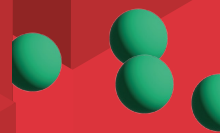
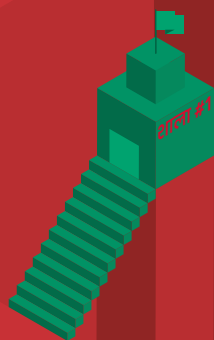


**Clearing the Air:**

# A Synthesised Mapping of Out of School Children during COVID-19 in India

April 2020–May 2022





**This report is an  
independent,  
non-commissioned piece of  
work  
by the Vidhi Centre for Legal  
Policy,  
an independent  
think-tank doing  
legal research to help make  
better laws  
and improve  
governance  
for the public good.**

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## Design

Helene Leuzinger

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# 1. Introduction

Children may be out of school for a multitude of interconnected reasons, including poverty (Hanna & Olivia, 2016; Siddiqui, 2013; Mukherjee, 2011), disability (Gupta, 2016), poor health (Govindaraju & Venkatesan, 2010; Siddiqui, 2013), child marriage (Govindaraju & Venkatesan, 2010; Mukherjee, 2010), child labour (Mukherjee, 2010; Hanna & Olivia, 2016), administrative barriers (Goodburn, 2009), conflict with the law (Fernandez-Suarez et al., 2016), internal migration (Coffey, 2013; Bhattacharya, 2019) and discrimination (Govindaraju & Venkatesan, 2010; Siddiqui, 2013). Siddiqui (2013) categorises the various reasons for being out of school into four major factors – socio-economic, psychological, societal, and school-level factors.

The COVID-19 pandemic has further exacerbated the challenges faced by children in their access to education. Not only does it continue to have a drastic impact on livelihoods, access to healthcare and mental health of all individuals, but the prolonged closure of schools faced by almost 80 percent of children globally (UNESCO, UNICEF, & World Bank, 2020) is likely to have long-term impacts on learning and consequently the completion of schooling. Globally, the length of closures of physical schools lasted for up to 75 weeks (or more), with vast variations across countries (McKinsey, 2022).

Moreover, economic and health shocks as well as challenges in accessing education were disproportionately borne by the economically and socially disadvantaged, and thus, the most marginalized children were already at risk of being out of school.

In response to the closure of physical schools, governments, schools, teachers, and civil society organisations around the world were quick to adapt to remote learning methods to help children continue schooling and to desperately try to arrest 'learning losses' (Chang & Yano, 2020; UNICEF, 2020). However, the extent of implementation of these methods, access to remote education, and consequently the 'success' of different initiatives varied substantially (UNICEF, 2020; LIRNEasia & ICRIER, 2021).

Unsurprisingly, populations who were disadvantaged even prior to the pandemic were affected most severely (Kesar et al., 2021), with at least 31 percent of students from pre-primary to upper secondary schools globally not being reached due to deficiencies in policies and lack of digital infrastructure (UNICEF Data, 2020).

India saw one of the longest periods of school closures across countries, which lasted almost two years (UNICEF Data, 2021). Here, too, more disadvantaged households were disproportionately affected, and pre-existing educational inequalities were exacerbated (UNICEF, 2020; Road Scholarz, 2021). While the penetration of smartphones and

the internet may have substantially increased a few years prior to the onset of the pandemic (ASER Centre, 2021; LIRNEasia & ICRIER, 2021), persistent and quality access to remote learning methods was only realised for a few (Bhattacharya & Kulshreshtha, 2022).

Lack of adequate resources—digital devices used for remote education and non-digital educational resources such as books and other teaching-learning materials (at the school and household level)—and difficulties in delivering and adjusting to new pedagogies, among several other factors, made it difficult for parents to continue their children's education in meaningful ways (UNICEF, 2020; Ghatak et al., 2020). While governments,<sup>1</sup> civil society organisations, and schools tried to alleviate these barriers, successful delivery of remote learning remained uneven (UNICEF, 2021), especially since these challenges were nested in households facing debilitating losses to incomes, livelihoods, and health.

Resources may have also been diverted to more 'urgent' and 'immediate' crises—not just within the household but also at the policy and civil society level owing to limited capacities. For example, government school teachers had been called upon to assist with COVID-19-related relief work and conduct surveys in communities (Govindan, 2022), and organisations and funders working on education redirected their efforts to cater to immediate needs like providing food relief to their beneficiaries (Chopra, 2020).

Therefore, access to schooling resources and materials remained, at best, sporadic for a large section of parents. Many children remained absent for prolonged periods or were 'out of school' during pandemic-induced closures. Absenteeism and especially prolonged absenteeism can lead to learning losses, especially loss of foundational learning. Accumulated over time, this can make it difficult for children to catch up and/or keep up with grade-appropriate learning levels, which in turn may increase their likelihood of permanently dropping out of schools (Azevedo, 2020). For example, in a rapid assessment conducted in 2020, over 65 percent of parents felt their children were "falling behind" as compared to where they should be or would be if they were in physical schools (UNICEF, 2020). Such prolonged absenteeism, as was seen during the COVID-19 pandemic in India, has a long gestation period, and long-term impacts of the same on the retention and learning of children can be accurately gauged only after this period has passed.

During this period in India, many efforts were made to document education gaps and experiences of parents and children in accessing schooling. Several surveys were conducted in geographies and communities that organi-

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<sup>1</sup> The government launched online portals such as Swayam, DIKSHA, and Swayam Prabha that housed digital learning content including digital textbooks across all age groups.

sations, governments, and academics were able to access during school closures, starting from April 2020—just one month after the first nationwide lockdown. Samples across these studies however ranged widely in size, geographic dispersion, and on socio-economic backgrounds, and only a few claimed to have attained some representativeness at the national level. Moreover, findings of these studies across the board varied vastly on the status of schooling among sampled children. Similarly, statistics reported by government agencies and representatives on the status of Out of School Children (OOSCs) varied substantially across states and times – from some states reporting a few thousand children dropping out to statements by ministers indicating millions being out of school.

We synthesise and compare these studies in this review to analyse the status of schooling—across time, geographies (states, regions, rural/urban areas) and social and economic backgrounds of households. The objective of the review is to compile findings from surveys that have gathered experiences of children, parents, and teachers, and their (in)ability to access, attend, and continue schooling during and after the pandemic-induced school closures.

Our focus is on the status of “OOSCs” in India during COVID-19. As per a government order<sup>2</sup> issued in 2018, OOSC includes those children who (i) have never enrolled in any elementary school, (ii) have officially dropped out of school after enrolment, or (iii) have been absent from the school they are enrolled in for 45 days or over “*without prior intimation*”. We document and analyse evidence on OOSCs by drawing from surveys, reports, and newspaper coverage. Since our criteria remain broad, the studies included are diverse in terms of statistical representativeness, methodologies, and sample sizes. We include reports and surveys that have captured any of the following—students “not-enrolled”, “dropped out”, “parents’ expectation and the likelihood of dropping out” (reflected in questions like “were likely to never return to school”), and “attendance in online classes”. The details of the surveys have been adequately provided to better contextualise and interpret the findings.

Our review complements the work of Moscoviz & Evans (2022) who synthesised 40 studies conducted during the period of COVID-19, which capture dropout rates and learning losses from around the world (including two studies from India). They found wide variation in dropout rates across 27 countries ranging from 0.14 percent to 35 percent, with low-income countries and the socially and economically disadvantaged groups being the worst affected.

We compile and compare statistics from across these studies to report on the status of OOSCs. Based on this, we find that children across different socioeconomic contexts have been severely affected. The share of children who were “not enrolled” or “dropped out” ranged from around 1 percent to 40 percent, depending on the underlying sample and the timing of the studies. In a similar vein, inaccessibility of devices, internet and online schooling – representing absenteeism was substantially higher—from 10 percent to more than 90 percent. Surveys indicated that households continued to report inaccessibility of online education even 19 months after the start of school closures.

The large range across studies is indicative of the complexity and sensitivity of the time, definitions and the methodology used to capture these outcomes, some of which have been discussed in the subsequent sections. Educational gaps were expectedly worse for those with prior disadvantages with lower access to materials, devices, internet, and other basic resources to continue schooling, and varied across gender, age, region, and disability status.

We go one step further by comparing reported OOSCs or rates of dropouts or non-enrolments between periodic surveys conducted pre-pandemic and during the COVID-19 pandemic (within the time range of this study). However, only a limited number of datasets allow for such comparison.

Since the impact of the pandemic on children’s education will be long-term, dynamic and remains to be fully understood, we hope this review provides early insights on how the COVID-19 pandemic may have affected the OOSC population in the country and opens new research areas or complements existing ones on its differential impact across various groups. We further hope this paper serves as a repository for education researchers and practitioners working on this topic. The scope of coverage and the limitations of our work have been clearly laid out in the subsequent sections.

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2 Interventions strategies for Special Training, MHRD, Department of School Education and Literacy, October 2013, [https://www.education.gov.in/en/sites/upload\\_files/mhrd/files/upload\\_document/OoSC.pdf](https://www.education.gov.in/en/sites/upload_files/mhrd/files/upload_document/OoSC.pdf)



# 2. Methodology

Based on an extensive and systematic search, three types of sources are compiled and analysed in this paper to gauge the status of OOSCs during COVID-19 in India:– (i) nationally representative surveys, (ii) COVID-specific surveys, and (iii) government surveys (as reported in newspaper articles, statements by government representatives, or official documents published by the government).

physical schools and over-reliance in digital modes during this period meant many children were ‘absent’ from school as they were unable to access digital education. Since this period of school closures lasted well beyond the 45 days of non-attendance that is referred to in the definition of ‘out of school’, we use inaccessibility of digital education (for students enrolled in a school) as a proxy to capture ‘absenteeism’.<sup>5</sup>

## 2.1

### Definition of Out-of-School Children

As stated above, as per a government order issued by India’s erstwhile Ministry of Human Resource Development (MHRD), (now the Ministry of Education)<sup>3</sup> OOSCs include those who (i) never enrolled in any elementary school, (ii) officially dropped out of school after enrolment, or (iii) have been absent from the school they are enrolled in for 45 days or over *“without prior intimation”*. Complexities associated with this definition and the consequent measurement and estimation of OOSCs in India go far beyond COVID-19. However, in this review, we do not delve further into refining the definition of OOSCs but subscribe to the definition above.

The categories of “never enrolled” and “dropped out” are relatively straightforward. The category of “never enrolled” is captured as students “non-enrolled” in any school at the time of the survey, while “dropped out” are usually captured using the term directly. In addition, however, several studies conducted in the early days of the pandemic asked parents about expectations of their students dropping out of school due to the pandemic. These are also included in this review.<sup>4</sup>

The question of capturing absenteeism however is slightly trickier. In the context of COVID-19, we must reinterpret “absenteeism” to account for the closure of physical schools and shift to digital modes of education, which lasted almost 24 months between 2020 and 2022 in India (UNICEF Data, 2021; Hamid & Poorvaja, 2022; Andrew & Salisbury, 2022). The prolonged period of closure of

## 2.2

### Search Strategy

We compiled and reviewed any COVID-19-specific studies which were published between April 2020 and May 2022 and that reported on the extent of “dropouts”, “non-enrollment”, and/or “absenteeism”—captured as the extent of “non-accessibility of digital resources” necessary for participating in remote education during school closures.

During the process of this search, we focused on studies which have samples of students from elementary education i.e., pre-primary, primary, and secondary school levels. We did not restrict the search to any geographical region.

For a systematic compilation of studies, we used the search terms “dropouts” OR “out of school children” OR “child labour” OR “child marriage” OR “care-work” OR “digital divide” OR “pandemic and education” AND “(COVID-19)” AND “(India)” in Google Search and Google Scholar. We reviewed the studies found through above, and complemented them with snowball sampling (i.e., identifying studies cited in other studies). We also included studies found through an extensive search of digital newspaper articles.

The search of newspaper articles was done using the same set of terms for the same period. Some newspapers that were included were – The Hindu, The Times of India, The Hindustan Times, The Economic Times, The Indian Express, India Today, The Wire, and The News18. Only digital versions of these newspapers were accessed.

The aim of this exercise was to particularly identify any studies or government sources on the status of OOSCs that were cited in such articles. This was found to be an

3 Ibid.

4 Questions used to capture students “non-enrolled” or “dropped out” included, “percent of students who were likely to never return to school”; temporary expectations such as percent of students “unlikely to return to school in the next three months” (from date of survey). Further, several studies reported, “percent of households in which at least one child had dropped out of school”.

5 “Absenteeism” is captured using questions about whether households had “access to devices and internet connectivity” during school closures, whether students “owned their own devices” (and thus had easier access than a shared resource), and whether they had “attended any online classes” up until the time of survey. Additionally, some studies captured variables with respect to “regularity” of attendance and “participation” in online classes, access to educational resources or “support from schools and teachers”.

effective strategy as estimations of OOSCs from government surveys were largely not found to be available on the respective websites of the Education department. We visited the websites of the Ministry of Education, Department of School Education and Literacy, Sarva Shiksha Abhiyan, NITI Aayog and state websites of Sarva Shiksha Abhiyan, but we did not find adequate publicly available information from these sources within the time period of this study. Therefore, we rely on newspapers reporting on or citing numbers on the OOSCs from government and other sources.

In total, we identified 72 primary and secondary peer-reviewed articles and studies including periodic and nationally representative surveys, and 110 newspaper articles relevant to the topic under study. Of these, we include for analysis 21 studies having conducted primary research, with the view that primary research studies and rapid assessment surveys conducted during the pandemic would give us a range of real-time statistics on the situation of OOSCs on-ground during the pandemic with respect to the dropouts and/or the digital divide. Of identified articles, only those articles are directly cited, where the source material referred to in said articles could not be located.

## 2.3

### Sample Description

We compiled statistics reported from: (i) 4 nationally representative or census surveys – two waves (2020 and 2021) of the Annual Status of Education Report or ASER (Rural), Unified District Information System for Education (U-DISE) 2020–21, and the National Achievement Survey (NAS) 2021; (ii) 17 COVID-19-specific surveys conducted by institutions, think tanks, and NGOs; and (iii) blog/articles or opinion editorials published in digital media or news platforms.

