported by data:

Finding 1: District-level trends obscure important variation in results at particular schools

MMSD comprises 52 unique school sites, varying in size, structure and student populations. As a result, there is wide variation in the extent to which individual schools' data hews to the average trends of the district, and looking simply at the district overall averages may not tell the full story. For example, while the district's high school completion rates have had slight, steady increases over the past five years, looking at the by-school variation reveals that this trend is not distributed equally throughout the district. Notably, East High School's high school completion rates (particularly for low income, Black, and Hispanic/Latinx students) indicate a particularly strong, positive trend not observed at the other comprehensive high

schools. These outlier results in high school completion rates merit a closer look to identify practices contributing to increased graduation for possible replication and spread in other district contexts. Looking at student literacy achievement data from the Forward assessment, we also see extreme variation in proficiency by site, with ranges from 14% proficient to 76% proficient at elementary level and 19% to 65% in middle school.

One major dataset-- the climate survey-- depended on site-based practices to administer the survey and collect responses. The survey was administered at vastly different rates throughout the district, ranging from 2% to 95%, meaning that some schools are disproportionately represented in the overall district results while some schools are barely represented at all. For these reasons, analyzing data at the school level is a critical technique for understanding local stories and the extent to which they may, or may not, be captured in district-level trends.

Finding 2: The quality and reliability of the data collected reflects the challenges of the pandemic

COVID-19 created disruptions to all levels of the educational system and the students, families, and staff members who interact with it. The disruptions wrought by the pandemic also had an impact on the quality of data collected during this period and the ability of researchers to make reliable comparisons or inferences. For example, summative achievement tests typically administered at the end of the school year (e.g. Forward, ACT/Aspire) did not occur in 2019-20. In 2020-21, when many schools and students had not yet returned to in-person instruction, student participation rates were substantially lower and disproportionately representative of students who had historically performed high on prior achievement tests, resulting in average scores that likely inflated the outcome that might have been observed if more typical samples of students had participated in the test. While participation rates for state-mandated tests have recovered in 2021-22 to near pre-pandemic levels, the data from the prior two years makes it difficult to confidently isolate and interpret trends.

Other measures requiring standardized data collection practices also took a hit during the COVID pandemic. District-wide, the total number of behavior events was about 27,000, which constitutes a reduction of more than 50% than behavior events recorded annually before the pandemic. This undercount may in reality be more drastic than observed, as anecdotal data from school staff in MMSD and throughout the country detail challenges in students' mental health and ability to adapt to school routines after a year of virtual instruction.

Finding 3: The focus on literacy may have helped buoy proficiency results amid pandemic challenges, while mathematics has lagged

Despite the challenges associated with incomplete achievement data from the COVID-19 pandemic, imprecise analyses of proficiency results suggest differential experiences in the content areas of reading and of mathematics, respectively. Looking at Forward ELA and ACT/Aspire Reading subtest scores, results in 2021-22 decreased from those in 2020-21, but participation differences likely explain the differences in scores. Taking a longer view, ELA proficiency results appear to have held steady or even improved from pre-COVID years, suggesting that whatever “learning loss” that may have occurred during the pandemic might have been recovered.

Mathematics results tell a different story. The 2021-22 Forward results show mathematics proficiency in a decline since the start of the pandemic. In 2018-19, mathematics proficiency rates were 45% for elementary and 34% for middle, but dropped to 40% and 31%, in 2021-22. In addition, at both elementary and middle school, the percentage of students scoring Below Basic on Forward Math (the lowest band) increased sharply after the pandemic began and persists despite slight increases this year. This discouraging trend in mathematics also holds at the high school level. The 2021-22 results on the combined ACT/Aspire metric show rates of College Readiness for Reading at 41%, comparable to rates around 42% and 44% in 2018-19 and 2017-18, respectively; for Math, however, the past year’s results (34%) are much lower than what was observed pre-COVID (43% in both 2017-18 and 2018-19).

