

Learning in the time of COVID

Rukmini Banerji¹

Some starting thoughts

By January 2021, schools across India will have been closed for nearly 300 days. Even when school systems declare themselves open, it will take time for attendance to stabilize. Teachers, especially those who come from a distance, have to return to their daily schedule. Parents have to feel comfortable sending children to school and children will need to get back into the routine of going to school. Yet, the longer schools remain closed, the more the concern among parents, practitioners and policymakers about impact and implications of what will be a year-long (maybe more) school closure.

As we look ahead and begin to plan, we need answers - data and analysis for many questions. At minimum, we need to know what has been going on with children's education in this COVID time, despite school closures. Next, to compare a typical year with a crisis year, we need to review evidence of long term trends over time prior to the pandemic. Thirdly, as we look towards a new era of education beyond the immediate crisis, what kinds of decisions and plans can be made based these types of data? In this note, I will try to take a crack at each of these questions.

Designing data collection: What has been the status of children's education during the COVID crisis school closure period?

Starting in 2005, for the past fifteen years, every year in the middle of January, India sees the release of the Annual Status of Education Report (ASER). For the first ten years, the ASER report tracked the status of schooling and provided estimates of basic reading and arithmetic skills each year. From 2014, the usual nationwide ASER report has been done every other year (we have reports from 2016 and 2018), with the gap year looking in depth at a specific age group. For example, ASER 2017 was on the age group 14 to 18, while ASER 2019 dealt with the age group 4 to 8. The year 2020 would have been the year for the usual report. But given the COVID crisis and the serious worry about school closure, it seemed right to change the focus and the timing of this year's ASER to explore what children were doing while schools remained closed.

Face-to-face surveys or field work are clearly not possible when physical movement is highly restricted, and there is fear about meeting unknown people. So, the usual ways of doing surveys are out of the question. In public discussions and private conversations, debates are raging about remote learning and digital opportunities in education. On the one hand, technology opens up immense possibilities for delivery of learning content and at the same time there are huge challenges in terms of inequitable access to new modes and mechanisms for accessing education. Yet at a time like this, it is even more important to find out, in rigorous and systematic ways, what children are doing and what has actually been possible in terms of extending educational opportunities to different kinds of populations.

In thinking about how the ASER effort could be adapted for use during the pandemic, there are several key features of the usual ASER architecture that are worth highlighting. ASER has always been a rural survey with information being collected from households. The sample of children reached is representative at district and state levels. In the COVID crisis, although the only way to reach families was via phone calls, it was nevertheless essential to maintain the representativeness of the sample. Luckily, phone numbers are collected from each surveyed household as part of the ASER survey process. This information is usually used for monitoring and cross-checking purposes. For ASER 2020 Wave 1, the ASER 2018 sample was used as the frame. The reliability of data depends entirely on the underlying sampling process. To rely on numbers, the sampling process must be scientific and rigorous. Despite the challenges posed by the COVID crisis, ASER even in this difficult year continues to be based on a meticulous sampling process.

Like in previous years, from April onwards, the ASER team piloted every aspect of the data collection process; from details of design to the nuts and bolts of delivery, each piece was tried out in diverse contexts and in many different languages. Since ASER 2020 Wave 1 data collection was the first nationwide phone survey for the ASER team, hours of practice went into that effort as well.

¹ Chief Executive Officer, Pratham Education Foundation

Timing wise, September seemed to be the right time to carry out the ASER 2020 survey. Many states have summer holidays in the April-May-June-July period. In addition, some of the time in July and August was used by state governments to formulate and finalize their strategies for the period of school closures. By September 2020, school systems across the country had settled into providing whatever support they could to their students. There was also a need for speed. If data could be made available quickly (within a month of data collection), then the evidence could be used by governments and others to carry out new interventions or do course corrections immediately, even while schools remained closed.

ASER 2020 Wave 1 was anchored around a set of interconnected questions. These included: what resources did families have to support home-based learning? Who in the family was able to help children? What inputs and learning opportunities did children receive? What were children able to do with respect to learning? Many of these questions were designed not only to explore how families dealt with the COVID crisis on the education front, but also to provide inputs into thinking about opportunities that could be leveraged beyond the crisis. Close to 120,000 households were sampled. Approximately 58% households were reached, of which 76% completed the survey. Thus, the ASER 2020 Wave 1 survey obtained information for about 60,000 children. Data collection was carried out in September and the report was released before the end of October 2020.