#### 2.3.1

#### Nationally Representative Periodic Surveys

During the period of April 2020–May 2022, 4 nationally representative periodic surveys were conducted, which captured some information on dropouts, non-enrollment and/or on access to digital resources needed for remote education.

**Table 1: List of Nationally Representative Surveys**

S. No.	Name of the Study	Reference Period
1	<a href="#">Annual Status of Education Report (Rural) 2020 – Wave 1</a> (ASER Centre, 2020)	2020
2	<a href="#">Annual Status of Education Report (Rural) 2021 – Wave 2</a> (ASER Centre, 2021)	2021
3	<a href="#">National Achievement Survey, 2021</a> (National Achievement Survey, 2021)	2021
4	<a href="#">Unified District Information System</a> (UDISE, 2020–21)	2020–21

## 2.3.2

## COVID-19-Specific Surveys

During the period of April 2020–May 2022, 17 COVID-19-specific surveys were conducted, which captured any information on dropouts, non-enrollment and/or absenteeism (access to digital resources needed for remote education).

Table 2: List of COVID-19-specific surveys

S. No.	Name of the Study	Sample Size	Reference Period	Region
1	<a href="#">Status Report: Government and Private Schools during Covid-19 – Findings of Rapid Survey</a> (Vyas, 2020)	1158 (Parents in private & government schools)  488 (Teachers in government schools)	May–June 2020	Bihar, Chhattisgarh, Jharkhand, Odisha, Uttar Pradesh
2	<a href="#">A Generation at Stake: Protecting India's children from the impact of Covid-19</a> (Shah, 2020)	992 (Parents in programme) 754 (Children in programme)  606 (migrant parents) 235 (migrant children)	June–July 2020	Bihar, Jharkhand, WB, Assam, Rajasthan, MP, Maharashtra, UP, Delhi, J&K, Odisha, Karnataka, Telangana
3	<a href="#">Ground-level Covid-19 Pandemic Impact Report: A cross-sectional survey of students in Pune, India</a> (Nair et al., 2022)	228 (students)	June–July 2020	Pune, Maharashtra
4	<a href="#">Digital Education in India: Will Students with Disabilities miss the bus?</a> (Swabhiman Odisha, 2020)	2178 (children) 303 (teachers) 1041 (parents, with 839 mothers)	July–August 2020	Odisha
5	<a href="#">Life in the time of Covid-19: Mapping the impact of Covid-19 on the lives of school going children especially girls in India</a> (Ghatak et al., 2020)	3176 (Parents or guardians)  3176 (Adults or children)	July–August 2020	Assam, Bihar, Uttar Pradesh, Telangana, Delhi
6	<a href="#">Rapid Assessment of Learning during the school closures in the context of Covid</a> (UNICEF, 2020)	5800 (Parents, adolescents, teachers)  50 (In-Depth interviews with parents, adolescents, teachers)  30 (In-Depth interviews with ecosystem experts)	August–September 2020	Assam, Bihar, Gujarat, Kerala, Madhya Pradesh, Uttar Pradesh
7	<a href="#">Myths of Online Education</a> (Azim Premji Foundation, 2020)	1522 (Teachers) 398 (Parents)	September 2020	Chhattisgarh, Madhya Pradesh, Rajasthan, Karnataka, Uttarakhand
8	<a href="#">Covid-19 and Exclusion of Children with Disabilities in Education</a> (Vernekar et al., 2020)	164 (Children and Parents) 50 (Teachers)	September–October 2020	Andhra Pradesh, Karnataka, Kerala, Tamil Nadu

S. No.	Name of the Study	Sample Size	Reference Period	Region
9	<a href="#">The Pandemic and Disparities in School Education: Results from a Telephone Survey</a> (Oshikawa & Chakraborty, 2021)	230 (Students from 108 households)	September–October 2020	Andhra Pradesh, Bihar, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Punjab, Tamil Nadu, Telangana, Tripura, Uttar Pradesh, West Bengal
10	<a href="#">Delhi NCR Coronavirus Telephone Survey – Round 4</a> (National Council for Applied Economic Research, 2021)	3168 (Households)	December 2020–January 2021	Delhi NCR – Delhi, Haryana, Uttar Pradesh, Rajasthan
11	<a href="#">Edtech and Educational Opportunity during the Covid-19 school closures: A case study of Chennai, Tamil Nadu</a> (Vegas et al., 2021)	201 (Households) 271 (Children)	February 2021	Chennai, Tamil Nadu
12	<a href="#">Annual Status of Education Report – Karnataka (Rural)</a> (ASER Centre, 2020)	13365 (Households) 18385 (Children)	March 2021	Karnataka
13	<a href="#">Access to Services during Covid-19 in “Digital India”</a> (LIRNEasia & ICRIER, 2021)	7000	March–August 2021	National level, except Kerala
14	<a href="#">Starting from Scratch: Role of Parents, Teachers, and Tech in Early Childhood Education during Covid-19</a> (Vernekar et al., 2021)	676 (Households)  58 (In-depth interviews with teachers)	April–June 2021	Maharashtra – Mumbai and Pune
15	<a href="#">Locked Out: Emergency Report on School Education – SCHOOL Survey</a> (Road Scholarz, 2021)	1400 (Households)	August 2021	Assam, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Jharkhand, Karnataka, Madhya Pradesh, Maharashtra, Odisha, Punjab, Tamil Nadu, Uttar Pradesh, West Bengal
16	<a href="#">Annual Status of Education Report – Chhattisgarh (Rural)</a> (ASER Centre, 2021)	33,432 (Households) 46,021 (Children)	October–November 2021	Chhattisgarh
17	<a href="#">Annual Status of Education Report – West Bengal (Rural)</a> (ASER Centre, 2021)	10,141 (Households) 11,189 (Children)	December 2021	West Bengal

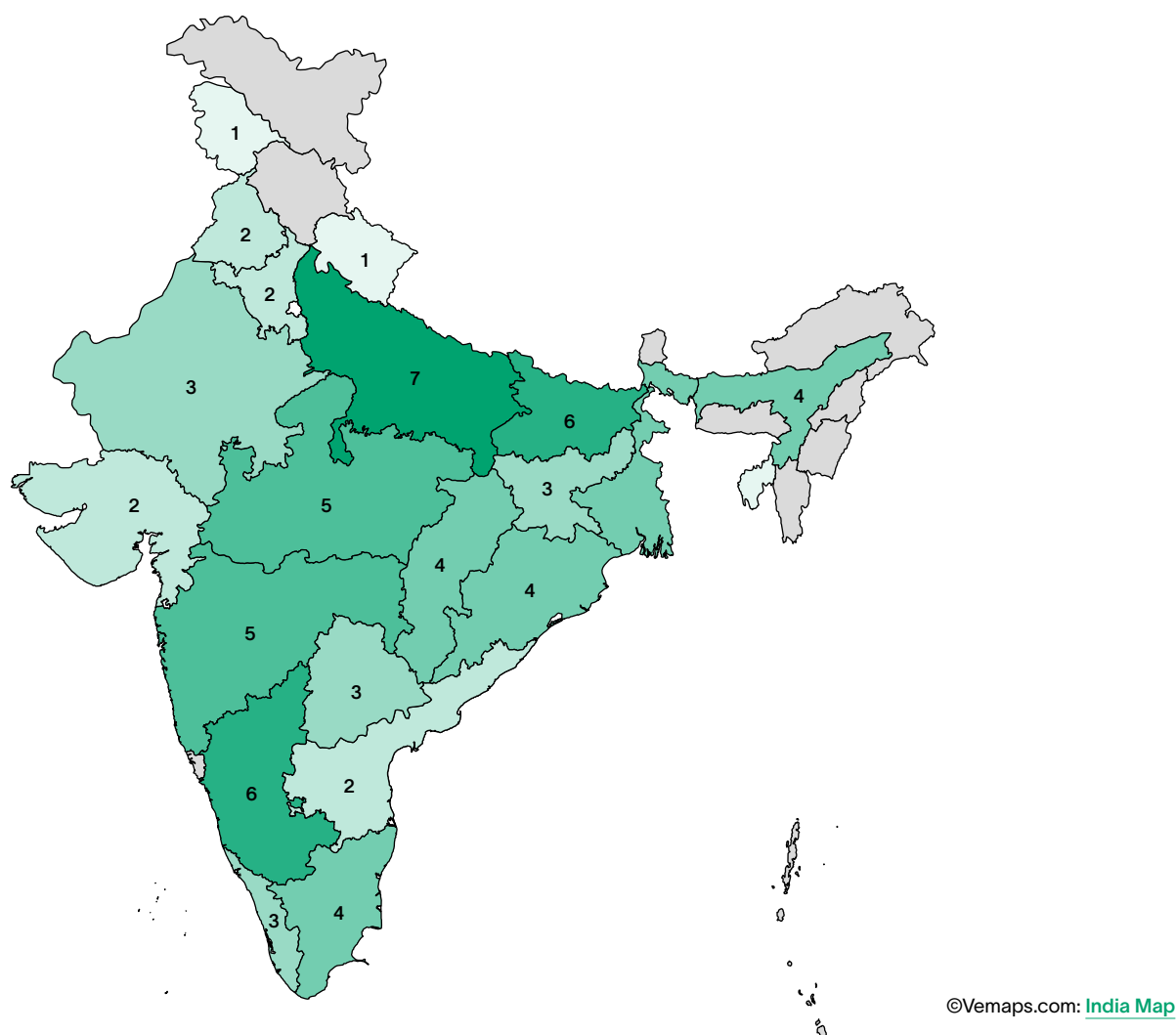
Note: A table including details on sampling methodology, age-group of the sample, and questions asked to capture OOSCs and estimates of OOSCs is provided in Tables 1 and 3 in the Appendix, respectively. Appendix Tables 1 and 2 list all reference sources and newspaper articles.

Statistics cited were descriptive statistics or absolute numbers reported across sources, during the period of May 2020 (~1 month from the start of the first wave and national lockdown in India) to November 2021. Details of the period of when studies were conducted by source are included in Appendix Tables 1 and 2. Respondents to primary surveys included teachers, parents or guardians of children, and children themselves.

Sampled studies conducted primary data collection across most states in India, with the exception of Himachal Pradesh and 5 of the Northeast Indian states (as shown in the map below). A majority of studies included samples from Uttar Pradesh, Madhya Pradesh, Maharashtra, Karnataka, and Bihar.

In addition to the above, the 4 periodic surveys and another nationally representative study – LIRNEasia & ICRIER (2021) (with the exception of Kerala) – include samples across all 28 states and 8 UTs of India.

Figure 1: Geographic spread of Covid-19 Specific Studies

©Vemaps.com: [India Map](#)

## 2.4

### Limitations

It should be noted that the different findings of the various sources, and especially of the COVID-19-specific surveys, are not strictly comparable, due to variations in questions used to capture out-of-school populations from survey to survey, methodologies, and geographies and socio-economic backgrounds of samples under study. We contextualise reported statistics by providing details of methods of sampling and analysis for the studies. While the assessment of the nature of questions used to capture OOSCs itself can be an important area of study, this is outside the ambit of this paper.

Secondly, the dynamism of the OOSC population during the period of COVID-19 was especially time-sensitive, due to nationwide lockdowns and periods of school closures. It is thus possible that we might see large spikes in numbers of “non-enrolled” or absent students, which would return to pre-pandemic levels over time.

Accounting for when data was collected might thus reflect whether the OOSC population changed through the course of the pandemic—as the state introduced new policies and initiatives to make education accessible, as schools closed and reopened, as schools became more or less willing to move to online modes of education, as the penetration of mobile phones and other devices increased across the country, as households and teachers became more or less comfortable with technology for education, etc. Given the vast number of considerations that might also explain sample statistics reported across compiled studies, making such determinations on the basis of time-lines alone proved difficult for the purpose of this paper.

# Summary

## What do Government Sources say about the Status of OOSCs?

- Numbers of the OOSCs population reported by the few states who did make this data public varied substantially on a range from 25,000 students in Maharashtra to over 6.2 lakhs in Jharkhand.
- In a statement made by Education Minister Dharmendra Pradhan on 21st November 2021, he stated that the number of OOSCs across India was at nearly 15 crores (nearly half of the school-going population in India)

## What do COVID-19-specific studies say about OOSC?

- Across compiled COVID-19-specific surveys, reported OOSCs during the pandemic ranged from 1.3 percent to 43.5 percent, depending on the period, geography, and/or groups surveyed.
- Across studies, the extent of inaccessibility of devices among sampled respondents ranged from 10 percent to 97 percent. Inaccessibility of internet connectivity to participate in online modes of education ranged from 11 percent to 91.1 percent.
- Across studies, percentage of children who “did not receive any online education” (from start of school closures till the time of survey), ranged from 10 percent to 60 percent. This further implies that at the worst, some students did not access any online education for a period of up to 19 months (from March 2020 to October 2021).

# 3. Findings

The findings of this paper are structured as follows: We first report findings from all government sources of information on the question of OOSCs, followed by findings from analysis of compiled studies, reports and surveys (including secondary datasets from periodic surveys) on two areas of questions:- (i) incidence of non-enrollment and dropouts, and (ii) access to virtual classes.

Secondly, we discuss whether specific groups of students—on the basis of age group, gender, disability, and socioeconomic background—might have been more affected by the pandemic than others in their access to education. Here, we also try to identify possible new sites of exclusion of students from education that require further examination.

## 3.1

### What do government sources say about the Status of OOSCs?

On the matter of tracking and addressing the issue of OOSCs during the pandemic, limited information was publicly available on initiatives taken by individual states and UTs across the country.<sup>6</sup> States are mandated to collect data annually on the status of OOSCs under the Sarva Shiksha Abhiyan.<sup>7</sup> However, by June 2022, the research team was able to find little publicly available information on any government websites for the status of OOSCs during COVID-19,<sup>8</sup> or released by either individual states, or in public statements made by ministers, that cited any estimation or record of the OOSC population during COVID-19.

