Meeting the Moment: New Data on Learning Loss and What We Can Do About It

Paul Atherton  Founder, Fab Inc  
Sajeda Amin  Senior Associate, Population Council  
Rukmini Banerji  CEO, Pratham  
Michelle Kaffenberger  Research Fellow, RISE & Univ. of Oxford  

Thursday, October 7th  
7:00 PDT, 10:00 EDT, 15:00 BST, 17:00 EAT, 19:30 IST
Learning Losses in Kenya and Nepal
We measured learning levels in the same secondary schools where two GEC projects collected data in 2019.

**EDT**

- Kenya
- 50 schools

**Mercy Corps**

- Nepal
- 45 schools

We also spoke to the girls to understand their experience of school closures.
We spoke with girls of the same grade, in the same term, pre and post-COVID

<table>
<thead>
<tr>
<th>Cross-Cohort</th>
<th>Midline</th>
<th>A&amp;L Study</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 2019</td>
<td>2,144 Sample size</td>
<td>2,313 Sample size</td>
</tr>
<tr>
<td>Kenya</td>
<td>Form 1 &amp; 2, Term 2</td>
<td></td>
</tr>
<tr>
<td>2,313</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nepal</td>
<td>Grades 9 &amp; 10, Term 3</td>
<td>1,046 Sample size</td>
</tr>
<tr>
<td>1,046</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Panel

<table>
<thead>
<tr>
<th>Also tested at midline...</th>
<th>...and found still enrolled at sample schools</th>
</tr>
</thead>
<tbody>
<tr>
<td>113 Sample size</td>
<td>113 Sample size</td>
</tr>
<tr>
<td>Grades 8, 9, 10</td>
<td>Grades 10, 11, 12</td>
</tr>
<tr>
<td>Nepal</td>
<td>Nepal</td>
</tr>
<tr>
<td>Term 3</td>
<td>Term 3</td>
</tr>
</tbody>
</table>
This means

We can see what the average learning levels are in secondary schools **before** and **after** COVID

And for some girls, how much they’ve remembered or forgotten
The sample was relatively balanced

**Sample Sizes**

<table>
<thead>
<tr>
<th></th>
<th>Form 1</th>
<th>Form 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midline</td>
<td>1229</td>
<td>1060</td>
</tr>
<tr>
<td>Post-COVID</td>
<td>1162</td>
<td>1151</td>
</tr>
</tbody>
</table>

**Sample Balance**

<table>
<thead>
<tr>
<th></th>
<th>Midline</th>
<th>Post-COVID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>16.11</td>
<td>16.34</td>
</tr>
<tr>
<td>Married</td>
<td>0.01</td>
<td>0.01</td>
</tr>
<tr>
<td>Language: Kiswahili</td>
<td>0.41</td>
<td>0.48</td>
</tr>
<tr>
<td>Disabled</td>
<td>0.02</td>
<td>0.03</td>
</tr>
<tr>
<td>Serious illness</td>
<td>0.26</td>
<td>0.24</td>
</tr>
</tbody>
</table>
And showed substantial learning losses

- 18 percentage point learning loss in Reading
- 7 percentage point learning loss in Maths

**Midline**
- Average age: **16.11**

**Post-COVID**
- Average age: **16.34**
Losses were not the same across the country, and we even found some schools doing better.
Pupils struggle even with simple tasks

Task 1, Q7

There were 48 pupils in a class. Each pupil drank 200ml of milk. **How many litres of milk did they drink altogether?**
Pupils struggle even with simple tasks

Task 2, Q5

Ole has twice as many goats as cows. He has 60 animals altogether. **Find the number of cows he has.**
Mercy Corps

Nepal
The sample was relatively balanced

Sample Balance: Cross-Cohort Girls

<table>
<thead>
<tr>
<th></th>
<th>Midline</th>
<th>Post-COVID</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sample size: 432</td>
<td>Sample size: 1,046</td>
</tr>
<tr>
<td>Age</td>
<td>15.97</td>
<td>15.65</td>
</tr>
<tr>
<td>Married</td>
<td>0.01</td>
<td>0.00</td>
</tr>
<tr>
<td>Language: Nepali</td>
<td>0.57</td>
<td>0.33</td>
</tr>
<tr>
<td>Language: Tharu</td>
<td>0.42</td>
<td>0.34</td>
</tr>
<tr>
<td>Disabled</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Serious illness</td>
<td>0.12</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Apart from language spoken at home
We spoke to some of the same girls two years later

