30-Minute Webinar: How Can Districts Measure Learning Loss Recovery Costs?

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Slides available at edunomicslab.org

Note: Presentation is on-the-record but Q&A after is off-the-record unless otherwise noted
We now know that students are behind in their learning.

1. https://www.npr.org/2022/06/22/1105970186/pandemic-learning-loss-findings
But the feds gave districts relief funds to help

✓ ESSER 3 = $123B.
✓ 20% must be used to remedy lost learning time but districts could spend more.
✓ Districts have 2 years remaining to spend it.
✓ Much of that money remains.

Districts wrote ESSER spending plans a year ago. Can they be changed? Yes!

Will investments work to remedy student learning gaps?

“I fear that, in areas where classrooms remained closed for long periods, school officials are not doing the basic math.”*
Here’s how to do the math on how deep the losses were

1. First, estimate impact of lost learning time for students in your district.

\[
R_{i1} = S_{i1} - (\hat{\beta}_0 + Race_{i1}\hat{\beta}_{\text{Race}} + Pov_{j1} Mode_{j,2021}\hat{\beta}_3 + X_{ij1}\hat{\beta}_4) + Pov_{j1}\hat{\beta}_1 + Mode_{i,j2021}\hat{\beta}_2.
\]

2. Then, simply apply effect sizes from prior research to estimate whether interventions are sufficient.

Table 1. Pandemic Achievement Gains by Student and School Characteristics, Math

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<td>Baseline Score (Reference: Top Quartile)</td>
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<td>Bottom Quartile</td>
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<td>Middle (25%-75%)</td>
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<td>School Poverty (Reference: Low &lt;25%)</td>
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<td>High (&gt;75%)</td>
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<td>Hybrid Schooling</td>
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<td>% Tested in School</td>
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<td>Constant</td>
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<td>Fixed Effects?</td>
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<td>School</td>
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https://www.nber.org/papers/w30010

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Here’s the math on how deep the losses were

1. First estimate student learning losses for your district.

\[ R_{i1} = S_{i1} - (\hat{\beta}_0 + \text{Race}_{i1} \hat{\beta}_{\text{Race}} + \text{Pov}_{j1} \text{Mode}_{i1} \hat{\beta}_{\text{Mode}}) \]

2. Then simply apply effect sizes from prior research to estimate whether interventions are sufficient.

There’s an app for that! “The Calculator” does this for 8000 districts. Edunomicslab.org/calculator

https://www.nber.org/papers/w30010
We start with the NBER research and import district data

Disproportionate impact on low-achievers

Additional effect on Black/Hispanic students

Bigger losses for low-income students

Weeks spent in remote / hybrid school

Interaction between remote/hybrid & income

Estimated learning gap (which we then converted to weeks)

Sources: Learning loss estimates derived using the coefficients from Goldhaber et al. in The Consequences of Remote and Hybrid Instruction During the Pandemic. Data for district instructional mode over the course of the 2020-21 school year comes from American Enterprise Institute’s Return to Learn Tracker (R2L). We converted the effect size estimates to weeks of learning using NWEA 2020 MAP Growth Achievement Status and Growth Norms for Students and Schools.

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We converted the effect size estimates to weeks of learning using NWEA 2020 MAP Growth Achievement Status and Growth Norms for Students and Schools. District demographic data come from NCES and individual state demographic files. Our district-by-district results are available at: https://edunomicslab.org/calculator/.
The sheer size of the losses are eye-popping

A standard academic year has 36 weeks. Losses of this size would have tremendous consequences for kids...

If unaddressed, these learning impacts could permanently impact a generation of children:

- ~$2T lost wages
- Reduced education attainment
- More reliance on government welfare
- Lower life expectancy

1. Pandemic Learning Loss Could Cost U.S. Students $2 Trillion in Lifetime Earnings.
2. 10 Lessons from Past Educational Disruptions, and How They Can Help Students Make Up Lost Learning After COVID-19
We compare estimates of the learning gaps to effect sizes of interventions...

- High-dosage tutoring 3 x week for a year → +19 weeks gains
- Double-dose of math each day for a year → +10 weeks gains
- Voluntary summer school → +5 weeks gains

https://www.theatlantic.com/ideas/archive/2022/05/schools-learning-loss-remote-covid-education/629938/
... then compute district-by-district cost estimates for tutoring.

Select a State  Select a District

Based on how long this district’s schools operated remote or hybrid and its mix of student characteristics and prior performance levels, recent research helps us estimate that students in Los Angeles Unified

lost an average of: 22 weeks of learning in math 18 weeks of learning in reading

Costs to remedy this magnitude of loss depend on the intervention utilized. Tutoring is considered a higher impact investment. Cost predictions suggest this district would need to spend an estimated amount of:

$851,046,581 for tutoring in math
$466,948,430 for tutoring in reading

To pay for these investments, the district could tap the $2,578,201,826 it received in federal relief funds (known as ESSER III).

Our estimates use a low-end cost of tutoring. Actual costs may vary.

Tutoring effect sizes come from The Impressive Effects of Tutoring on PreK-12 Learning: A Systematic Review and Meta-Analysis of the Experimental Evidence. The estimates on the cost of tutoring programs comes from Were Federal COVID Relief Funds for Schools Enough? and Blueprint for Scaling Tutoring Across Public Schools.
Most districts got federal funds to help with pandemic recovery

- The law requires districts to spend **20% of ESSER 3 money on making up for lost learning time**.

- At the time the law was written, this percentage was just a guess at what was needed.

- Now we know that many districts will need to spend **far more than 20%** to catch their students up.

- Wealthier districts received less federal aid – those closed longer may need to spend some of their state/local funds to get students caught up.

https://edunomicslab.org/esser-spending/
We also list how much the district got in ESSER 3.

Select a State: California
Select a District: Los Angeles Unified

Based on how long this district’s schools operated remote or hybrid and its mix of student characteristics and prior performance levels, recent research helps us estimate that Students in Los Angeles Unified lost an average of:
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To learn how much of the ESSER 3 money remains in your district see edunomicslab.org/esser-spending/
Got questions?

I think our students are over/under performing these estimates.

So if we spend this amount on tutoring, we’re good?

My district is using the money to backfill budget gaps, not address learning.

I don’t see my district listed.

Districts can consult their own data to see if their losses are greater (or less severe) than these estimates.

Research hasn’t studied interruptions of this magnitude. We suggest monitoring progress along the way.

We’re hoping these data can help engage leaders and communities in these tradeoffs.

The calculator has data on over 8000 districts. We were unable to make estimates for districts with missing data elements.
Got questions?

How come districts that were 100% in-person all SY20-21 still show learning gaps?

Those gaps could have been caused by remote operations in spring 2020, poor attendance during COVID outbreaks, increased use of subs, or other factors.

Do districts have to pay for tutoring?

No. Districts make those choices. The tutoring costs are provided as a higher-impact example.

Why didn’t my district get any ESSER relief funds?

ESSER was distributed via the Title I formula and some lower-poverty districts didn’t qualify.

The projected tutoring costs for my district exceed our ESSER3.

That’s common in districts that were remote longer and with fewer low-income students (which received fewer federal dollars per pupil).
Q&A

Note: Q&A is off the record unless otherwise stated

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