Numbers of the OOSCs population reported by the few states who did make this data public varied substantially on a range from 25,000 students in Maharashtra to over 6.2 lakhs in Jharkhand.

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- 6 We conducted a review of initiatives announced by individual states and union territories (on respective government websites of states or as cited in news-paper articles). We find that of 36 states and UTs across the country, 7 had not announced any initiative on the matter of OOSCs. Others provide some detail as compiled by the research team [here](#). Further information on initiatives announced by states can be found in [Project Approval Board \(PAB\) Minutes](#). As these documents were largely released outside the period of this study (between June and July 2022), they have not been compiled by the research team.
- 7 In 2018–19, the three schemes – Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA), and Teacher Education (TE) were subsumed under one scheme i.e. Samagra Shiksha Abhiyan. More information on this is available [here](#).
- 8 In June 2021, the Union Education Ministry launched the data portal PRABANDH (Project Appraisal, Budgeting, Achievements and Data Handling System) under the Samagra Shiksha Abhiyan. States were to use this data portal to compile information on children in the age group of elementary schooling (6–14 years), to capture and track those who were out of school during the pandemic. However, this portal does not release open-access data on the same.



**Table 3: State-reported numbers on status of OOSCs, drop outs and digital divide during COVID-19**

Name of the State	OOSCs/Dropouts Reported	Percent OR number of children with no access to digital devices	Source
All India	3,500,000+ (OOSCs)		<a href="#">Economic Times, 2021</a>
All India	150,000,000 (OOSCs)		<a href="#">India Today Web desk, 2021</a>
All India	0.8% (Drop out rate – Primary School)		<a href="#">UDISE, 2020–21</a>
	2.3% (Drop out rate – Upper Primary)		
	14.0% (Drop out rate – Secondary School)		
Andhra Pradesh	60,200 (OOSCs)	100,000 (No access to TVs, smartphones, or laptops)	<a href="#">Indian Express, 2021; Times of India, 2020</a>
		57%	<a href="#">Economic Times, 2021</a>
Assam	86,094 (OOSCs)	44.2%	<a href="#">Economic Times, 2021</a>
Bihar	68,256 (OOSCs)	58.1%	<a href="#">Economic Times, 2021</a>
Gujarat		40%	<a href="#">Economic Times, 2021</a>
Jharkhand	620,000 (OOSCs)	43.4%	<a href="#">Economic Times, 2021</a>
Ladakh	18.3% (Drop out rate)		<a href="#">Economic Times, 2021</a>
Maharashtra	25,200 (OOSCs)	40.2% (No access to smartphones with internet connectivity)	Borwankar, 2020
Madhya Pradesh		70%	Vishnoi, 2021
Nagaland	16.5% (Drop out rate)		Vishnoi, 2021
Odisha	22.5% (Drop out rate)		Vishnoi, 2021
Rajasthan	180,000 (OOSCs)		Vishnoi, 2021
Uttarakhand		41.2%	Vishnoi, 2021
Uttar Pradesh	550,000 (OOSCs)		Vishnoi, 2021

In addition to the sources cited above, the *Sarva Shiksha Abhiyaan* released the Project Approval Board (PAB) minutes for all states, in which states provided an estimate of dropout rates and the absolute number of OOSCs in elementary school and higher secondary school for the year 2021-22.<sup>9</sup> This was, however, released between June and July 2022, outside the period in which sources were compiled for this paper.

In January 2021, an article reported on a survey conducted by the Delhi Government which found that nearly

2.2 lakh students in the age group of 6-17 years were out of school at the time of the survey (The Wire Staff, 2020). This was estimated to be approximately 10 percent of the student population in the state. Additionally, it reported that approximately 15 percent of students enrolled in government schools “have been missing” from the alternative classes being conducted online or through phones.

As per data collected by the Maharashtra government (Borwankar, 2020), approximately 25,200 students were reported as being out of school in the state at the time

<sup>9</sup> While analysis of these numbers have not been included in this study, numbers reported for all states were compiled by the research team, and can be referred to [here](#).



of the survey. The source cited that of these, about 31 percent of students were “never enrolled” while the remaining were deemed to be out of school due to irregular attendance. The same article also reported that 40.2 percent of children in Maharashtra had no access to smartphones with internet connectivity.

In July 2021, an article reported that as per data collected by the Andhra Pradesh Government, approximately 60,200 students were out of school in the state at the time of the survey (Janyala, 2021). Another article published in August 2020, cited that 1 lakh students in Andhra Pradesh did not have access to TVs, smartphones, or laptops in the state (Mishra, 2020).

In October 2021, an article reported numbers released by states in the Parliamentary Standing Committee held on 21st June 2021 (Parliament of India, 2021). In descending order of numbers reported, overall dropout rates were reported as 22.5 percent in Odisha, 18.3 percent in Ladakh, 16.5 percent in Nagaland. OOSCs were reported as 6.2 lakhs in Jharkhand, 5.5 lakhs in Uttar Pradesh, 1.8 lakhs in Rajasthan, 86,094 in Assam, and 68,256 and counting in Bihar as of June 2021. The article further reported on access to devices in 7 states, citing a report by the Ministry of Education. It reported that 70 percent of students in Madhya Pradesh; 58.09 percent of students in Bihar; 57 percent of students in Andhra Pradesh; 44.24 percent of students in Assam; 43.43 percent of students in Jharkhand; 41.17 percent of students in Uttarakhand; and 40 percent of students in Gujarat have no access to digital devices. Details on how such data was collected, including details about the sample of children in terms of age and other characteristics, was not provided.

The article went on to report that on the basis of this, “35 lakh students and counting” were considered out of school across the country. However, in a statement made by Education Minister Dharmendra Pradhan on 21<sup>st</sup> November 2021 (only a month later), he stated that the number of OOSCs was at nearly 15 crores (which is nearly half of the school-going population in India) (India Today Web desk, 2021). Importantly, the age or grades of children being referred to here was not specified.

Finally, the official source of information from the government on dropout rates is the periodic surveys conducted by the Government of India—the UDISE.<sup>10, 11</sup> This can be referred to as it is one of the only state-run periodic

surveys (having relevant indicators to this study) that was conducted in some form during the period of the pandemic in India. U-DISE 2020–21 statistics revealed drop-out rates of 0.76 percent, 2.27 percent, and 14.04 percent in primary, upper primary and secondary stages of schooling, respectively for the period coinciding with the pandemic in India (U-DISE, 2020–21).

## 3.2

# What do COVID-19-specific Studies say about the Status of OOSCs?

## 3.2.1

### Non-enrolled and Dropouts during COVID-19

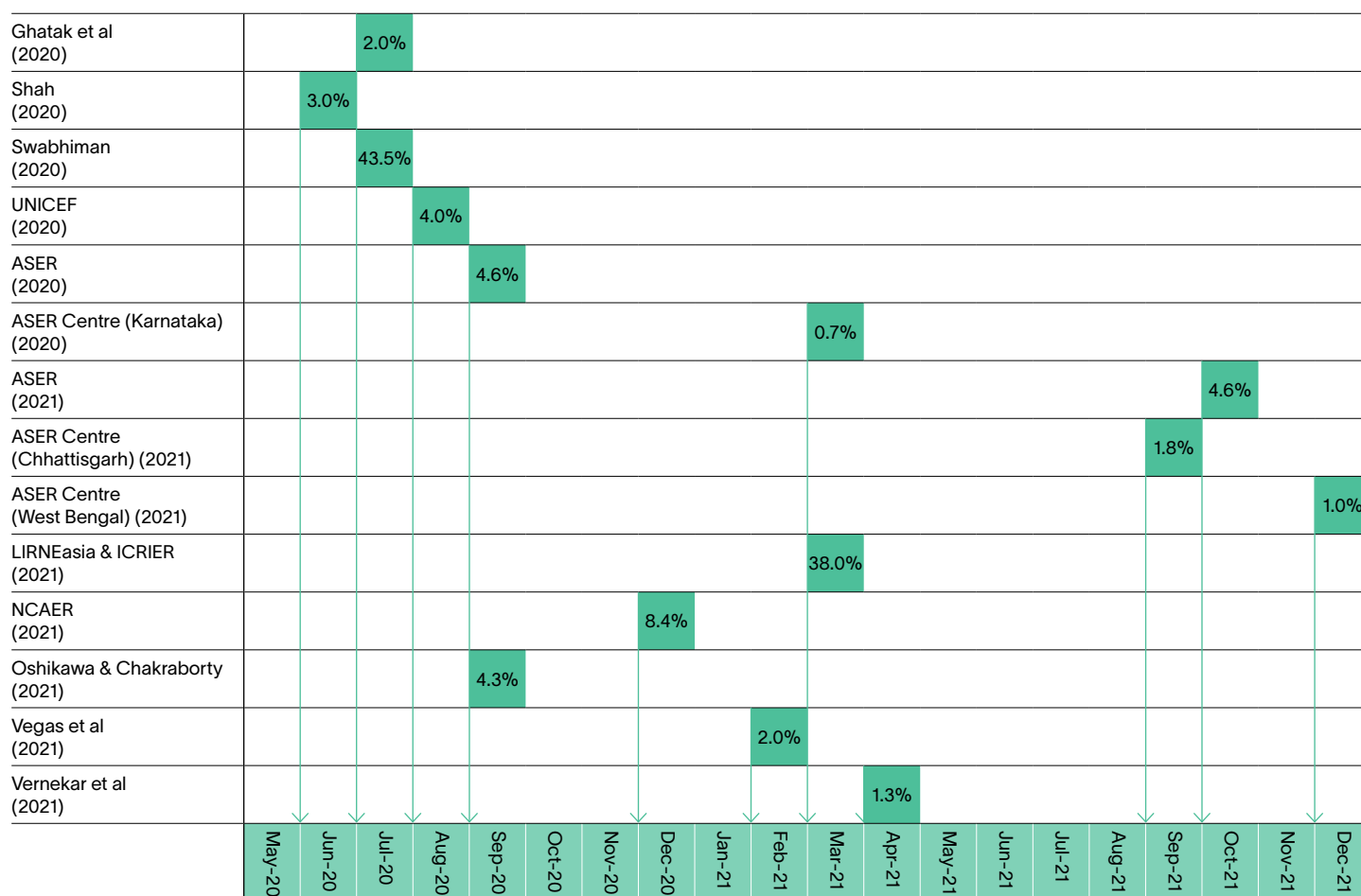
In this section, we report on what compiled sources tell us about the status of “dropouts” and “non-enrolled” students, across levels of schooling, during the COVID-19 pandemic. Compared to any measure of “non-attendance”, these metrics for capturing the out-of-school population are relatively more severe or egregious, where students, parents or teachers report a clear decision or constraint that has led to non-enrollment or dropping out of school. This is in comparison to measures of “absenteeism” that might reflect some temporary behaviours.

Across compiled COVID-19-specific surveys (that sampled households at the national-level and within states), the reported percentage of children who were ‘out of school’ at the time of surveys being conducted (during the pandemic), ranged from 1.3 percent to 43.5 percent, depending on the period, geography, and/or groups surveyed.

10 U-DISE, first initiated in 2012–13 integrating DISE for elementary and secondary education, is one of the largest Management Information Systems on School Education covering more than 1.5 million schools, more than 9.6 million teachers and 264 million children.

11 U-DISE collects data at the school level, and includes an indicator, “dropout rate”, which is presented by stages of schooling (primary, upper primary, or secondary), and by gender. Crucially, it should be noted here that U-DISE reports on percent of dropouts, which is only a subset of the larger OOSC population. Secondly, while it is intended to be a census of all schools in the country, U-DISE collects data through self-administration of survey tools by schools, and thus sees less than 100% participation from private unaided schools specifically. Thus, while U-DISE is a credible source of information on all government and government-aided schools, it should be considered that private unaided schools are not adequately represented here. This is significant as nearly 37% of the school-going population were enrolled in private schools across the country prior to the pandemic (U-DISE 2019–20).

Chart 1: Drop-Outs Reported Across Covid-19 Specific Studies



Note: This chart is reflective of statistics reported by all studies reporting “non-enrolled” or “drop-outs” during COVID-19 in chronological order by date of publication. Statistics reported in this graph are not comparable as samples differ by region, socio-economic background and other characteristics. Shah (2020) and statistics on drop-outs from U-DISE are not included in this chart as they are only provided by grade, and not for the total sample.

The upper end of this range (43.5 percent) is substantially higher than pre-pandemic estimates of the OOSC population across the country at 2.5 percent as per ASER Centre 2018 data for rural India, or 14.04 percent for secondary school-going children as per U-DISE 2019–20 (ASER Centre, 2018; U-DISE, 2019–20). In later sections, we compare the rounds and waves of U-DISE and ASER data collected since the start of the pandemic to the latest round of data collected prior to the pandemic.

The vast range of OOSCs reported across studies can be explained by the diverse samples from which data was collected, the time period in which data was collected (and corresponding lock-downs, school closures and other measures associated with COVID-19 during that period that might have determined status of education), as well as the questions used to capture the OOSC population.

This vast range is both concerning and puzzling and necessitates further examination. For example, a study reporting 43.5 percent students were likely to drop out of

school due to the pandemic had a sample of approximately 3000 children with disabilities, who were a marginalised population from mainstream schools even prior to the pandemic (Swabhiman Odisha, 2020).

A survey conducted by UNICEF between August and September 2020 on a sample of 5800 adolescents, parents, and teachers across 6 states in India, reported 8 percent students were “not returning to school in the next three months” (from the date of survey), while 4 percent were likely to “never return to school”. The temporary nature of the first question, as well as uncertainty around re-opening of physical schools and their safety during the initial days of the pandemic, might have lent itself to a higher percent of households reporting a likelihood of not returning to school (UNICEF, 2020).

