



From: Adam Larsen, Assistant Superintendent

To: Board of Education

Cc: Thomas Mahoney, Superintendent

Re: December 2020 Board Report

Learning Loss

In October, we began examining how much learning loss was experienced during the time that all students were remote learning. It was clear from that analysis that our students in the middle elementary grades had some regression in mathematics. This appears to be consistent with national trends.

Another trend that has emerged is how the COVID emergency has widened the achievement gap between students of color and those from economically disadvantaged households. While our student population is not very ethnically diverse, our free/reduced lunch numbers are high enough to provide an opportunity to compare these groups. One of the more common questions asked in education is, “Does _____ have an effect on student achievement/social-emotional-learning/other outcomes?” The answer is almost always yes, but the more interesting question is not, “Does it?” but instead, “How does it?” or, “For whom does it?” Often, for a change in process, an event, a type of adversity, the impact that it has on student outcomes is not felt uniformly across diverse groups of students. These are important questions, and with good datasets, we can answer them.

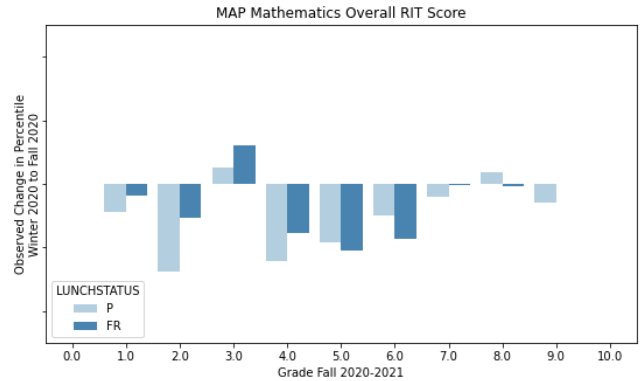
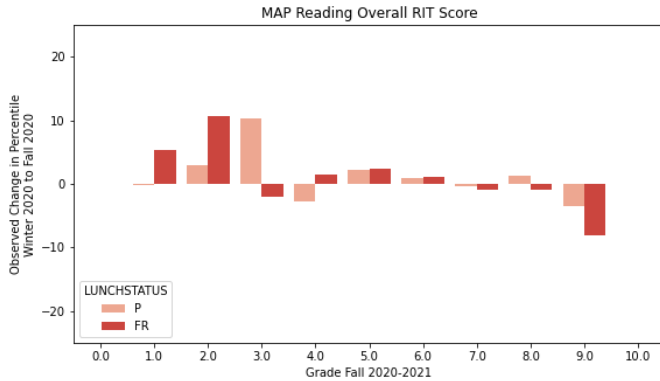
The following two sets of graphs explore the relationship between socioeconomic status and learning loss during this interval. The first set shows the average change in percentile for each student between Winter 2020 and Fall 2020. When students take these assessments, they receive both a scaled score and a percentile score. A percentile is the percentage of scores that fall at or below a particular score. Thus, a student scoring at the 75th percentile achieved the same or higher than 75% of peers who took the same assessment. A useful property of percentile scores is that they are universal across all grade levels, subjects, and seasons. This allows us to make easy comparisons across instructional intervals and student groups.

One way we examine changes in achievement is the amount of change in percentile ranking. An increase in percentile from one point to another means that a student made gains when compared to peers. No change means the student grew a typical amount, and a decrease means the student did not grow as much as his or her peers. In this final instance, the student might still have demonstrated an increase in learning, but relative to peers, his or her position in the group has slipped.

In Reading, the first graph (red bars), there is some improved achievement at the earlier grades. Grade 3 sees a fairly large difference in average percentile change between the Paid (P) and Free/Reduced (FR) students. Most other grades are quite similar to each other, with very little change in percentile. In Mathematics, the second graph (blue bars), a similar trend emerges as the analysis performed in October. Those middle elementary grades saw a large slide from Winter to Fall. However, there does not appear to be strong trend that suggests Free/Reduced students were impacted more negatively than Paid students. This is in contrast to the national trend.

