November 30, 2021

To: 2021 Special Committee on Education

From: Norma Volkmer, Fiscal Analyst

Re: Learning Loss

THE IMPACT OF COVID-19 ON LEARNING LOSS

Following the closure of schools in spring 2020 and the limited reopening of schools in the 2020-2021 school year, many in education expressed concern about the COVID-related learning loss. This memo will define learning loss, review national research that has been published on the possible impact of COVID-19, and examine relevant Kansas data, including state assessment scores and absenteeism.

Defining Learning Loss

Learning loss, sometimes called the "summer slide", refers to the slowing of learning and possible loss of academic skills that occurs during summer breaks from school. This phenomenon is also sometimes referred to as "unfinished learning" as it is generally measured as lost instruction time and some believe the connotation associated with "loss" is negative or misleading. While the the phrase "learning loss" may imply that the student has forgotten what they learned, *i.e.* no longer having specific skills, it may also refer to a stagnation of learning, *e.g.* a student may not test at the level expected of them at that point in the year.

Scholars in recent years have begun to question early comprehensive data on learning loss,[1] including the extent of the loss, factors that contribute to that loss, and the impact of that loss on academic gaps. There does appear to be consensus that summer learning loss is common. The amount of learning lost varies greatly, often with factors such as socioeconomic status, geography, grade level, and subject having a varied level of influence.

---

1   In the 1990s there appeared to be consensus: (1) that students scores dropped by the equivalent of approximately a month of school instruction; (2) that this "loss" was sharper in math than in reading; and (3) that "loss" for older students was greater than for younger students.

COVID-19 Learning Loss

ACT Scores

In July 2021, ACT published "Learning Opportunities: Understanding Scores from ACT's Assessment Suite During the COVID-19 Pandemic." In this review of the national 2020-2021 preACT and ACT scores, ACT notes decreased scores in every subject but science (preACT only) for the fall 2020 and spring 2021 tests compared to the prior year.[2] The composite score for grade 12 students dropped from 19.5 in 2019 to 19.0 in 2020. Grade 11 students testing in the spring saw the greatest decline, with an average score of 18.8 in 2021 and 19.5 in 2019.

ACT noted several possible findings from this information:

- On average, the score decreases translate to approximately one to three months of instruction loss. ACT believes the decreases do not indicate academic loss *per se*, rather the decreases indicate that student gains were not at the level expected. ACT noted that students could catch up with school time and focused resources;

- Math scores dropped more sharply than reading scores, which appears to track with other assessment data published;

- Students in lower grades (5,6, and 7) seemed more affected that students in higher grades (8,9, and 10); and

- The opportunity gap between white students and Black, Latinx, Native American, and Native Hawaiian/Pacific Islander students did not appear to grow, though it also did not close.

Other ACT research on the impact of COVID-19 on learning and testing can be found on the ACT website.