<table>
<thead>
<tr>
<th>Characteristics of Panel Girls</th>
<th>Midline</th>
<th>Sample size: 113</th>
<th>Post-COVID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>15.48</td>
<td></td>
<td>17.42</td>
</tr>
<tr>
<td>Married</td>
<td>0.00</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Language: Nepali</td>
<td>0.55</td>
<td></td>
<td>0.39</td>
</tr>
<tr>
<td>Language: Tharu</td>
<td>0.42</td>
<td></td>
<td>0.43</td>
</tr>
<tr>
<td>Disabled</td>
<td>0.00</td>
<td></td>
<td>0.00</td>
</tr>
<tr>
<td>Serious illness</td>
<td>0.04</td>
<td></td>
<td>0.05</td>
</tr>
</tbody>
</table>
There were substantial learning losses

Cross-Cohort Girls

18 percentage point learning loss in Reading
18 percentage point learning loss in Maths

Grades 9 & 10

Midline
Average age: 15.97
Sample size: 432

Post-COVID
Average age: 15.65
Sample size: 1,046
Even the same girls had forgotten what they had learnt

Panel Girls

- **Reading**: 14 percentage point learning loss
- **Maths**: 21 percentage point learning loss

**Midline**
- Sample size: 113
- Average age: **15.48**
  - Grades 8, 9, 10

**Post-COVID**
- Average age: **17.42**
  - Grades 10, 11, 12
Losses were not the same across the country, and we even found some schools doing better.
Girls maintained level across easier tasks but the achieved level remains low

If one mango costs Rs. 13, what is the price of 11 mangoes?

Girls maintained level in some easy questions which can be related to their lives (20% of girls reported working in their family business during COVID)
But they forgot fractions

Task 1, Q3

Change $\frac{3}{5}$ to a percentage

<table>
<thead>
<tr>
<th>Midline</th>
<th>Post-COVID</th>
</tr>
</thead>
<tbody>
<tr>
<td>37.96%</td>
<td>12.62%</td>
</tr>
</tbody>
</table>

Incorrect

Correct
We also spoke to the girls about what they were doing

- Very few girls studied regularly
- Lots of schools were outside of the coverage of radio and cell phones
- Support was often one-way, with little opportunity to ask questions and get help
- Girls faced mental health challenges - uncertainty around reopening meant it was hard to engage
- In Nepal, we saw post-grade 10 drop out and early marriage
- In Kenya, girls flagged issues around pregnancy and transactional sex
Challenges with coverage must be taken into account when developing distance learning.
Radio lessons don’t reach everybody

How often did you listen to radio lessons?

- Never
- Less than once a month
- Once a month
- Several times a month
- Once a week
- Twice a week
- Every day

Kenya
And not all pupils listen regularly

How often did you listen to radio lessons?

0% 20% 40% 60% 80% 100%

- Never
- Once a month
- Several times a month
- Once a week
- Twice a week
- Every day

Mercy Corps

Nepal
What should we take away?

1. Learning losses are real and for some schools very noticeable.

2. It’s not just failure to learn new things, but children forgetting what they previously knew.

3. Need to take their level into account going forward.

4. Radio was the prevalent way of reaching girls - but we know coverage is limited. We also know one-way lecturing limits learning.

5. Recommend revisiting the challenge of learning without the school as the entry point - how can we support communities and hybrid models?
COVID-19 LEARNING LOSS IN RURAL BANGLADESH

Sajeda Amin, Population Council
Overview

▪ **COVID Context in the Country**
  ▪ Lockdown
  ▪ School closures

▪ **Adolescent Girl Studies**
  ▪ Rapid phone surveys (April, June, and September 2020)
  ▪ Qualitative in-depth interviews with students and teachers
  ▪ Learning assessment 2018 and 2021 in-person surveys

▪ **Program Strategy During COVID**
  ▪ Virtual Adaptations
  ▪ Remedial math and English, life skills education
Bangladesh COVID-19

- First COVID-19 case: 08 March 2020
- Updates: October 2021
  - >1.5 million confirmed cases
  - ~27,000 Covid deaths
- Longest duration of school closures during the pandemic globally.