The estimate of 1.3 percent dropouts comes from a study of approximately 650 households in urban Mumbai and Pune who were, while urban-poor, categorically more socially and economically advantaged than the average

household in Maharashtra (Vernekar et al., 2021). On the other hand, the study reporting on the upper end of the range, that 38 percent households in their sample had at least one child in their household who had “dropped out of school” is a troubling consideration (LIRNEasia & ICRIER, 2021). This study is especially important to examine for three reasons. Firstly, it captures data from a nationally representative sample (with the exception of the state of Kerala), of children aged 15 years and above, from a total of 7,000 respondents in 350 villages and wards across the country.<sup>12</sup>

Secondly, the study was conducted between March and August 2021, which suggests that a large population of children were dropping out of school or had not returned to school well into the second year of the pandemic. On the other hand, the third significance of this study, is the framing and interpretation of the question, which might lend itself to an over- or under-estimation of the OOSC population. Respondents were reportedly asked whether any child in their household had dropped out of school “due to COVID-19”, which means the question only captures dropouts at the household level, and not individual child level. As such, while 38 percent of households reported at least one child has dropped out of school, this is not the percent of children who have dropped out. However, due to the phrasing of the question that attributes dropping out to the COVID-19 pandemic, it is possible that some students might have dropped out due to reasons they considered non-relevant to the pandemic. Finally, the question only captures “dropouts” and not the status of enrollments.

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12 A note on the methodology of LIRNEasia & ICRIER (2021) can be found in: Tharaka Amarasinghe, “Impact of COVID-19 on households and the workforce in India - Survey methodology note”, LIRNEasia, November 2021, <https://lirneasia.net/wp-content/uploads/2021/11/Impact-of-COVID-19-on-households-and-the-workforce-in-India-Methodology-v1.pdf>.

## 3.2.2

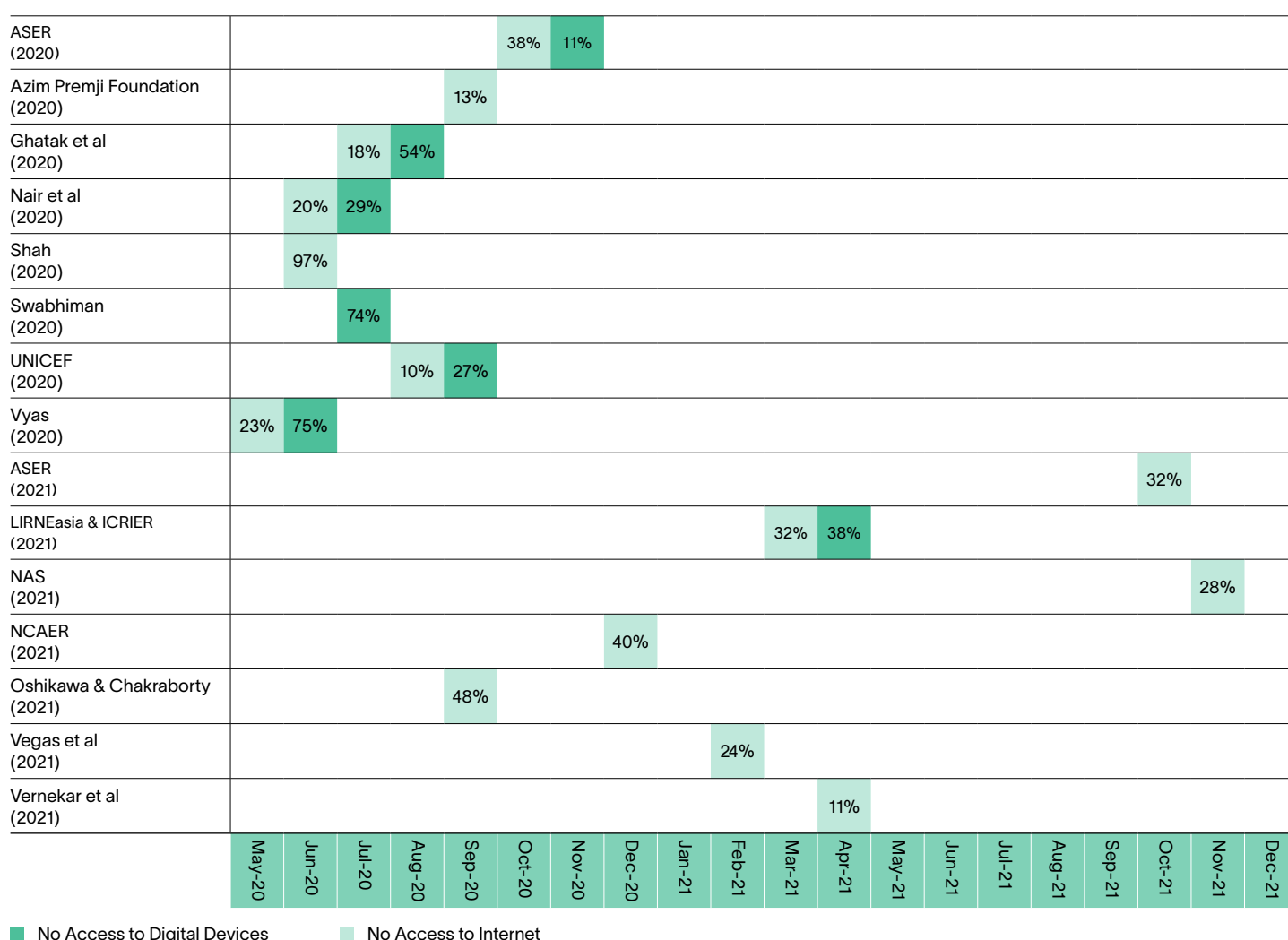
## Absenteeism or Non-attendance during COVID-19

As explained above, “absenteeism” or “non-attendance” are captured using questions regarding access and participation of students in digital modes of education—predominantly determined by access to devices and internet connectivity. Table 2 of the Appendix presents a summary of the evidence on the access to digital devices and internet services from the reference surveys and newspaper articles.

Across studies (that sampled households at the national level and within states), the extent of inaccessibility of devices among sampled respondents **ranged from 10 percent to 97 percent**, while inaccessibility of internet connectivity to participate in online modes of education ranged similarly from 11 percent to 91.1 percent.

The fact that the percentage capturing access to education during school closures is considerably higher than even the upper range of “dropouts” or “non-enrolled” children (as reported in the last section) is not surprising. It might reflect what we already know from literature—that among children who are absent from school for prolonged periods of time, some are likely to drop out permanently.

**Chart 2: Absenteeism or Non-Attendance reported across Covid-19 Specific Studies**



**Note:** This chart is reflective of statistics reported by all studies reporting “no access to digital devices” and “no access to the internet” during COVID-19, in chronological order by date of publication. Statistics reported in this graph are **not** comparable as samples differ by region, socio-economic background and other characteristics. Additionally, Road Scholarz (2021) is not included in this chart as data was only presented across regional sub-groups and not for the total sample.

13 The definition of ‘devices’ differs across different compiled studies. For example, in waves of ASER, the word ‘Smartphones’ was used in the place of the ‘devices’. LIRNEasia & ICRIER (2021) used the word ‘Smartphones’, however also differentiated it from ‘basic phone’ and ‘feature phone’.

It further reflects why capturing absenteeism in and of itself is important, as being enrolled in a school is an insufficient indicator of participation in education.

Here, too, the large range of respondents not having access to online classes, or devices and/ or internet connectivity might be explained by a combination of the time when surveys were conducted, the sample from which data was collected, as well as the nature of questions posed to respondents.

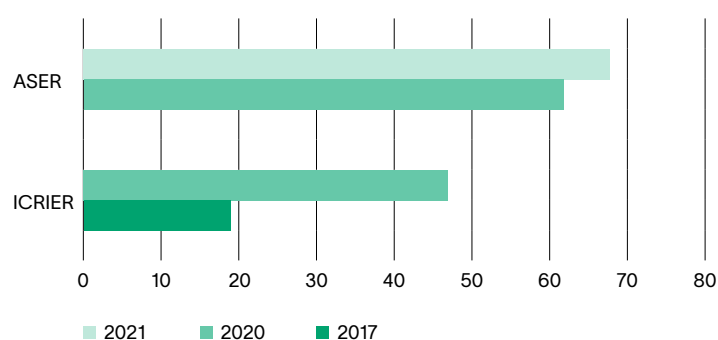
For example, 97 percent inaccessibility referred to access to computers, which are known to be fairly unaffordable for a large segment of the Indian population (Shah, 2020). On the other hand, the lowest-end of the range at 10 percent is explained by students who did not use **any** devices for learning – including smartphones, feature phones, laptops, computers, televisions, and radio (UNICEF, 2020).

Studies presenting either census level or nationally representative data reported inaccessibility of devices<sup>13</sup> between 28 percent and 40 percent. ASER Centre (2021) reported between 35 percent and 40 percent of sampled households did not have access to devices and the internet, respectively; NAS (2021) reported access to devices at 28 percent; and the study conducted jointly by LIRNEasia & ICRIER (2021) reported 32 percent of students aged 15 years and above did not have a smartphone.

However, inaccessibility of devices was not a static claim. Device penetration was found to drastically increase during the COVID-19 pandemic (as shown in Chart 3 below) with households increasingly investing in smartphones (primarily) for accessing online/virtual modes of education.

ASER data reported an increase of 5.8 percent in access to devices among sampled households (from 38.2 percent households not having smartphone access in 2020, to 32.4 percent in 2021) between 2020 and 2021 waves of data collection. Smartphone access was also 31.1 percent higher in 2021 than in 2018 (ASER Centre, 2021). The study conducted by LIRNEasia & ICRIER (2021) compared smartphone penetration in 2020 to data collected in 2017 (prior to the pandemic), and reported an increase from 19 percent in 2017 to 47 percent in 2020.

**Chart 3: Device Penetration across Years,  
as per ASER (2020; 2021)  
and LIRNEasia & ICRIER (2021)**



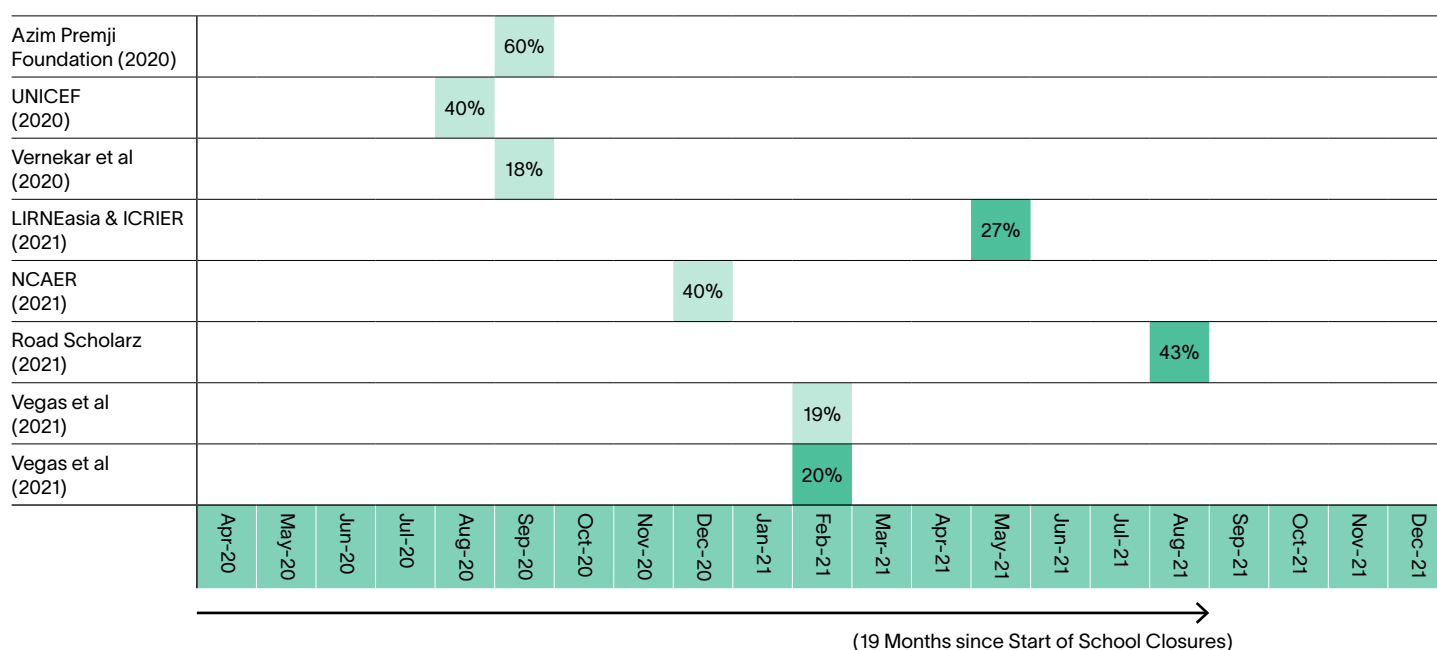
Note: Statistics reported under ICRIER (2017) and ICRIER (2020) are as cited in LIRNEasia & ICRIER (2021).

## On access to any online education

Despite the apparent increase in penetration of smart-phones, some studies reflected a persistent inaccessibility to digital education. In an additional statistic, some studies (that sampled households at the national level and within states) reported on the number of children who “did not receive any online education” (from the start of school closures till the time of survey<sup>14</sup>).

This ranged from 10 percent to 60 percent, which would imply that at the worst, some students did not access any online education for a period of up to 19 months (from the start of the pandemic in March 2020).

**Chart 4: Non-Attendance in Remote Classes (since Start of School Closures) across Covid-19 Specific Studies**



■ % not having accessed Remote Education

■ % reporting School was not offering Remote Instruction

Note: This chart is reflective of statistics reported by all studies reporting “no access to online classes” during COVID-19, in chronological order by date of publication. Statistics reported in this graph are **not** comparable as samples differ on region, socio-economic background and other characteristics.

14 It should be noted that schools across India were closed from the first nationwide lockdown in March 2020, however schools did not open across the country at the same time. School reopenings happened in a phased manner with classes for higher grades largely opening sooner than primary and pre-primary grades. Further school reopenings differed across states and between rural and urban areas within states.