These results align to national trends and research evidence and merit further investigation.

Finding 3: In the first fully reopened school year since COVID-19, students reported positive, but somewhat nuanced, feelings of belonging and safety at school

While not every school building had a high response rate, the over half of students who did respond to the survey reported fairly high rates of belonging (74%) and safety (80%) overall. Analyses of pre-COVID (2018-19) results show student rates for belonging around 62% positive and 22% neutral and for safety around 62% positive and 21% neutral, suggesting that the results observed in 2021-22 are likely within MMSD’s normal expected range for these questions. Reengaging

students was a top priority as the 2021-22 school year began, and student climate results provide some evidence that these efforts may have been successful.

New questions added to the 2021-22 student climate survey allow for deeper and more nuanced understanding of aspects of student experience contributing to belonging and safety. Notably, there was incongruence in how students reported feeling about their relationships with staff versus their relationships with other students. For example, the percentage of students who agreed *"There is at least one teacher or other adult at this school who really wants me to do well"* was high, in the 90%*s*, across student demographic groups. Meanwhile, only 49% of students overall agreed that *"Most students in my school try to understand how other students think and feel."* In addition, there was dissonance in how students described their own engagement with the instructional content delivered at school; overall, 88% of students agreed *"I want to learn as much as I can"* but only 69% agreed *"I am interested in what I am learning."* [emphasis added] These areas merit further investigation as the district heads into the 2022-23 school year in order to move the key levers of belonging and safety.

Finding 4: The 2021-22 school year stressed MMSD staff, particularly teachers.

In line with national trends, data from MMSD indicates that the past school year was extremely challenging for teachers and other school-based staff. Overall, respondents to the staff climate survey reported feelings of safety at work (65%) and enjoyment of work (64%) at rates substantially outside of the range observed in pre-COVID years. (Although the instruments are not perfectly equivalent, 76% of staff reported enjoying work in 2018-19 while 9% were neutral for this question, and 74% said they feel safe at work, with 9% neutral.) The 2021-22 ratings on these questions were particularly low for staff in the teacher bargaining unit.

In addition, staff retention metrics show that the district is retaining fewer staff and employing fewer staff overall than prior years, so the district's staff retention rate of 80% may actually be inflated due to overall lower employment. Over each of the last three years of available data, the staff retention has decreased, from 87% in 2019-20 to 80% in 2021-22. The average tenure in the district, when weighted to account for the total number of staff, has also declined by almost a year of employment.

A critical focus area in staffing-- increasing the number of staff of color who are classroom teachers-- also seems to be an area of challenge. The percentage of

MMSD teachers of color (15%) in 2021-22 does represent a one percentage point increase from before the pandemic (2018-19). However, the actual *number* of teachers of color decreased over this same period (from 279 to 269); thus, the increase in percentage is due to a smaller number of teachers overall.

Finding 5: Post-pandemic, MMSD’s equity imperative persists

MMSD’s persistent challenges in serving students of color equitably, particularly Black students, is as evident in the post-pandemic data as it was before COVID-19. The inequitable experiences in MMSD schools for Black students show up in lower proficiency scores across grade levels and assessments, from PALS in 4K to ACT and high school graduation. When including Black students who also identify as another race/ethnicity in addition to Black, as in the Goal 3 definition, these rates are slightly higher, but still lag behind those of other demographic groups.

In addition to Goal 1 and Goal 3 achievement results, the voices of students and their families in the culture and climate data provides further evidence of continued inequitable experiences of the MMSD system. While 74% of student respondents overall reported feeling a positive sense of belonging at school, only 62% of black student respondents agreed. Likewise, families of Black students who took the family climate survey had low rates of positivity. Black students reported feeling safe at similar rates to non-Black students, but their family members gave responses that were about 12 percentage points lower than the district average (64% compared to 76%). Fifty-nine percent of Black family respondents agreed with *“I feel like a part of the school community,”* the lowest of any group, and about 7 percentage points lower than the district overall (66%).