McKinsey & Company (McKinsey) Report: Curriculum Associates' i-Ready Assessment

McKinsey, a management consulting group, studied the Curriculum Associates' i-Ready in-school assessment to determine the extent of unfinished learning in the 2020-2021 school year.[3] The assessment results included 1.6 million elementary students in nearly all states, though 23 states accounted for 90.0 percent of the math sample and 21 states accounted for 90.0 percent of the reading sample. Schools that were open at the time of the assessment are overweighted due to the in-person nature of the assessment, *e.g.* Florida accounted for 29.0 percent of math and 30.0 percent of reading sample.
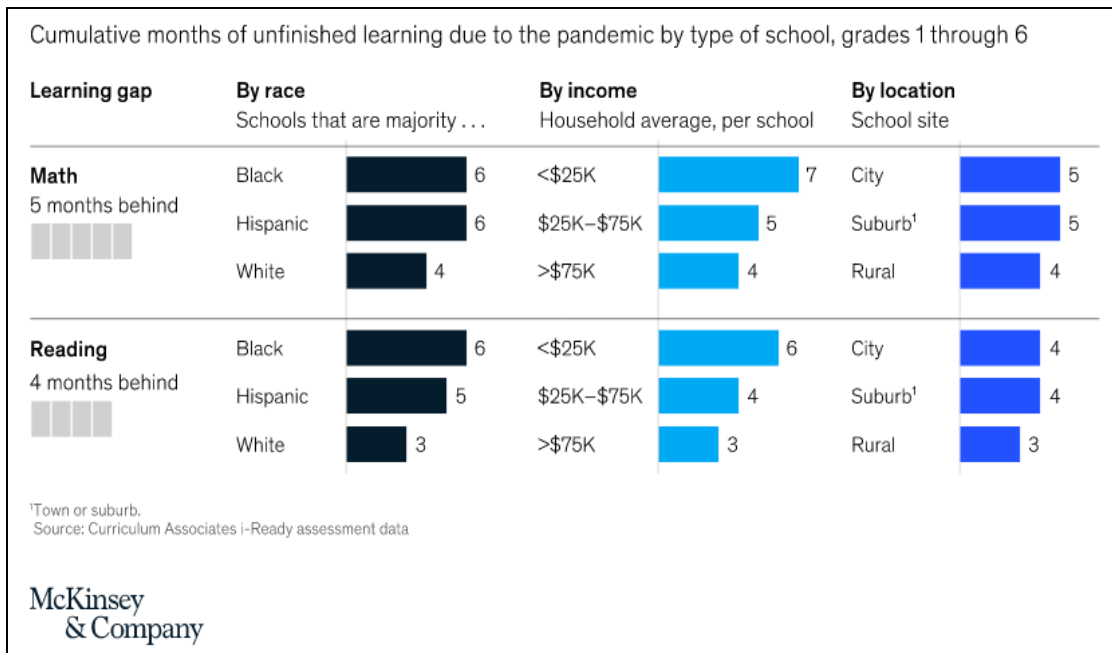
McKinsey hypothesized several findings, including that students were, on average, five months behind in math and four months behind in reading. It should be noted that this average, depending on race, gender, and subject, might encompass a broad range of outcomes. Further,

---

2   ACT, "Learning Opportunities: Understanding Scores from ACT's Assessment Suite During the COVID-19 Pandemic," at 4.

3   Emma Dorn, Bryan Hancock, Jimmy Sarakatsannis, and Ellen Viruleg, "COVID-19 and education: The lingering effects of unfinished learning," July 27, 2021.

McKinsey staff had originally predicted students could lose five to ten months of learning in math, so this analysis indicates that students came in at the lower end of the projection. Other findings include:

- That unfinished learning did not vary across grade-level as much as originally predicted. Early predictions showed younger students struggling more with remote learning. However, the data appears to indicate that there was not such a disparity between younger and older elementary students;

- Data from spring and fall 2020 indicate that students fell behind quickly in math and began the year three months behind in math. With a slower learning pace in the 2020-2021 school year, students were not able to catch up and ended the year five months behind;

- Reading data indicates that students began the 2020-2021 school year a month behind, with the slower learning pace resulting in students being four months behind by the end of year. So, the summer decline was less sharp than in math, but the school year pace was slower; and

- Cumulative unfinished learning for students in grades 1 through 6 varied by the school's predominant race, income, and location, as indicated by the chart below. The chart, and the other findings, reflect the difference between where students were expected to be and where the results placed them. Therefore, the COVID-19-related learning loss for students in predominantly Black and Hispanic schools is in addition to pre-existing inequities.

Cumulative months of unfinished learning due to the pandemic by type of school, grades 1 through 6

Learning gap	By race Schools that are majority . . .		By income Household average, per school		By location School site	
Math 5 months behind	Black	6	<$25K	7	City	5
	Hispanic	6	$25K–$75K	5	Suburb[1]	5
	White	4	>$75K	4	Rural	4
Reading 4 months behind	Black	6	<$25K	6	City	4
	Hispanic	5	$25K–$75K	4	Suburb[1]	4
	White	3	>$75K	3	Rural	3

[1]Town or suburb.
Source: Curriculum Associates i-Ready assessment data

McKinsey & Company

McKinsey also included some information on the possible impact of COVID-19 on student health and student absenteeism. In a survey of roughly 16,000 parents across every state, parents reported higher percentages of anxiety and depression, as well as increased social withdrawal, self-isolation, lethargy, and irrational fear. Additionally, Black and Hispanic

parents are more likely to report higher levels of concern and parents of children who have fallen behind academically are more likely to say they are very or extremely concerned about the child's mental health. Absenteeism increased by roughly 12.0 percentage points for students in grades 8 through 12, with sharper increases in student populations that have historically low absenteeism rates.