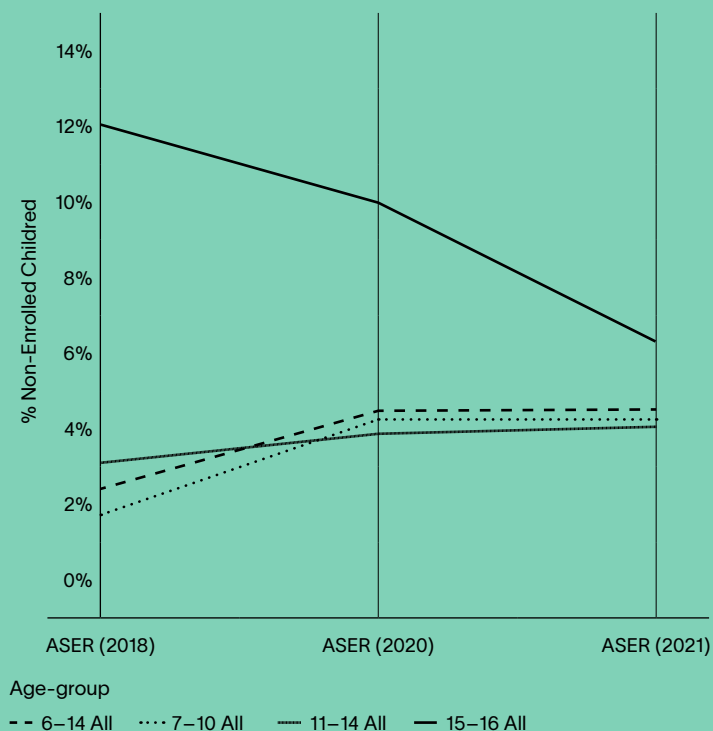
Two studies conducted between August and September 2020, reported high non-participation in online classes. The first, with a sample from 5 states in India, reported that 40 percent of children in their study (a sample of 5800 parents, adolescents, and teachers across 6 states) did not use *“any form of remote learning in the six months prior to the date of survey”* (UNICEF, 2020). Another reported that approximately 60 percent of children could not access any online learning opportunities at the time of the survey as per their sample of 1522 teachers surveyed across 26 districts in 5 states, serving 80,000 children from *“the most disadvantaged geographies across India”* (Azim Premji Foundation, 2020). However, a third study conducted around the same time on a sample of 164 parents of children having disabilities from four Southern Indian states reported only 18 percent of students had not received any access to online classes at the time of the survey (Vernekar et al., 2020). While all three surveys were conducted around the same time, it is possible this gradient of non-percent could be explained by characteristics under study as well as states in which data was collected. The studies themselves did not compare findings across states. As such, making such a comparison is outside the ambit of this study.

While some of these studies capture this statistic as students not having access to any phone/device for education, others put the onus on schools and whether they offered, or were able to offer, remote lessons. A nationally representative survey reported that around 27 percent of schools were *“not prepared to deliver online education”* (LIRNEasia & ICRIER, 2021). ASER Wave 1 data reported that 68.1 percent of students who did not receive any online education during the pandemic (or 43.85 percent of the total sample) cited *“school not sending”* as the reason for this (ASER Centre, 2020). Another study conducted in February 2021, nearly a year into the pandemic, reported that 20 percent of their sample were enrolled in schools that did not offer any remote instruction (Vegas et al., 2021). Finally, Road Scholarz (2021), conducted in August 2021, reported that 43 percent of their sample from rural areas cited *“no online material is being sent by the school”* as the main reason for not studying online regularly, despite having access to a smartphone.

On the other hand, one study reported that among the 80 percent of the sample who were enrolled in schools offering digital lessons, 19 percent of them did not attend any digital lessons (Vegas et al., 2021). In a worrying statistic, a nationally representative survey reported that of the sampled students who were enrolled in schools prior to the pandemic, 80 percent did not have *“continuity in formal education during school closures”* (LIRNEasia & ICRIER, 2021).

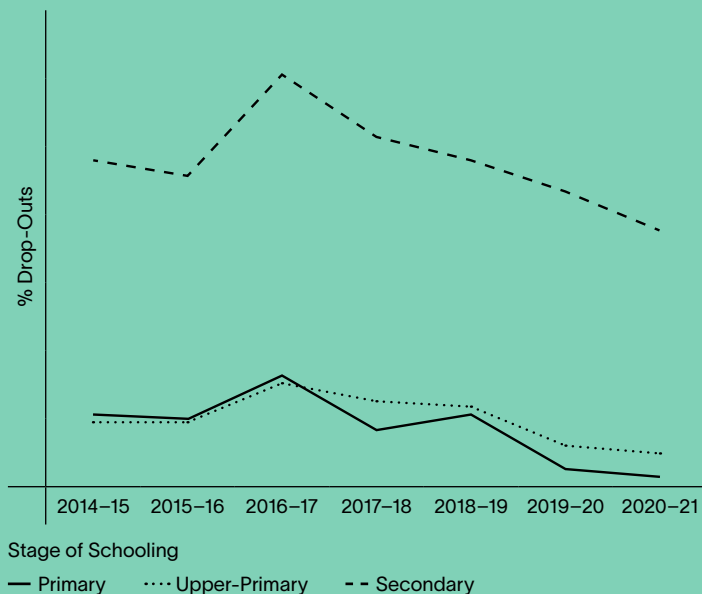
# Summary

**Non-Enrolled Children  
by Age-Group Across Time (ASER)**



Note: This chart has been created by authors using data presented in ASER (2018; 2020; 2021).

**Drop-Outs by  
Stage Of Schooling Across Time (U-DISE)**



Note: This chart has been created by the authors using data presented in U-DISE flash statistics reports from 2014-15 to 2020-21.

- While U-DISE data reports a continuing trend of declining drop-outs, ASER data suggests an increase in the population of non-enrolled children during the pandemic compared to the 2018 round.
- ASER data shows an increase in percentage of children non-enrolled during COVID-19 when compared to 2018, for the age group of 6-14 years. However, there appears to be a decline of non-enrolled children in the age-group of 15-16 years.
- U-DISE data shows a continued declining trend in percentage of drop-outs across grades, from 2014-2015 to 2020-2021



## 3.3

## Comparing Reported OOSCs to Pre-Pandemic Levels

On non-attendance-rooted in the inaccessibility of virtual modes of education—there is little to compare to pre-pandemic estimates. Andrew and Salisbury (2022) report that while absolute education expenditure fell drastically since the start of the pandemic, expenditure on “cell and internet” remained relatively stable and might have marginally increased. Vernekar et al. (2021), conducted in urban Mumbai and Pune during the height of the second wave of the COVID-19 pandemic in 2021, had some teachers provide anecdotal evidence of an average fall in enrollment of students in virtual classes, ranging from 30–40 percent when compared to their strength prior to the pandemic, and a fall in regular attendance of students of up to 60 percent compared to their strength prior to the pandemic. The National Council for Applied Economic Research (2021) reported that even among children having access to online classes, less than 40 percent did not regularly attend them.

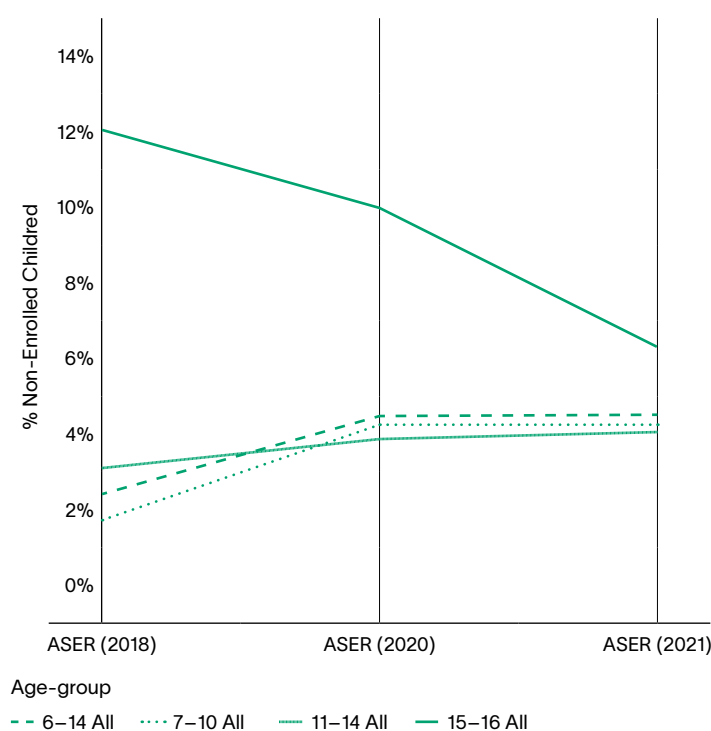
On dropout rates and non-enrollment, U-DISE and the ASER reports are the primary sources (of those compiled in this study) that allow for comparisons to pre-pandemic levels, since they have been conducted periodically, even prior to the pandemic. Further, both surveys attempt to use similar methodologies across rounds of data collection to enable comparisons between rounds. Comparing trends on drop-outs and non-enrollment during COVID-19 to previous rounds of the same periodic surveys allows us to make some inferences on whether and how the COVID-19 pandemic has affected the percentage of OOSCs.

During the COVID-19 pandemic, ASER was collected in two waves<sup>15</sup> with a sample of 350,000 households in Wave 1 in 2020, and ~76,000 households in Wave 2 in 2021. ASER is a citizen-led periodic household survey that is deemed to be nationally representative of the rural population of India, providing estimates of children’s schooling status, targeting children in the age group of 3 to 16 years in rural-only districts of India.<sup>16</sup> The 2018 round of ASER, published in January 2019, surveyed 546,527 children from the same age group.

Relevant to this study, ASER includes a variable capturing the number of students “non-enrolled” at the time of the survey, which can be interpreted to include students who have never-enrolled in any school or have dropped out.

ASER data collected during COVID-19, suggests an increase in the population of non-enrolled children during the pandemic compared to data collected in 2018. Non-enrolled percent of children in ASER Waves 1 and 2 (collected in 2020 and 2021, respectively) are 2.7 percent points and 2.1 percent points higher than the 2.5 percent reported in ASER 2018 (the last round of ASER prior to the pandemic). This is possibly reflective that the pandemic did have a substantial effect on at least the rural OOSC population in the country.

**Chart 5: Non-Enrolled Children by Age-Group across Time (ASER)**



Note: This chart has been created by authors using data presented in ASER (2018; 2020; 2021).

15 The report published in October 2020 covers about 350,000 households across 17,500 villages and almost 600 districts from 26 states and 4 union territories. The latest report published in November 2021 covers 76,706 households, 75,234 children and 7,299 schools across 25 states and 3 union territories. Distinct from earlier rounds of the survey, which were collected face-to-face by trained enumerators, the 2020 and 2021 waves of the survey were conducted telephonically.

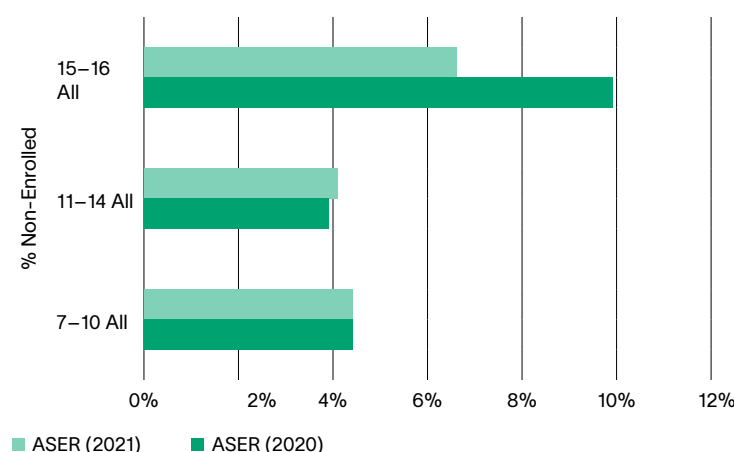
16 The study collects information regarding enrolment – if the children aged between 3 to 16 years are enrolled in any school, and what management type of school they attend (government or private, or any other). Children aged 5–16 years are further tested on basic arithmetic and language skills using the ASER learning assessment tool.

Waves of ASER conducted during COVID-19 however show a net marginal fall in the percentage of children “non-enrolled” in the age-group of 7–16 years. Data from ASER Wave 1 showed that 5.2 percent of students in the age group of 7–16 years were non-enrolled at the time of the survey in 2020. This fell to 4.6 percent for the same age group during the second wave of data collection in 2021.

Importantly, this decrease is seen despite the fact that the percentage of “non-enrolled” children in the age groups of 7–10 years and 11–14 years increased marginally from Wave 1 to Wave 2, by 0.6 percent points and 0.2 percent points, respectively. The overall fall in non-enrolled children across children in the age-group of 7–16 years, can therefore be attributed to the substantial fall in “non-enrolled” children reported in the age group of 15–16 years, which fell from 9.9 percent in Wave 1 to 6.6 percent in Wave 2.

This suggests that between the first and second years of the pandemic we might have seen some students, specifically in the age group of secondary schooling, returning back to school, however, there continued to be a marginal increase in those non-enrolled among children of primary school-going ages.

**Chart 6: Non-Enrolled Children across Age-Groups during Covid-19 (ASER, 2020; 2021)**



Note: This chart has been created by authors using data presented in ASER (2020; 2021).

Crucially, while ASER surveys are known to be nationally representative and comparable across rounds, due to the COVID-19 pandemic, nationwide lockdowns and the corresponding need for the survey to be conducted telephonically, attrition of the sample was significant, with only 58.3 percent of the total sample being reached through telephonic surveys, of whom 24.6 percent refused to participate in the complete survey or could not be tracked (ASER Centre, 2020). This puts into question the comparability of the two waves of ASER to each other, and also to the ASER 2018 round of data collection. Moreover, the collection of data during the pandemic, as is evidenced by the compiled studies above, was highly time-sensitive. This thus requires some caution in interpreting differences between the two waves of ASER conducted during COVID, as well as in the ASER 2018 round.

ASER data collected from the states of West Bengal, Chhattisgarh and Karnataka, however, prove an important resource as the 2021 rounds of data collection for these three state-level reports were conducted akin to pre-pandemic rounds and are thus more comparable to the 2018 rounds for the same.

