New data from Education Analytics (EA) highlights the changes in learning patterns experienced by students in grades 3–8 in California and South Carolina. Using results from winter 2020–21 interim assessments, EA provides an up-to-date picture of the learning lag students have experienced during the pandemic. EA also highlights findings from a well-being student survey collected during the 2020–21 school year.
Results are from 54 local education agencies in South Carolina (SC) and 19 local education agencies in the CORE Data Collaborative in California (CA). In both states, the demographics of students were similar to those in previous years, although slightly fewer students with disabilities were included in the 2020-21 California sample. In California, the analytic sample includes a greater proportion of Latinx, English learner, and economically disadvantaged students compared to the state.

**IMPACT**
Up to 2.5 months of learning lag in both English Language Arts and Math

**A Typical School Year is 9 months**

**FOCUS**
Students in grades 3-8 in **California** and **South Carolina**

**DATA**
Results from NWEA MAP, Renaissance Star, and Curriculum Associates iReady administered in Winter 2020-21 from 73 local education agencies
Key Findings

Students in both California and South Carolina exhibited slightly more learning lag in ELA than in Math. Students who are economically disadvantaged and English learners exhibited more learning lag in both ELA and Math in California, and in ELA in South Carolina. In California, Black and Latinx students exhibited more learning lag in both subjects. In South Carolina, Black and Latinx students exhibited more learning lag in ELA.

### Average Learning Lag Across Grades and Assessments

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>South Carolina</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA</td>
<td>2.6 months behind</td>
<td>2.3 months behind</td>
</tr>
<tr>
<td>Math</td>
<td>2.5 months behind</td>
<td>2.0 months behind</td>
</tr>
</tbody>
</table>

### A Breakdown of Learning Lag by Economic Disadvantage and English Learner Status

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>South Carolina</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economically Disadvantaged Students</td>
<td>3.2 months behind</td>
<td>2.8 months behind</td>
</tr>
<tr>
<td>English Learners</td>
<td>1.1 months behind</td>
<td>1.7 months behind</td>
</tr>
<tr>
<td></td>
<td>2.8 months behind</td>
<td>2.3 months behind</td>
</tr>
<tr>
<td></td>
<td>3.8 months behind</td>
<td>2.4 months behind</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Non-ED and Non-EL Students</th>
<th>English Learners</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA</td>
<td>2.6 months behind</td>
<td>2.1 months behind</td>
</tr>
<tr>
<td>Math</td>
<td>2.1 months behind</td>
<td>2.3 months behind</td>
</tr>
<tr>
<td></td>
<td>2.8 months behind</td>
<td>2.0 months behind</td>
</tr>
<tr>
<td></td>
<td>3.1 months behind</td>
<td>2.1 months behind</td>
</tr>
</tbody>
</table>
A breakdown of learning lag by grade

**California**

- **Grade 4**
  - ELA: 2.9 months behind
  - Math: 2.6 months behind

- **Grade 5**
  - ELA: 3.4 months behind
  - Math: 3 months behind

- **Grade 6**
  - ELA: 3.2 months behind
  - Math: 2.6 months behind

- **Grade 7**
  - ELA: 2.3 months behind
  - Math: 1 month behind

- **Grade 8**
  - ELA: *0.3 months ahead*
  - Math: No Lag

**South Carolina**

- **Grade 4**
  - ELA: 1.9 months behind
  - Math: 2.2 months behind

- **Grade 5**
  - ELA: 2.6 months behind
  - Math: 2.1 months behind

- **Grade 6**
  - ELA: 2 months behind
  - Math: 2 months behind

- **Grade 7**
  - ELA: 2 months behind
  - Math: 1.6 months behind

- **Grade 8**
  - ELA: 3.7 months behind
  - Math: 1.3 months behind
A breakdown of learning lag by race/ethnicity

**California**

- American Indian: 2.4 months behind
- Asian: 0.7 months behind
- Black: 1.6 months behind
- Latinx: 2.1 months behind
- White: 1.8 months behind

**South Carolina**

- American Indian: 2.3 months behind
- Asian: 2.0 months behind
- Black: 2.3 months behind
- Latinx: 1.7 months behind
- White: 2.4 months behind
A breakdown of learning lag by disability status