Outlining findings: What has been the status of children's education during the period of school closure caused by the COVID crisis?

Here are some of the highlights from this exercise. First, the availability of ASER 2018 data allowed comparisons to be made between then and now. For example, although the proportion of households who own televisions or motorized vehicles remained similar from 2018 to 2020, a sharp increase in smartphone ownership is visible across all states. Nationally, in 2018, 30% families whose children went to government schools owned smartphones. This number rose to 56% by 2020. For families who send their children to private schools, the figure in 2018 was 50% which increased to 74% in 2020. 11% families reported buying a new phone since the lockdown began, of which more than 80% reported that the new phone was a smartphone. The significant expansion in access to smartphones in rural families is a striking feature of the last two years.

Overall, households reported that about 75% children get some help at home in terms of learning support and that despite the crisis, close to 30% children continued to attend paid tuition classes. Obviously, in families where parents have more education they are able to help children more. However, even in families where both parents have less than 5 years of schooling, close to 55% children received help from parents. Significant help in low education families also comes from siblings (in households where both parents have not even studied up to Std V, 23% children get help from older brothers and sisters.)

In the reference week before the survey in September, about a third of all households reported receiving learning materials and activities from the child's school. 67% families whose children go to government schools and 87% of those whose children go to private schools reported receiving these materials via WhatsApp. Interestingly, 32% of government school children's families also added that materials came via visits (either to the school by parents or by school teachers to the child's home.)

As many as 80% of all children in the sample had textbooks of their current grade. This proportion was higher for government school children. State governments across the country have made extensive efforts to deliver textbooks to children and this statistic is testament to their endeavours. When asked about where children were learning at home during the reference week, 70% families replied that their children did some kind of learning activities in that week. The majority of these activities were with traditional materials like textbooks and worksheets, while far fewer children (usually below 20%) accessed learning programs on television or radio or online (via videos, recorded classes or live online sessions.)

ASER 2020 completed the first wave in September. It is likely that a follow up wave may be planned later in the current school year to track how children's learning journeys are progressing.

Projecting possibilities: How can the current evidence and past trends be used to plan for the future?

Five major takeaways from the current exercise of ASER 2020:

First, the situation is likely to remain fluid for some months to come. With the clear inequities in our society, it is essential to continue to track who is getting what kinds of opportunities and to assess what kind of learning loss is being experienced.

Second, ASER 2020 provides clear evidence of parental engagement and willingness to support children's learning. This family support has to be leveraged by the school system in a systematic way.

Third, traditional teaching-learning methods need to be combined effectively with newer ways of reaching and learning.

Fourth, in-depth assessments of 'what works and how' are needed to improve digital content and delivery for the future. Just because families have devices and connectivity does not automatically mean that children are learning effectively.

Finally, the digital divide is layered on to the existing divisions in our society. Mechanisms to reach and teach children who are on the dark side of the divide have to be worked out so that their educational disadvantage can be ameliorated over time.

Comparing typical year-on-year learning gains to possible learning loss in the crisis year and linking to what may be possible as 'catch up':

For over fifteen years, ASER surveys have repeatedly pointed to weak levels of basic learning for primary school children across India. The finding that even after five years of schooling, half of all Std V children still struggle to read basic text fluently or do simple arithmetic operations - has remained persistently unchanged over time. Even before COVID struck, low and unchanging learning levels were a key feature of the Indian school system.

Over the years, the ASER survey provides estimates for learning trajectories of different cohorts of children. For example, the tables below indicate that depending on the year and the cohort, 'learning gains' in usual years in Uttar Pradesh vary from 5-15 percentage points for Std III-V. Table 1 below tracks cohorts over time using reading data from ASER for children enrolled in government schools in Uttar Pradesh. Table 2 shows the percentage point gain year on year in the proportion of children reading at Std II level.