In both, West Bengal and Chhattisgarh, the overall percentage of non-enrolled children in the age group of 6–14 years, decreased in 2021 compared to pre-pandemic levels. In West Bengal, we find 1 percent of non-enrolled children in 2021, compared to 2 percent in 2018. In Chhattisgarh, the same was 1.8 percent in 2021 compared to 3.6 percent in 2018.

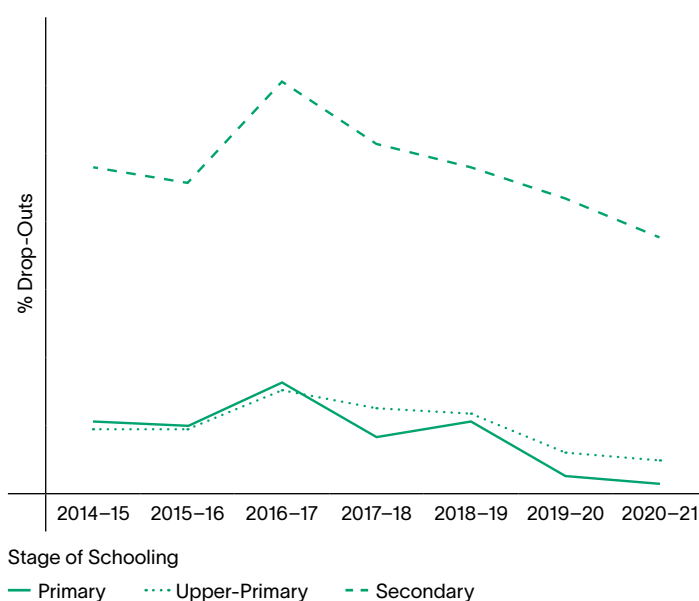
However, Karnataka, consistent with the all-India ASER statistics, reported 0.7 percent non-enrolled students in 2021, higher than the 0.3 percent reported in 2018. We further break this up by age group, gender and state in the following subsections (ASER Centre, 2021).

From U-DISE, we consider seven rounds of data collected from schools annually – five rounds from prior to the pandemic, and two rounds that overlap with some period during the pandemic. Thus, we look at U-DISE data starting from 2014–15 up till 2020–21.<sup>17</sup>

Since 2014–15, there has been a consistent trend of dropout rates reducing over time, across all stages of schooling, with the exception of a sudden increase in dropout rates in 2016–17.<sup>18</sup> Reported dropouts in the 2020–21 round conducted during COVID-19 show that this trend of falling dropout rates has been unaffected by the pandemic, with an all-time low (when compared to all previous rounds of U-DISE) of 0.76 percent, 2.27 percent and 14.04 percent dropouts reported in primary, upper primary and secondary education levels, respectively. Three considerations can be made here.

It is possible that, in the absence of the COVID-19 pandemic, this percent of dropouts, while continuing the apparent trend of declining dropout rates, might have fallen even lower. Estimating this possibility is outside the ambit of this study. On the other hand, it is possible that these numbers might be under or over-reported for the following reasons: U-DISE data is self-reported by schools and school administrators and thus consistency and quality of data reporting are difficult to standardize, and there is anecdotal evidence that schools and teachers faced difficulties in reaching students during the pandemic.

**Chart 7: Drop-Outs by Stage of Schooling across Time (U-DISE)**



Note: This chart has been created by the authors using data presented in U-DISE flash statistics reports from 2014–15 to 2020–21.

Finally, in comparing trends on dropouts reported in U-DISE data to trends on non-enrolled children reported in ASER, we find they are not entirely in consensus. While U-DISE data reports a continuing trend of declining dropouts, ASER data suggests an increase in the population of non-enrolled children during the pandemic compared to the 2018 round.

Possible explanations for variation in trends between these two datasets could be that: (i) U-DISE captures “dropouts”, while ASER captures “non-enrolled” students (which includes those never enrolled), and (ii) that ASER captures data from rural-only districts. On the other hand, U-DISE collects data at the school-level compared to ASER, which collects data at the household-level. Self-reporting from schools means that the two datasets might reflect the narrative of OOSCs from two different perspectives.

Further, a large number of schools, and especially private unaided schools, are not reflected in U-DISE data (Central Square Foundation, 2020). This is a crucial limitation as during COVID-19, ASER waves 1 and 2 found evidence of a substantial exodus of students from private to government schools. This is discussed in greater detail in the sections below.

17 Some considerations on the comparability of data from U-DISE (2018–19) and onward to rounds of data collected between 2005–06 to 2017–18, due to calculation of “drop-out rates”, as in: AC Mehta, “Education ministry must explain why 49,000 schools dropped out of UDISE Plus”, News by Careers360, March 14, 2022, <https://bit.ly/3zZjDk1>.

18 Some speculated that increased drop-out rates in 2016–17 could be attributed to amendments to the Child and Adolescent Labour (Prohibition and Regulation) Amendment Act, 2016, as in: Ruchira Gupta, “A law that allows child labour”, The Hindu, August 10, 2016, [https://www.google.com/url?q=https://www.thehindu.com/opinion/columns/Ruchira-Gupta-Child-Labour-Prohibition-and-Regulation-AmendmentAct-2016-A-law-that-allows-child-labour/article56842404.ece&sa=D&source=docs&ust=1656648189490704&usq=AOvVaw2EKu\\_CY9EA4evQwzq9Gi2L](https://www.google.com/url?q=https://www.thehindu.com/opinion/columns/Ruchira-Gupta-Child-Labour-Prohibition-and-Regulation-AmendmentAct-2016-A-law-that-allows-child-labour/article56842404.ece&sa=D&source=docs&ust=1656648189490704&usq=AOvVaw2EKu_CY9EA4evQwzq9Gi2L).

# Summary

## Economic Disadvantage:

- Economically worse-off households had less access to devices and the internet; teacher check-ins and home visits; learning materials, and online classes.

## Age:

- Percentage non-enrolled continues to be higher for children between 15–16 years, however.
- A possible new site of exclusion is seen in the increase in % of non-enrolled children in the 6–14 years age-group. Some evidence suggests this could be explained by non-enrollment in grade 1 (entry point for formal schooling) during school closures.
- Limited evidence on enrollment rates for children in pre-primary education levels continues to be an issue. ASER (WB) 2021, and ASER (CH) 2021 shows far higher non-enrolment in the age-group of 3–5 years compared to 6–8 years.

## Gender:

- Evidence on female gender-based disadvantage in continuation of education during covid remains mixed, or at least a clear pattern is yet to emerge.
- Studies conducted during COVID-19 suggest that girls had lower access to devices, internet and learning materials and spent less time on education compared to male students.
- On the other hand, some studies found no significant difference in learning time and access to remote learning; and some found a gender gap in accessing remote classes in favour of girls.

## CWD:

- During COVID-19, limited studies documented the plight of students with disabilities.
- Even for those who could access remote classes, modes of instruction were not made accessible for children with disabilities (for example, sub-titling or sign language interpretation was not provided for children with hearing impairments).

## Region:

- Across studies compiled, urban households reported lower drop-outs and non-enrollment, and greater access to education across various indicators, especially with respect to remote modes. However, there was some evidence that rural households had more access to physical learning materials.

## Social group

- Access to educational resources, regularity of attending remote classes, and time spent on education was found to be lower for children from disadvantaged social groups (including children belonging to Scheduled Castes and Scheduled Tribes).

## 3.4

## Intersectional Disadvantages and Incidence of OOSCs

Globally and in India, students from socioeconomically vulnerable or marginalized groups were disproportionately impacted by the COVID-19 pandemic, in terms of their access to, and consequent participation in education in terms of learning losses (Moscoviz & Evans, 2022). We find in this study that the out-of-school population differed on the basis of schooling levels, socio-economic backgrounds of households, gender and disability of students, and location of residence in ways that were largely consistent with pre-pandemic evidence. However, we also identify possible new sites of exclusion and large variations across states that warrant further examination.

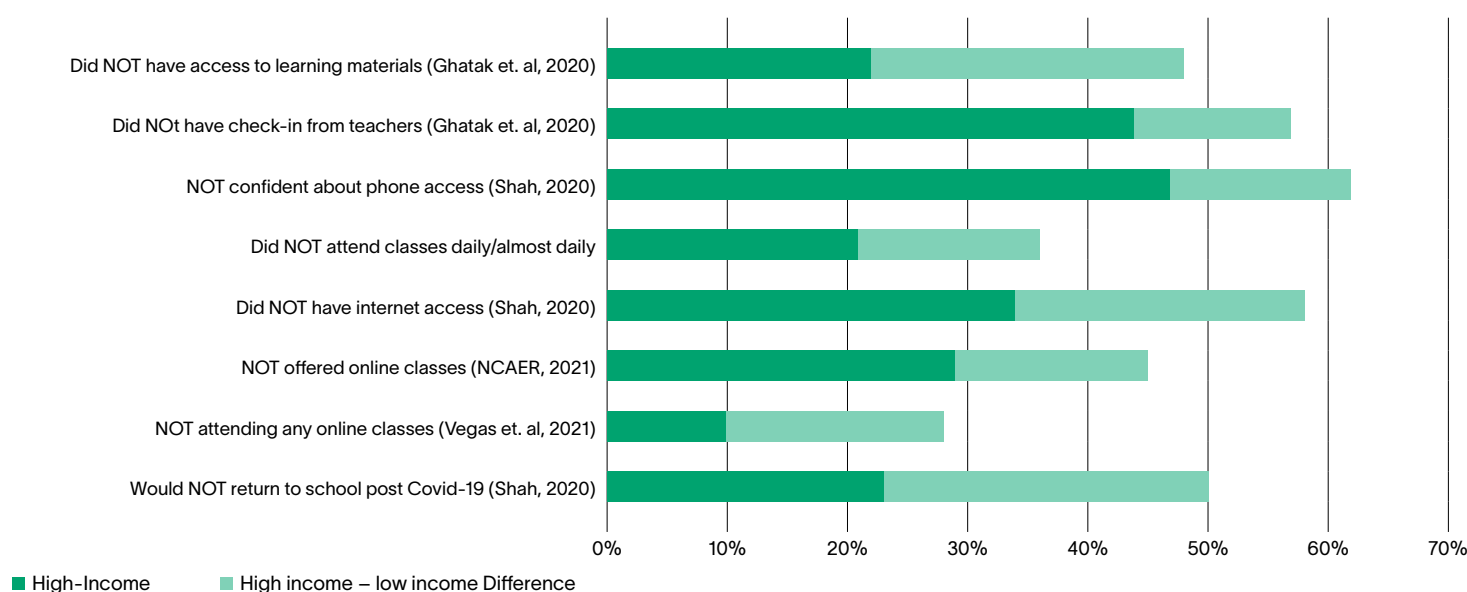
## 3.4.1

### Economic Disadvantage

We know that even prior to the pandemic, economically vulnerable households faced more systemic issues in accessing education. Children belonging to such households further face differential investments in their education, for example, on the basis of age, gender, and disability (OECD, 2012). This in turn may determine which schools children attend, and for how long they stay in school.

During COVID-19, a substantial economic shock led to rampant job and income losses across the country. Keskar et al. (2021) found that in October 2020, income levels of the households in India were around 16-18 percent below February 2020 levels, in both rural and urban areas depicting the fact that inequality in India increased sharply during the pandemic and lower income households were likely to have experienced a larger decline in earnings. This would likely have hampered the ability of households to invest in education, including in resources required for remote education, and might have increased the likelihood of older children dropping out of school to support households' care-work or paid work. Many suggested that increasing income inequality in the aftermath of the pandemic might reverse the gains/progress made over the last 20 years in girls' education (Berkhout et al., 2021).

**Chart 8: Difference in Educational Access between 'High-Income' and 'Low-Income' Households**



**Note:** The number in the figure above are computed from Ghatak et al. (2020), Shah (2020), National Council for Applied Economic Research (2021) and Vegas et al. (2021), where the studies provided a comparison between 'low' and 'high' income households within their sample. The figure shows that across compiled studies, children in 'low-income' households did worse on various indicators of education access, compared to their relatively higher-income counterparts.



Across studies that conducted some form of sub-group analysis on the basis of class, it was found that, consistent with pre-pandemic literature, more economically advantaged households had access to resources or support compared to their relatively disadvantaged counterparts.<sup>19</sup> Economically worse-off households had less access to devices and the internet (Ghatak et al., 2020); teacher check-ins and home visits (Shah, 2020); learning materials (Shah, 2020); and online classes (National Council for Applied Economic Research, 2021).

Further, one study found that while 77 percent of their sample, among those who reported “not facing any financial difficulties”, reported they would return to school, this was only 50 percent among those who reported, “facing financial difficulties”, including cash and food shortages (Ghatak et al., 2020). It is possible that this could be explained by households’ inability to afford smartphones for education, which over a prolonged period of time, might have led to children falling behind and thus choosing not to return to physical schools. This is corroborated by other studies where primary reasons cited for not attending classes during the pandemic also differed by income levels, with low-income households citing a lack of devices and additional responsibilities of parents (that prevented them from investing time in children’s education) as top barriers to access.

On the other hand, households with relatively higher incomes reported their top reasons for not participating in education as parents’ inability to pay school fees in private schools, children having other interests and refusing to participate in online classes (Vegas et al., 2021). Andrew & Salisbury (2022), using waves of data from Centre for Monitoring Indian Economy (CMIE) up to 2021, report a substantial fall in average monthly educational expenditure as a percent of monthly household expenditure from 2.25 percent in the Jan–April 2020 wave, to its lowest at 0.7 percent around May–June 2020 (soon after the pandemic first hit in India). Similarly, absolute average monthly educational expenditure also fell drastically from pre-pandemic levels. The study further reported that across CMIE waves the average monthly educational expenditure in absolute terms fell from Rs. 800 (in the Sept–Dec 2019 wave) to Rs. 560 (in the Jan–April 2020 wave), and to its lowest at Rs. 330 (in May–Aug 2020). This fall in educational expenditure was found to be sharper in rural compared to urban areas, and differed by state/region and on the basis of caste group, income levels and the level of income shock faced by households.