Source of information
https://iedcr.gov.bd/

Distribution of COVID-19 cases, by district
Disruption in Education

▪ Schools closed March 2020 to September 2021
▪ 68% of girls do not support proposed auto-promotion to next grade
▪ Increasing numbers not attending digital classes

<table>
<thead>
<tr>
<th>Survey Round</th>
<th>% responded not studying at all</th>
<th>% not following Government digital classes on TV</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 2020</td>
<td>1%</td>
<td>21%</td>
</tr>
<tr>
<td>June 2020</td>
<td>5%</td>
<td>16%</td>
</tr>
<tr>
<td>September 2020</td>
<td>10%</td>
<td>34%</td>
</tr>
</tbody>
</table>
How Girls Experienced Remote Learning

• “I did not participate in distance learning classes over the internet during the school closure ... I don’t have a smartphone. My mother has a ‘button’ phone. ... we have no satellite connection to watch BTV (the state run television).” IDI-6, 14 yrs

• I didn't always have the routine, as classes of different subjects were broadcast on different days at different times. The English classes lasted 10 to 15 minutes. I could mostly understand the lessons, but I never had enough time to note down the homework in the time given. (IDI-5)

• We have access to internet in our home, also I had heard that online classes were being conducted, but I didn't care much about it. However, I could not attend the online classes as I don't have a Facebook account. I have not opened an account as I'm not allowed to open an account (by my conservative family). (IDI-4)
Correlates of Learning Loss - Methods

▪ Sample: Representative sample of in-school adolescent girls living in 24 villages in project area (Khulna, Chapainawabganj and Sherpur) in villages with no program (2427 in-school girls)

▪ Dependent Variable: 23 point score measuring competencies
  1. Bangla score (2 points)
  2. English score (2 points)
  3. Mathematics and analytics score (19 points)
  4. Median Score: Baseline 16– Endline 15

▪ Estimation techniques (bivariate and multivariate regression)

▪ Regression analysis with main effects and time interaction with background characteristics

▪ Assess score gain/loss associated with TV, Smartphone ownership, marital status, grade level and being poor
Factors affecting learning scores following COVID:
Adolescent girls in 3 rural districts, 2018-2021

** 23 points score/ learning scores increase by about 1 point per year of grade attained

- Learning level declined significantly by 1 point 2018-2021
- Bottom 40% in wealth ranking already had lower scores in 2018
- Learning loss three times greater among the poorest 40%
- TV/smartphone ownership did not mitigate learning loss during COVID
Difference in Total learning scores among adolescents in 24 rural communities in Bangladesh

Note: For estimated learning loss, higher numbers indicate greater loss

* Results are statistically significant
Socially distanced Learning during COVID

- Mentors lived in the community and distributed hardcopy learning material
- 15-minute WhatsApp sessions twice a week
- In small group sessions of 3 girls per group
- Social interaction actively encouraged

Early Results from Impact Assessment

- Girls in intervention communities had significantly higher math/analytical scores at endline compared to control communities.
- Child marriage rates increased by 18% in control villages but did not change in intervention villages (a protective effect)
The Population Council conducts research and delivers solutions that improve lives around the world. Big ideas supported by evidence: It’s our model for global change.

For more information contact Sigma Ainul (sainul@popcouncil.org) or Ubaidur Rob (urob@popcouncil.org)
Pandemic & Learning Loss: How “teaching-at-the-right-level” can help?
Rukmini Banerji
By the end of Grade 2 in India, children are expected to be able to read a simple text fluently (and also be able to do basic operations like subtraction. Hence, it is possible to use ASER data as a ‘proxy’ for the proportion of children who are at ‘grade level’ by the time they have reached the middle of the school year in Grade 3.
% Children in Grade III enrolled in government schools who are at “grade level” (These children can read basic text fluently)

ASER 2018 – Selected states
Primary school age: Learning levels – basic reading & arithmetic

Reading and arithmetic tasks from the ASER surveys

Each child assessed one on one. S/he is marked at the highest level that s/he is able to do. Reading tasks are available in all regional languages.