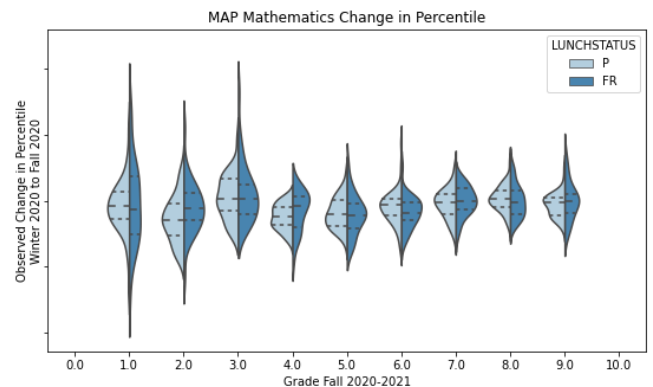
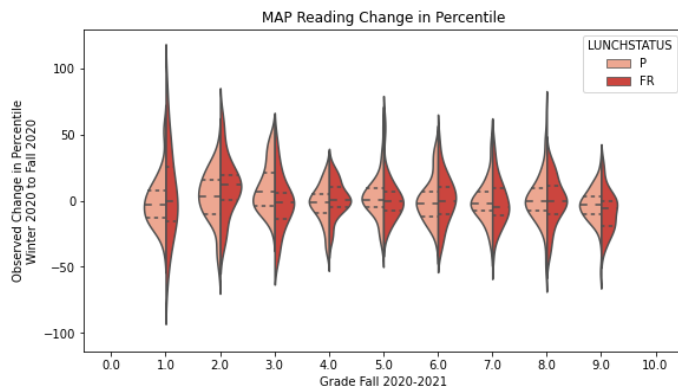


Academics | Activities | Service | Leadership



This second set of graphs is underpinned by the same data but plots it differently. Instead of a simple average for each group and grade level, this split violin plot considers the entire shape of the distribution. It is similar to turning frequency distributions (bell curves) on their sides.

Again, there is not a pronounced difference between Free/Reduced and Paid students. This suggests that while we did see some negative impacts from a lack of in-person instruction, it does not appear that these two groups of students were affected differently. This again contrasts with what is being discussed at the state and national level. In particular, the COVID conversation in Illinois has been heavily focused on making sure that students from disadvantaged backgrounds are not inequitably or disproportionately affected by school closures or remote learning. For our district, the concern does not seem to have played out, which is likely a testament to how hard we have worked to ensure that all students had access to remote learning during the initial emergency and through the fall semester.



Enrollment and COVID-19

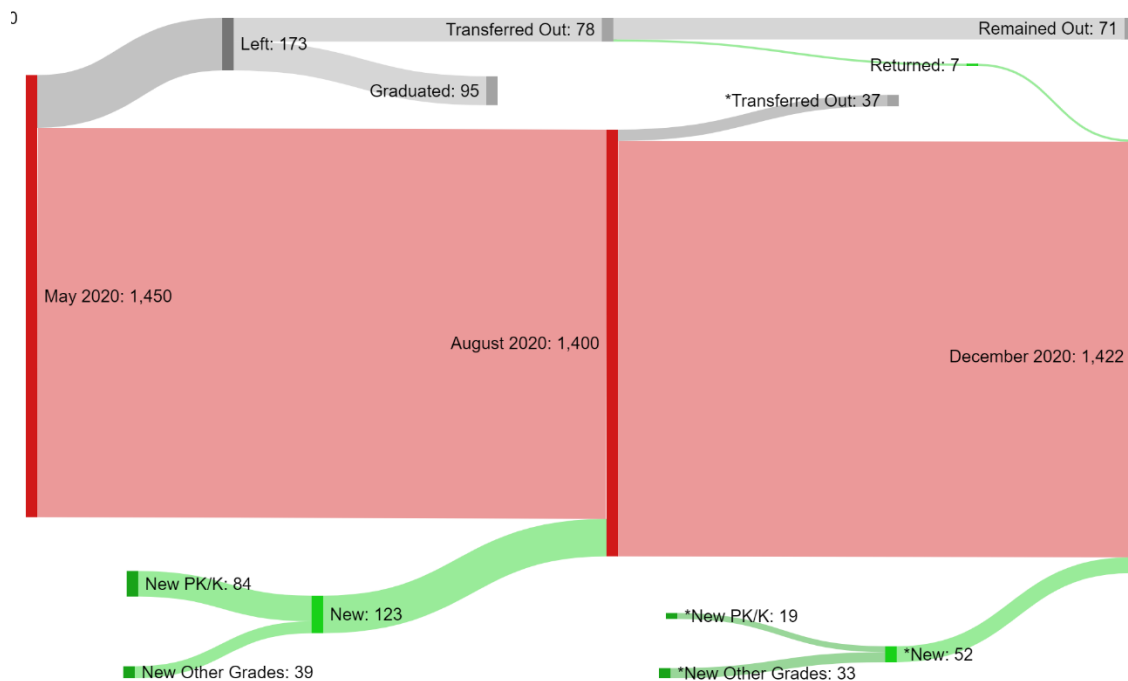
This analysis is a follow-up to a report shared in September 2020. Given the uncertainty in the school environment, and facing an already-existing enrollment decline, we continue to watch our enrollment numbers closely. In order to examine the changes in our figures, we pulled enrollments as of the end of the 19-20 school year, the first day of the 20-21 school year, and now toward the beginning of December.