### 3.4.2

#### On basis of Age of the Child

As per ASER Waves 1 and Wave 2, the percent of “not enrolled” children were higher for children in the 15–16-year age group at 9.9 percent and 6.6 percent, respectively, when compared to children in the 6–10-year, and 11–14-year age groups.

#### A new site of exclusion – among younger children:

A rich body of evidence points to the fact that children who access high-quality education in early years show gains in cognitive and socio-emotional development and foundational learning (UNESCO, 2012), which increases their future learning (Kaul, 2019) and earning capabilities (Gertler et al., 2014). This is further acknowledged in the policy agenda of the National Education Policy 2020 that emphasises the importance of the foundational years of schooling (for children between 3 and 8 years).

However, when we compare estimates to pre-pandemic evidence, as per ASER 2018, 2020 and 2021 rounds and waves, the non-enrolled percent dropped by 5.4 percent between 2018 and 2021 for the age group of 15–16 years, but it increased by a substantial 4.3 percent and 3.9 percent for age groups of 7–10 years and 11–14 years, respectively. This is then an important finding in that it points to a new trend that must be examined closer.

This might point to a new site of exclusion of children from education—those yet to be enrolled in schools and who were unable to/were delayed in enrollment due to prolonged school closures during the pandemic. A study conducted by National Council for Applied Economic Research (2021) in 4 states, between December 2020–January 2021, found that 8.4 percent of children in their sample (aged 6–14 years) reported being unable to enrol in any school during the pandemic. It was further suggested that a “majority”<sup>20</sup> of these children were between 6–7-years old, who seemingly would be enrolling in grade 1. This estimate is close to the estimate released by the Delhi government survey which found 9.76 percent of children in the age group of 6–17-years were out of school at the time of the survey (The Wire Staff, 2021). UDISE (2020–21) further corroborates this by reporting that despite an overall increase in enrollments in schools between 2019–20 to 2020–21, enrollment of students in pre-primary grades and grade 1 reduced by 29.1 lakhs and 18.8 lakhs, respectively during the same period. The report attributes this to delays in admission of first time entrants into schools during school closures.

<sup>19</sup> Across studies the definitions and indicators used to measure ‘economic advantage’ differ, for example on the basis of income alone, or some measure of socio-economic disadvantage.

<sup>20</sup> This report does not provide a break-up of drop-outs reported by age.

### Investments in older children are higher than in younger:

Findings from some studies possibly reflect that younger children are possibly less able or less likely to be allowed to independently navigate technology or tech-enabled applications for educational purposes compared to their older counterparts. As per a rapid assessment survey conducted by UNICEF, fewer children in younger age groups accessed learning materials, used technology-enabled solutions or remote learning resources, and younger children spent less time on remote learning resources compared to their older counterparts (UNICEF, 2020). Another study reported that more than 45 percent of households in their sample prioritized their older children in the use of phones for education, with the rest reporting they do not favour any child (Vernekar et al., 2021). Finally, ASER Wave 2 data also found that more households with children in upper-primary (30 percent) and secondary schooling (36.4 percent) had purchased “a new phone for children’s education” compared to households with children between grades 1–5 (19.3 percent for grades 1–2, and 24.6 percent for grades 3–5) (ASER Centre, 2021).

*“Experts believe that higher usage among older students may be due to greater awareness of learning tools, higher ability to use them without supervision, higher access/ usage of tech-devices, and given greater trust by parents”* (UNICEF, 2020). This could in turn have resulted in lower participation in education from younger age groups.

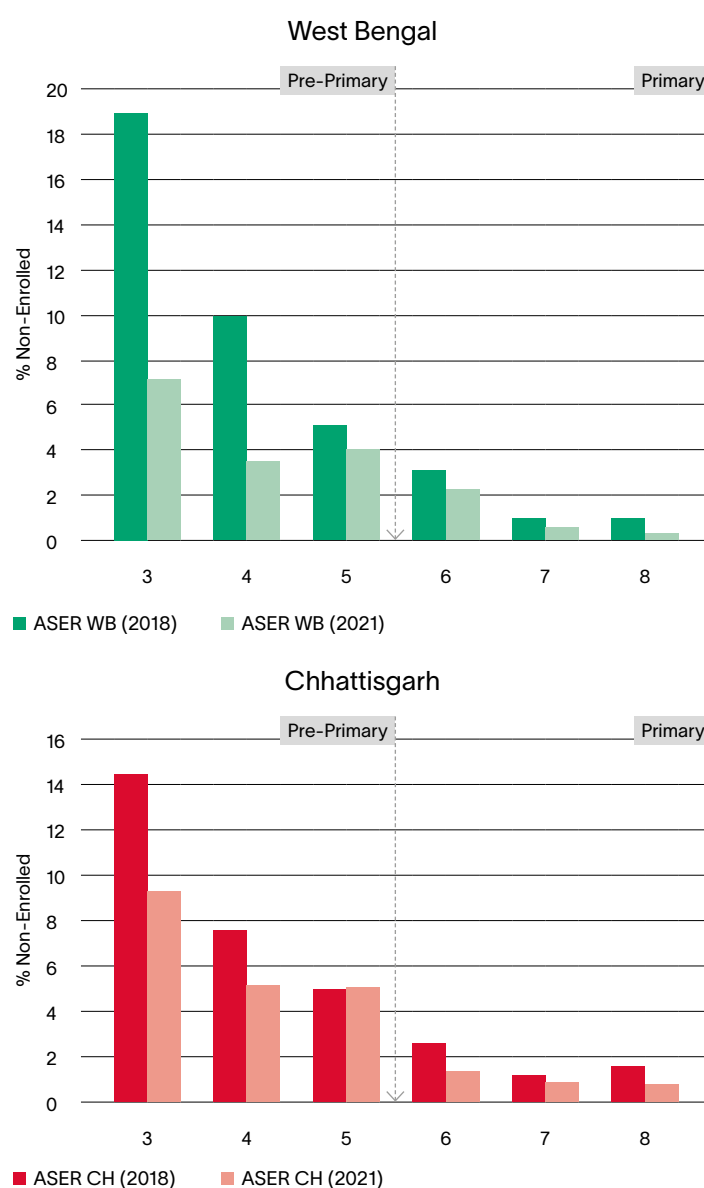
### Limited evidence on enrollment rates for children in pre-primary education levels:

Additionally, nationally representative data from the 5<sup>th</sup> round of the National Family and Health Survey provides an estimate of enrolment of children in the age-group of 2–4-years in pre-schools in 2019–2021. 40.1% of children were reported as attending a pre-school between 2019–21, with 43.9% of male children aged 2–4 years attending some pre-school, compared to 38.7% female counterparts. The report, however, does not allow for a comparison of enrolments in pre-schools across periods of time (NFHS-5, 2019–21).

ASER here too is one of the only sources that allows for a comparison of enrolment or non-enrolment for this younger age group across years in its state-based reports, albeit only for West Bengal and Chhattisgarh.

As of 2021, non-enrollment of children in the age group of 3–8-years in West Bengal was 2.8 percent, however among 3 years old this was 7.1 percent. Similarly, in Chhattisgarh, non-enrollment was at 3.3 percent for the age group of 3–8-years, but was at 9.3 percent for 3 year olds.<sup>21</sup>

**Chart 9: Non-Enrolled Children  
in West Bengal and Chhattisgarh  
between 3–8 Years**



Note: The chart has been created by authors using data presented in ASER (West Bengal), 2021 and ASER (Chhattisgarh), 2021.

<sup>21</sup> We refrain from comparing these enrollment rates with the last available round (from 2018) since there has been considerable attention given to Foundational Literacy and Numeracy (FLN) by the government and civil society organisations between 2018–20.

## 3.4.3

## Region-wise differences

We might expect that lockdown and subsequent school closures might have impacted access to schools for students in rural areas. Specifically, access to remote modes of education could be expected to be poorer in rural areas due to lack of infrastructure for internet connectivity (Muthuprasad T et al., 2020).

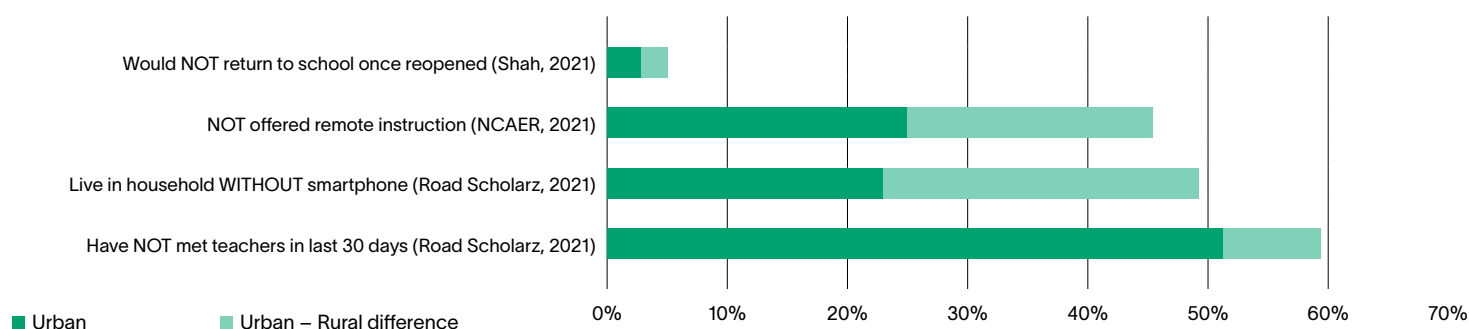
At the same time, studies and reports cited in newspapers provided at least anecdotal evidence that schools and teachers in rural areas were more easily able to conduct home visits to interact with their students even during the COVID-19 lockdowns (Shah, 2020). Thus, while access to physical schools outside of villages might have been a constraint for students, students in regions with lower case counts, which were predominantly rural during at least the first year of the COVID-19 pandemic, might have been better off than their urban counterparts.

On the other hand, COVID-19 lockdowns were far tighter in restricting movement in urban areas, and especially in the largest cities of the country. However, a study conducted across 15 states in 2021 reported that more children in rural areas had not met their teachers in the 30 days preceding the date of survey at 58 percent compared to 51 percent in urban areas (Road Scholarz, 2021).

Finally, the migration crisis witnessed during the pandemic was a predominantly urban crisis, where families of migrants and largely daily-wage labourers, were forced to migrate overnight to rural areas in the face of large-scale job and income losses and in the absence of protection and support from the state during the first wave and nation-wide lockdown of the COVID-19 pandemic. Even prior to the pandemic, seasonal migration, and migration from rural to urban areas created difficulties for children in accessing education and for schools in tracking OOSCs (Bhattacharya, 2019; Chandrasekhar & Bhattacharya, 2019; UNESCO, 2020).

As such, migrant children are one of the most vulnerable populations in terms of their access to schools, with high non-attendance and dropout rates from schools reported (Bhattacharya 2019; Government of India, 2022). One study suggested that migrant children were more vulnerable to dropping out, reporting that while 3 percent of non-migrant households in their sample said they would not return to schools once they reopened, this was at 5 percent for migrant households in their sample (Shah, 2020). The combination of increased vulnerability of this population during the pandemic and an increase in opportunities for informal and unsupervised employment of various nature in urban areas, also increases the risk of children becoming involved in child labour.

**Chart 10: Difference in educational access between urban and rural households**



Note: The numbers in the figure above are computed from Road Scholarz (2020), Shah (2020), and National Council for Applied Economic Research (2021), where the studies provided a comparison between rural and urban households within their sample. The figure shows that across compiled studies, children in rural households did worse on various indicators of education access, compared to their urban counterparts.

**Across studies compiled, urban households reported lower dropouts and non-enrollment and greater access to education across various indicators,** especially with respect to remote modes. However, there was some evidence that rural households had more access to physical learning materials.

Two studies that were conducted in urban-only areas reported the lowest dropout rates when compared to

the rest (Vegas et al., 2021; Vernekar et al., 2021), and higher access to devices (at 24 percent in Vegas et al.) when compared to rural-only surveys (at 48 percent in Oshikawa and Chakraborty, 2021). Similarly, access to online classes (National Council for Applied Economic Research, 2021; LIRNEasia & ICRIER, 2021) was found to be higher for students and households in urban areas, compared to those in rural areas.



Only one study compared samples from rural and urban areas on access to devices and reported a **6 percent rural-urban gap in ownership of devices and a 26 percent gap** between rural and urban children, “living in a home with a smartphone” (Road Scholarz, 2021).

On the usage of the internet, the **rural-urban gap in facing internet issues ranged from 8 percent to 24 percent** (as in Road Scholarz, 2021 and UNICEF, 2020, respectively), depending on the nature of the question and the age group. Road Scholarz (2021), for example also reported a gap of 15 percentage points in households feeling they had “adequate online access”.

**Rural-urban gap in access to online classes ranged from 9 percent to 29 percent** (as in LIRNEasia & ICRIER, 2021 and Road Scholarz, 2021, respectively). Consequently, urban households also reported more **regularity in attendance in online classes, with the gap ranging from 16 percent to 27 percent** (as in Road Scholarz, 2021 and National Council for Applied Economic Research, 2021, respectively). One study further reported fewer urban households felt their children were learning “little” or “nothing” from online education, compared to their rural counterparts (Shah, 2020).

On the contrary, there is some evidence that access to physical learning materials was better for rural households compared to urban, possibly due to better access to schools in children’s homes (Shah, 2020). UNICEF (2020) also found the rural-urban gap varied by age. For example, the rural-urban gap in access to devices was higher for younger children compared to older children, at 15 percent compared to 5 percent for children aged 14–18 years and 5–13 years, respectively. On the other hand, the gap in usage of WhatsApp was higher for younger compared to older children – at 24 percent compared to 15 percent for students aged 5–13 years and 14–18 years, respectively (UNICEF, 2020). This reflects both that access to devices and usage of the same is skewed favourably towards older children, in rural and urban contexts.