Students Without Disabilities

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>South Carolina</th>
<th>Students Without Disabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA</td>
<td>3.0 months behind</td>
<td>2.7 months behind</td>
<td>2.6 months behind</td>
</tr>
<tr>
<td>Math</td>
<td>2.8 months behind</td>
<td>2.3 months behind</td>
<td>2.2 months behind</td>
</tr>
</tbody>
</table>

A breakdown of learning lag by low prior achievement

Non-Low Prior Achievement

<table>
<thead>
<tr>
<th></th>
<th>California</th>
<th>South Carolina</th>
<th>Non-Low Prior Achievement</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELA</td>
<td>3.1 months behind</td>
<td>2.7 months behind</td>
<td>2.7 months behind</td>
</tr>
<tr>
<td>Math</td>
<td>2.4 months behind</td>
<td>2.3 months behind</td>
<td>2.6 months behind</td>
</tr>
</tbody>
</table>
A breakdown of learning lag by students experiencing homelessness

We did not have data available to distinguish whether students were assessed remotely or in person.

Testing environment: Key Findings for California

ELA
Students who tested remotely experience 4 months of learning lag in ELA compared to 1.9 months for students who tested in-person.

Math
Students who tested remotely experience 2.7 months of learning lag in Math compared to 2.1 months for students who tested in-person.

To learn more about the findings, visit: https://edanalytics.org/projects/covidimpacts
A well-being survey was administered to ~32,000 students in grades 4-12 in three California districts in fall 2020-21; ~15,000 students responded to both fall and winter surveys.

Survey topics include: personal well-being, interpersonal well-being, school learning environment, and home/online learning environment.

Key Findings

- Lower ratings for personal and interpersonal well-being overall vs. school learning environment and home/online learning environment
- Elementary students reported higher personal well-being than secondary students
- Secondary students reported higher interpersonal well-being than elementary students
- Girls rated their interpersonal well-being higher than boys, and boys in secondary grades rated their personal well-being higher than girls
- English learners rated their interpersonal well-being consistently lower across grades vs. non-English learners
- Ratings for home/online learning environment improved from fall to winter across all grades
- Elementary students’ home/online learning environment and personal well-being were the topics most strongly correlated with achievement at the school level
- Secondary students’ interpersonal well-being was the survey topic most strongly correlated with achievement at the school level
A Call for More Data

COVID school closures and remote learning call for additional high-quality data and information to gain a deeper understanding of where students are in their learning. Teachers are working with students at a wide range of learning levels, and are eager to have information needed to use differentiated approaches to meet students where they are and accelerate learning.

Through diagnostic, interim, and summative assessments, educators can monitor students’ progress and determine how best to support their learning.

When states use high-quality assessments across districts, information can tell the bigger story over time of student progress and the need to accelerate student learning. State leaders and policymakers can use this information to direct resources to learners who need it most and to create effective, equitable education systems.
Our Approach: Measuring Learning Lag

EA compared growth from fall 2019 to winter 2021 (the “COVID-19” period) to the average of growth from fall to next winter in the two prior school years (fall 2017–winter 2019 and fall 2018–winter 2020). To summarize learning lag across assessments on different scales, we converted our results to a single “months of learning” metric that used either a typical amount of growth from one year to the next or the range of achievement scores within a given school year. We use this “months of learning” scale for intuitiveness and interpretability across different assessments, but this scale is an approximation that should not be literally interpreted to correspond to a specific number of months of instruction. Finally, the demographic composition of students in our sample shifted slightly over time; changes do not appear to be due to a dramatic shift in the students assessed in COVID-affected years compared to pre-COVID years, except for students with disabilities, who were underrepresented in the California sample in 2020-21.

When comparing these results to fall-to-fall models, we find some early evidence that learning lag may have continued from fall to winter in ELA, but may have slowed down (or recovered) in math.

Terms Used in the Study

EA opted to use the terms *learning change*, *learning lag*, and *learning acceleration* rather than the more commonly referenced *learning loss*. These terms were selected to underscore that a lag in learning can occur even as students continue to gain new knowledge and skills, and that learning that has been delayed during the pandemic can be recouped.