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Number Recognition/
अंक पत्वान 1-9
संख्या पतवान 1-9

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>65</td>
<td>38</td>
</tr>
<tr>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>92</td>
<td>23</td>
</tr>
</tbody>
</table>

Subtraction/घटान
(2 digit with carry over)

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>52</td>
<td>76</td>
</tr>
<tr>
<td>- 24</td>
<td>- 47</td>
</tr>
</tbody>
</table>

Division/भाग
(3 digit by 1 digit)

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
</tr>
<tr>
<td>919</td>
</tr>
</tbody>
</table>

### Primary school age: Understanding implications of the learning “crisis”

ASER 2018: % Children at different reading levels. Representative sample of rural children from nationwide household survey. All India

<table>
<thead>
<tr>
<th>Grade</th>
<th>Cannot recognize letters yet</th>
<th>Can recognize letters but not read words</th>
<th>Can read simple words but not sentences</th>
<th>Can read Std I level text but not higher</th>
<th>Can read at least Std II level text (and maybe higher)</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Std III</td>
<td>12.1</td>
<td>22.6</td>
<td>20.8</td>
<td>17.3</td>
<td>27.2</td>
<td>100</td>
</tr>
<tr>
<td>Std IV</td>
<td>7.6</td>
<td>15.9</td>
<td>16.6</td>
<td>19.3</td>
<td>40.7</td>
<td>100</td>
</tr>
<tr>
<td>Std V</td>
<td>5.9</td>
<td>11.7</td>
<td>13</td>
<td>19.1</td>
<td>50.3</td>
<td>100</td>
</tr>
</tbody>
</table>
Key features of “Teaching at the Right Level” – best for children who are 7/8 and older

• Do a quick assessment – one on one – oral of reading and arithmetic to understand each child’s current level

• Group children by their current level (regardless of grade)

• Each group has a teacher/instructor who helps children do activities that enable the group to move from their current level to the next level

• Simple activities and materials are designed for this purpose. Often teachers/instructors can make materials locally

• Do quick assessment after some time and regroup children

• The assessment tool helps everyone to understand the goals and to track progress
School year: 2018-19

~ 3.5 million children in 113,000 schools in UP (India’s biggest state)

Pratham’s partnership work with UP govt. All govt. primary schools in the state. School teachers worked with children.

45-60 days of instruction

- At baseline 25% children could read at least at para level.
- 45-60 days later, at endline 57% children can read simple text fluently.
What about the youngest children entering school in these COVID years?

% Children reading at different levels in different grades 2018 and 2020: Karnataka India

<table>
<thead>
<tr>
<th></th>
<th>Beginner - cannot recognize letters</th>
<th>Can read letters but not words</th>
<th>Can read words and more</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ASER 2018</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 1</td>
<td>40.3</td>
<td>39.9</td>
<td>19.8</td>
<td>100</td>
</tr>
<tr>
<td>Grade 2</td>
<td>17.2</td>
<td>31.7</td>
<td>51.2</td>
<td>100</td>
</tr>
<tr>
<td><strong>ASER 2020</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grade 1</td>
<td>56.8</td>
<td>29.4</td>
<td>13.8</td>
<td>100</td>
</tr>
<tr>
<td>Grade 2</td>
<td>31.8</td>
<td>37.3</td>
<td>31</td>
<td>100</td>
</tr>
</tbody>
</table>

ASER 2020: Overall survey numbers
670 villages
13,365 households
18,385 children
Prioritizing learning when schools reopen and beyond: Long term implications of learning loss and recovery

Michelle Kaffenberger
Population Council Webinar
07 October 2021
Data is emerging showing devastating learning losses during school closures.

In 2020, **South African** primary school children learned 50-75% less than usual.

In **Pakistan**, poor children’s learning regressed.

In **Ethiopia**, children learned 60-70% less than in a typical year.
Three questions

• How much learning might be lost in the long term due to school closures?

• How could these losses be mitigated when children return to school?

• How much of a difference could mitigation measures make for children’s learning?
How much learning might be lost in the long term due to school closures?
Short term learning loss can continue to accumulate after children return to school

Four years after the 2005 Pakistan earthquake, affected children were equally likely to be in school, but had much lower learning.

Source: *We Have to Protect the Kids* (Tahir Andrabi, Benjamin Daniels, Jishnu Das)
Modelling long term learning losses due to Covid school closures

Modelled learning loss for today’s third graders suggests missing 1/3 of a year of learning could reduce long term learning by a full school year.

For today’s 3rd graders, missing ½ a year’s learning could reduce long term learning outcomes by 1.5 years.