A straightforward way to visualize this type of information is with a Sankey diagram, which is used to model flows. In this particular case, we are interested in observing the number of students who left the district (flowed out)



Academics | Activities | Service | Leadership

and the number who entered (flowed in). In each case, there are two principal categories. On the outflow, students who transferred out through moves or a change to homeschooling are designated as having left, while those who completed grade 12 and earned a diploma are marked as graduated. On the inflow, students can either be new to the district (PK or K students) or transfers in (any other grade level). This same set of flows is repeated in the interval between August and December, with a few differences. No students should graduate between these two dates, and we also have the possibility of students leaving, then returning to the district. This thin thread (comprising 7 students) appears toward the top-right corner of the diagram.



While the district experienced a decrease of about 50 students from May to August, about half of that decrease has been made up with new or returning students. There has been a bit of churn in the Pre-K program, as families who decided to remove their students from a non-compulsory program have been replaced by families who want their young students to be in school despite the risks. We have also seen a fairly large number of new students in other grades, almost as many as we received over the summer.

Remote Learning Statistics

At the beginning of the year, about 75% of families chose to have their students on campus when school resumed. This number fluctuates daily as we conduct contact tracing, place students on quarantine, have them return from quarantine, or families choose to remain home. It is difficult to summarize this movement because it does change so rapidly, but the visual below examines three points in time for some trends.

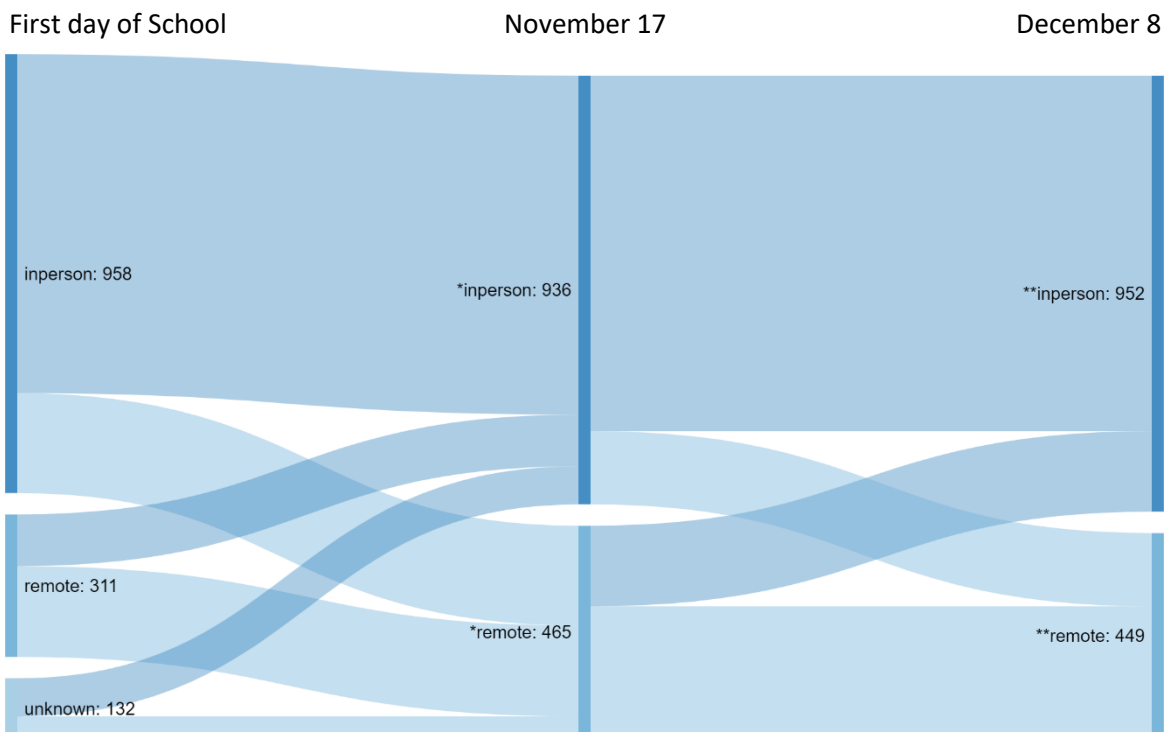
While the total number of students in remote learning has remained fairly stable over the course of the year, there has been considerable churn in who which students are in which category. When performing a textual analysis of the learner notes, it was observed that many students had recently been placed in a temporary quarantine immediately prior to November 17. Between that date and December 8, 176 students had moved from remote to in-person. This



OREGON
CUSD220

Academics | Activities | Service | Leadership

suggests that large groups of students are changing between in-person and remote, and this occurs on a daily basis. There is a slight uptick in the percentage of students who are remote learning from the beginning of the year until now, but that trend is unremarkable. What is remarkable is how much shuffling is actually occurring. Our office staff and teachers have done a remarkable job keeping track of the ins and outs of student locations, in addition to supporting the contact tracing process and notifications of possible exposure.



Respectfully Submitted,

Adam P. Larsen
Assistant Superintendent
Oregon CUSD #220