Table 1: % Children in government schools in Uttar Pradesh reading at least at Std II level

Std				No ASER			
	2012	2013	2014	2015	2016	2017	2018
Std II	2.2	2.3	1.9		3.2		4.6
Std III	6.5	7.1	6.0		7.2		12.3
Std IV	14.2	17.1	15.2		15.9		23.8
Std V	25.6	24.5	26.8		24.3		36.2
Std VI	37.6	39.9	38.5		34.7		45.1
Std VII	48.9	50.1	52.1		49.5		55.3
Std VIII	57.3	57.6	59.3		56.3		62.0

Table 2: Year-on-year percentage point increase in children's ability to read at least at Std II level

Std				No ASER			
	2012	2013	2014	2015	2016	2017	2018
Std II	Start	Start	Start	Start	Start		
Std III	Start	4.9	3.7	7.0		10.3	
Std IV	Start	10.6	8.1	9.1	7.0	14.5	10.3
Std V	Start	10.3	9.7	9.7	9.1	14.6	14.5
Std VI	Start	14.2	14.0	11.4	9.7	15.5	14.6
Std VII	Start	12.5	12.2	8.9	11.4	13.7	15.5
Std VIII	Start	8.7	9.2		8.9		13.7

Note: For years where there is no ASER data (2015 and 2017), an even percentage point increase has been projected based on data of year before and after.

For example, the cohort that was in Std II in 2012 (light blue) gained almost 5 percentage points over one year as children moved to Std III. For the next three years, they gained roughly 8 to 10 percentage points each year. In higher grades (movement from Std VI to VII to VIII) the cohort gained between 13 to 14 percentage points a year.

While data above show trends for 'learning gains' in a business-as-usual year, is there evidence and experience from Uttar Pradesh of learning gains if focussed efforts are made for 'catch-up'?

For the past ten years and more, Pratham has developed the Teaching-at-the-Right Level (TaRL) approach that can help children who are in Std III or older learn to read fluently and do basic arithmetic in a matter of 30-50 days.² TaRL has clear goals, strong focus, simple techniques and materials and continuous on-site support that is provided to teachers via cluster and block resource persons from within the government system. The model has been evaluated rigorously and found to be effective.^{3,4} Children are assessed using a simple tool, then grouped by level rather than grade for instruction. Using activities and materials appropriate for each group, children make quick progress.

In the 2018-19 academic year, Government of Uttar Pradesh in collaboration with Pratham rolled out the 'Graded Learning Program' (GLP) to improve the learning levels of Std I-V students. The 'GLP' was based on the TaRL approach. The program was implemented by about 220,000 teachers in 110,000 government schools, and approximately 9,000,000 children participated in the intervention. The effort achieved significant learning gain across all grades.

There was around a 15 percentage point increase in the proportion of children reading fluently and doing basic operations in Std III and IV who had 45-50 days of instructional time (2 hours a day dedicated to basic reading and arithmetic) and 10% in Std V who had about 30 days of classes. If a longer duration of instructional time had been available, a much greater learning improvement would have been seen.

The results from 2018-19 show that effective catch-up is possible. This was achieved due to specific time commitment and concerted effort on part of the teachers, cluster and block officers, district/ state education officials and leadership.

If a similar effort is done across the state for Std IV and V as soon as schools reopen, in 100 days it is possible that bigger learning gains in foundational skills are achieved than in a regular school year. If needed, an additional phase of 100 days can be planned either during the summer of 2021 or as soon as the 2021 school year begins.

Concluding thoughts

The availability of trends over time from data such as ASER can enable this type of projections to be made, so that planning is based on the available evidence. Both past data as well as current data (like that from ASER 2020) show us the urgent need for planning and implementing effective 'catch up' interventions across the country. This 'catch up' was needed before COVID but has become even more urgent now. As children return to school, enabling them to acquire foundational literacy and numeracy skills must have high priority. ASER 2020 Wave 1 data indicates that there are other resources - human (family members, communities) and technology (hybrid mechanisms and mixed modes of delivery) that can strongly support school based efforts to fuel 'catch up'. The available evidence strongly presents the possibility of 'building back better'. Now concerted action must follow.

Chart 1: % Children in government schools in Uttar Pradesh reading at least at Std II level



Data from 110,747 schools; 5,030,301 students; 75 districts in UP

² https://link.springer.com/article/10.1007/s10833-016-9285-5?wt_mc=Internal.Event.1.SEM.ArticleAuthorAssignedToIssue

³ <https://www.nber.org/papers/w22931>

⁴ https://cpb-us-w2.wpmucdn.com/campuspress.yale.edu/dist/4/2450/files/2018/04/EvidenceInPractice_CaseStudy_TaRL-1mshy9c.pdf