Because children re-enter school behind the curriculum, they continue falling further behind without remediation.

Source: Modeling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss (Michelle Kaffenberger) and RISE learning simulations tool.
The youngest children stand to lose the most

Modelled learning loss for today's 1st graders suggests missing 1/3 of a year of learning could reduce long term learning by 1.5 school years

For today's 1st graders, missing ½ a year's learning could reduce long term learning outcomes by 2.2 years

Source: Modeling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss (Michelle Kaffenberger) and RISE learning simulations tool
How can that be?

12 + 12 ≠ 24

2 x 12 ≠ ??
How could these losses be **mitigated** when children return to school?
What could mitigate these losses?

ALIGNS Principles

1. **Set clear learning goals**, particularly for catch up on foundational skills
2. **Adapt instruction** to children’s learning levels, including assessing learning when they return
3. **Support teachers** and other instructors
4. **Adapt particular approaches** to the opportunities and constraints of the context

Source: *Aligning Levels of Instruction with Goals and the Needs of Students (ALIGNS): Varied approaches, common principles* (Yue-Yi Hwa, Michelle Kaffenberger, and Jason Silberstein)
Set learning goals, with focus on foundational skills

Children who miss foundational skills early rarely catch up

- Even before COVID, many children in India remained at a grade 2 learning level despite spending many years in school
- By missing foundational skills, they cannot gain later competencies
- Young children missing foundational skills may have the largest, negative, long term consequences for learning

Source: Muralidharan and Singh (forthcoming)

For more see: Building on Solid Foundations: Prioritizing Universal, Early, Conceptual and Procedural Mastery of Foundational Skills (Carmen Belafi, Yue-Yi Hwa, Michelle Kaffenberger); Indonesia got schooled: 15 year of rising enrollment and flat learning profiles (Amanda Beatty et al.); Special Issue with International Journal of Educational Development on learning profiles
Adapt instruction to children’s learning levels

• Children will be behind when they return to school but by unknown and varying amounts

• **Assess** children’s learning:
  - Simple assessments like the ASER Assessment Tool
  - Repurposing existing assessments (e.g. give 3rd graders the grade 2 evaluative assessment)

• **Adapt** instruction
  - Streamline/condense curriculum
  - Begin the year teaching from the previous year’s curriculum
  - Teaching at the right level and/or structured pedagogy type approaches

All options require supporting, equipping, enabling teachers to repurpose assessment tools and adapt instruction.
Similar practices can address the underlying learning crisis, allowing education systems to come back stronger in the long run.

Examples of ALIGNS approaches:

• **Curriculum** reform in Tanzania cut topics like “Vocational skills” from Standard 1 and 2 curriculum, put **80% of time on literacy and numeracy**, and produced large gains in foundational skills (Mbiti and Rodriguez-Segura, forthcoming)
  - Schools that received teacher training had larger impacts

• Alphabetisation at the Right Age in Sobral, Brazil, **prioritized literacy for all children**, aligning grades 1 and 2 curriculum with children’s learning levels and conducting remediation for higher grades (Crouch, 2020)

• Tusome in Kenya **reoriented literacy curriculum** to children’s levels and provided substantial support to teachers, with large impacts (Piper et al., 2018)

• Funda Wande in South Africa developed new curriculum, teacher guides, and support materials **aligned to the levels and pace of children’s learning** (Ardington and Meiring, 2020)

For more see also: *A Structured Model of the Dynamics of Student Learning in Developing Countries, with Applications to Policy* (Michelle Kaffenberger and Lant Pritchett)
How much of a difference could mitigation measures make for children’s learning?
Simulating long term implications of catch up programs

Long term effects of mitigation strategies for today’s third grade students

- Remediation programs when children return could reduce long term learning loss
- Keeping good practices in place long term could help systems come back stronger than before

Source: *Modeling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss* (Michelle Kaffenberger) and RISE learning simulations tool

Please cite as: Belafi, Carmen and Kaffenberger, Michelle (2020): Long-term effects of different strategies to mitigate the COVID-19 shock. RISE Programme. [access date].
Data source: PISA-D 2018.
Stay in touch

riseprogramme.org
 michelle.kaffenberger@bsg.ox.ac.uk

@MichelleKaffs @riseprogramme RISE Programme
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All links available in the chat!

Thank you for joining!