NWEA: MAP Assessment

The NWEA Center for School and Student Progress also published a brief[4] analyzing assessment data for the 2020-2021 school year to determine the extent of COVID-19-related learning loss. This research considers how 2020-2021 school year gains and student achievement compare to 2018-2019 using MAP Growth data for 5.5 million students in grades 3 through 8. Scores were calculated for the fall, winter, and spring of both school years.

Additionally, NWEA noted that the data for fall 2020 included remote testing, which decreased throughout the year. This data was included following comparison of test modalities and test quality metrics. NWEA also notes that overall 20.0 percent of students who tested in pre-pandemic years did not test in 2020-2021. This is higher than normal (the rate for 2018-2019 was 13.0 percent), and the rate was even higher for Black, Latinx, and American Indian and Alaska Native (AIAN) students.

The NWEA brief reported the following results for students in grades 3, 5, and 7:

- Students made some gains, but not at the same level as pre-pandemic, with fewer gains in math;

- Students began the year behind in math by 5 to 10 percentile points compared to same-grade students in pre-pandemic years. Combined with less in gains, students ended the year 8 to 12 percentile points behind in math;

- Students began the year at the expected level for reading with gains on track with pre-pandemic levels through the beginning of the school year. However, declines in the spring resulted in students ending the year three to six percentile points behind pre-pandemic year students;

- Achievement declines varied by age, race, and socioeconomic status with declines greater for:

  ○ Students in grades 3 and 5;
  ○ Black, Latinx, and AIAN students; and
  ○ Students attending high-poverty schools.

Kansas Assessment and Absenteeism Data

According the Kansas State Department of Education (KSDE) Report Card, Kansas public schools saw a drop of 4.75 percent in math and 1.42 percent in ELA for all students and

---

4 Karyn Lewis, Megan Kuhfeld, Erik Ruzek, and Andrew McEachin, "Learning during COVID-19: Reading and math achievement in the 2020-21 school year," July 2021.

all grades from levels 3 and 4 (considered college ready or proficient) from 2019 to 2021. In 2019, 9.39 percent of students were in level 4 and 23.25 percent of students were in level 3 in math. This fell in 2021 to 7.82 percent in level 4 and 20.07 percent in level 3. Students in level 1 for math increased from 28.29 percent in 2019 to 34.35 percent in 2021. ELA saw less sharp declines. Students decreased in level 4 from 8.72 percent to 8.07 percent and in level 3 from 27.86 to 27.09. The percent of students in level 1 increased slightly from 2019 to 2021 (29.45 percent to 30.3 percent).

Kansas public schools saw decreased attendance rates in the 2020-2021 school year compared to the 2018-2019 school year. The attendance rate for all students decreased from 94.4 percent in 2018-2019 to 93.7 percent in 2020-2021.[5] Attendance rates decreased slightly for the majority of students, but there were noticeable decreases for Black students (2.3 percent), Hispanic students (1.7 percent), and free- and reduced-price lunch students (1.3 percent). Male students in these student populations often saw greater decreased attendance than their female counterparts.

The McKinsey reported noted increased absenteeism, which is often tied to increased drop out rates. Kansas public schools also saw an increase in chronic absenteeism from 2020 to 2021, according to the KSDE Report Card. For all students in the state, the rate of chronic absenteeism increased from 13.9 percent in 2020 to 17.5 percent in 2021. The graph below provides this increase by subgroup of students.

---

5 Kansas State Department of Education, State Attendance Rate, Yearly Totals, Public Schools.

Illustration 1: Chronic Absenteeism (Graphic from KSDE Report Card)