Finally, state-wise variations also call for further examination. While most studies compiled in this paper conducted data collection across multiple states, few provided comparisons between states (Vyas, 2020; LIRNEasia & ICRIER, 2021). Such comparisons could demonstrate how states handled the crisis during COVID-19, but may also be a product of how states have historically dealt with OOSC populations. Further, there is limited literature that allows for the formulation of a systematic hypothesis of which states we would expect to perform better compared to others. For these reasons, this paper does not delve into this further.

### 3.4.4 Gender

There is substantial literature on gender-based disadvantage in schooling and education in India as well as other developing countries, and the several barriers faced by females—they are more likely to reside in larger and poorer households, receive fewer investment in education, have to often compete for resources within their households, and have lower educational and school achievements. These are often nested in higher incidences of malnutrition, societal norms such as preference for sons, inaccessibility to schools, and safety concerns. There are multiple barriers which are only further complicated (and often compounded) by factors such as caste, class, religion and region (Kingdon 2002; Filmer, 2005; Bose, 2012; Maitra et al., 2016; Jain et al., 2022).

In this context, the direct shock of COVID-19 lockdowns on their education, and indirect shocks on livelihood and incomes are likely to have a substantial bearing on their schooling experiences and outcomes, during school closures and beyond. We try to understand whether any patterns of disadvantages or differential experiences due to COVID-19 have emerged from recent surveys.

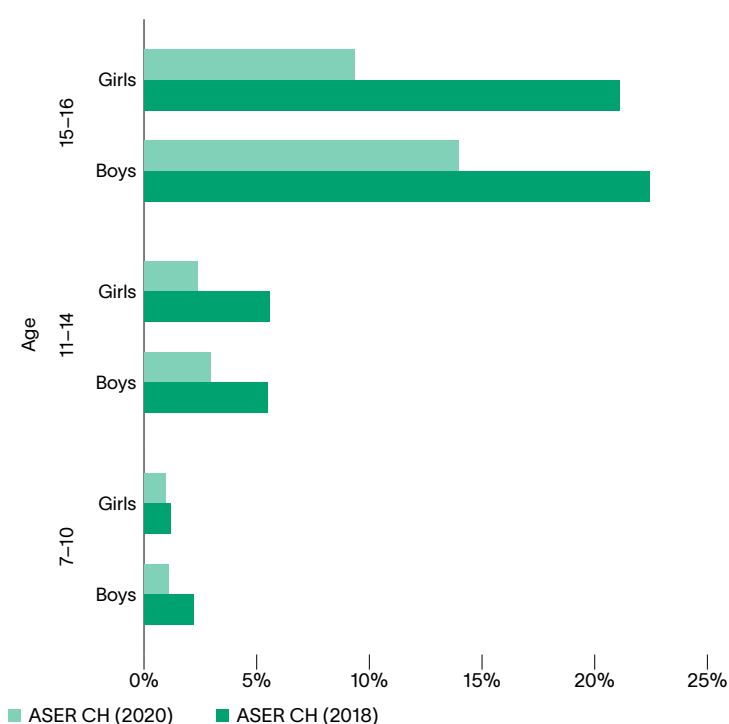
**We find that the evidence on gender-based disadvantage in continuation of education remains mixed, or at least a clear pattern is yet to emerge.** As observed earlier, these depend on the socioeconomic and geographic context of the studied sample.

Consistent with pre-pandemic literature around uneven access to educational technology (Bhattacharya & Kulshreshtha 2022), studies conducted during COVID-19 suggest that girls had lower access to devices, the internet and learning materials and spent less time on education (Ghatak et al., 2020; LIRNEasia & ICRIER, 2021) compared to male students. On the other hand, some studies found no significant difference in learning time (Andrew & Salisbury, 2022) and access to remote learning. Further, UNICEF (2020), and Vegas et al. (2021) found a gender gap in accessing remote classes in favour of girls.

We find a similar mixed pattern from the representative and periodic surveys-ASER and U-DISE. U-DISE (2020–21) reported similar dropout numbers for girls and boys when compared to data from prior to the pandemic. ASER Centre (2020) and ASER Centre (2021) report an overall increase in the share of non-enrolled primary school-going children (7–14 years) in schools compared to the data from 2018, although no discernible patterns related to gender emerged. For secondary school going children, we observe that: (i) overall dropouts/non-enrollment during COVID-19 have decreased, and (ii) this reduction was higher for girls.

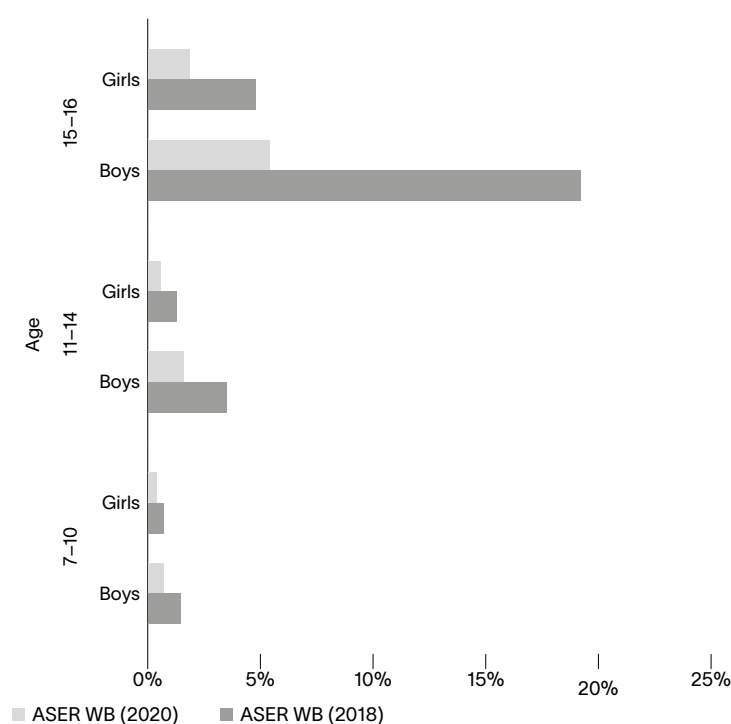
The in-person state-wise surveys conducted by ASER also reflect this mixed pattern. In West Bengal and Chhattisgarh, we find higher non-enrolled percentages across genders in pre-pandemic data compared to 2021. The highest drop of 13.8 percentage points is seen among boys in the age-group of 15–16 years in West Bengal, followed by girls and boys in the same age group in Chhattisgarh. Secondly, across age groups, a higher percent of boys is non-enrolled compared to the girls in the same age group, which remains the case even in the 2021 data (ASER Centre, 2021).

**Chart 12: Non-Enrolled Students in Chhattisgarh by Gender and Age Group**



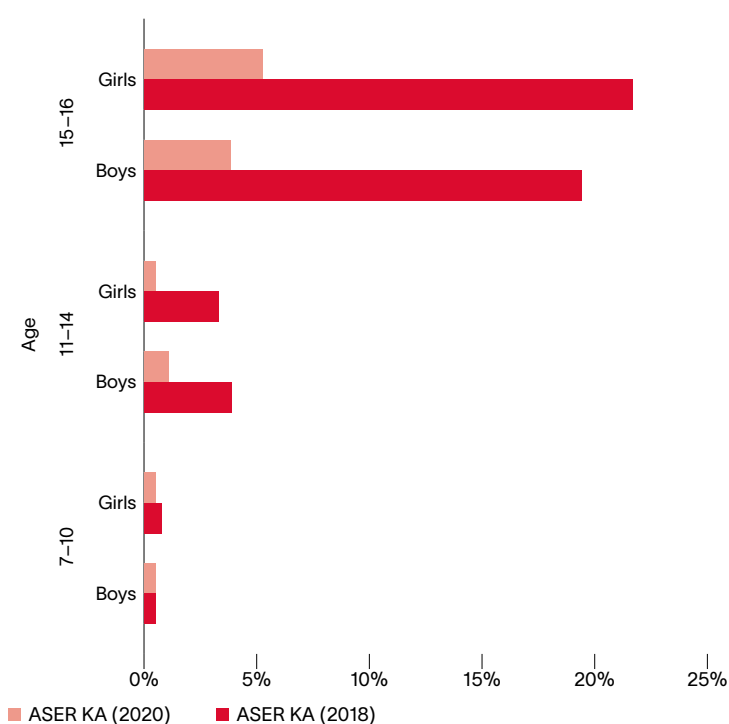
Note: This chart has been created by authors using data presented in ASER (Chhattisgarh), 2021.

**Chart 11: Non-Enrolled Students in West Bengal by Gender and Age Group**



Note: This chart has been created by authors using data presented in ASER (West Bengal), 2021.

**Chart 13: Non-enrolled Students in Karnataka by Gender and Age Group**



Note: This chart has been created by authors using data presented in ASER (Karnataka), 2021.

In Karnataka, however, we first find evidence of a marginal increase in non-enrolled percentages from 2018 to 2021, among children in the age group of 11–16 years, with the sharpest increase among girls and boys in the age group of 15–16-years. Non-enrolled boys in the age group of 15–16-years see a 5.6 percentage points increase between 2018 and 2021, compared to a 5.9 percentage points increase among girls in the same age group. Among the age group of 11–14 years, there is a 1 percentage point increase for both girls and boys. Secondly, across both waves of data collection, we find that while non-enrolled percent of girls and boys in the 7–14 years age groups are comparable, more girls are non-enrolled in the age groups of 15–16 years compared to boys (ASER Centre, 2021).

Despite the varied experiences reported, there is a gendered pattern in the reasons for not being able to continue learning or schooling in ways which are largely consistent with pre-pandemic trends. Data from the National Family Health Survey 2015–16 found that 14.5 percent of female students and 10.7 percent of male students were out of school as they were “*required for household work*”. This was also relatively more prevalent in rural areas, compared to urban areas.

In some samples, girls were twice as likely to report doing household chores than boys (Shah, 2020; Ghatak et al., 2020). Remote education may have become more appealing for families of girls who would otherwise prevent (especially older) female children from participating in learning and activities outside (Andrew & Salisbury 2022). Similarly, gender-based disadvantages in access to phones and the internet may have only been driven by economic reasons but also due to patriarchal norms such as “*fears of girls forming relationships with boys*” (Ghatak et al., 2020).

### 3.4.5

#### Children with Disabilities

Even prior to the pandemic, the population of children with disabilities in India who were never enrolled in formal schools lies at 25 percent for 5–19-year olds, and 75 percent among five-year olds (UNESCO, 2019). Even those who do enrol are unlikely to be retained throughout their schooling. Evidence shows that compared to children without disabilities, children with disabilities are more likely to dropout from schools starting from class 5 onwards, with retention rates as low as 12.02 percent by grade 12 (Gupta, 2016). During COVID-19, limited studies documented the plight of students with disabilities.

A study conducted in Odisha between July–August 2020 on a sample of over 2000 children with disabilities

and 1300 parents and teachers, reported that 43.5 percent of their sample were likely to drop out of school, substantially higher than all other studies in our sample (Swabhiman Odisha, 2020).

Secondly, disability itself is a function of poverty (Kalyanpur, 2008; Vernekar et al., 2020), with over 72 percent of the disabled population in India residing in rural areas (UNESCO, 2019), which further exacerbates issues of access to education. Studies further found an additional barrier of inaccessibility of virtual modes of instruction for these students. One study reported that 74 percent of children in their sample required support to access the internet to continue learning and 86 percent of children reported not knowing how to use technology appropriately (Swabhiman, 2020).

A study conducted on a sample of 164 students with disabilities and their primary caregivers provided anecdotal evidence of how inaccessible modes of instruction affected children with disabilities. Students having visual disabilities reported unique issues such as lack of accessible digital learning materials or lack of audio descriptions during live lessons (on platforms such as Zoom or Google Meet) using visual aids. Similarly, children with hearing disabilities said that they were unable to participate in TV lessons or live lessons offered during the pandemic as these were not supplemented with subtitles or sign language interpretation (Vernekar et al., 2020; Lynch et al. 2021).

As a result of inaccessible online modes of instruction, this study reported a substantial fall in regular attendance in classes, with 92 percent of the sample reporting they regularly attended classes prior to the pandemic, to only 67 percent at the time of the survey (Vernekar et al., 2020). Further, even among those who did attend classes regularly, 36 percent and 33 percent reported not being able to complete class work and assignments “most of the time” or “all of the time”, respectively (Vernekar et al., 2020), while 77 percent of the sample of students from Odisha reported they would fall behind in learning due to inaccessible distance learning modalities (Swabhiman Odisha, 2020).

### 3.4.6

#### Social Group

Access to education during the pandemic was found to differ by social group (on the basis of caste or socioeconomic status). This further suggests that the digital divide, access to education, and the likelihood to stay in school might be determined by salient socioeconomic advantages, and determine access to education for children, thus exacerbating inequalities.

Consistent with pre-pandemic literature, fewer Scheduled Caste (SC) children accessed remote learning (even when compared to other marginalized groups of Scheduled Tribes (ST), and Below Poverty Line households) (UNICEF, 2020); more SC/ST children reported “not studying at all”, and fewer reported “studying regularly” or “studying online regularly” (Road Scholarz, 2021). A study using data from the Consumer Pyramids Household Survey data (from CMIE), however, reported that while SC/ST and Other Backward Classes (OBCs) households had lower learning time (compared to more advantaged caste groups) both prior to and during the pandemic, the absolute fall in learning time during COVID-19 was fairly comparable between the groups (Andrew & Salisbury, 2022).

Similarly, a study categorising households on the basis of Socio-Economic Classification (SEC) predictably reported that fewer households in the lowest SEC received any educational resources, followed by households in the second lowest SEC, and so on (Vegas et al., 2021).

### 3.4.7

#### Parental Education and Support

Finally, while only few studies captured how support from within households might have played a role in students’ participation in education, evidence from prior to the COVID-19 pandemic provides a clear indication that better access to schools and learning might be associated with higher parental education. Low parental education seemingly interacts with other socioeconomic disadvantages too. A study reported that while, *“70 students belonging to other caste groups had an educated person in their home... only 10 Scheduled Caste and 1 Scheduled Tribe child had an educated person at home”* (Oshikawa & Chakraborty, 2021).

During COVID-19, the role of parental engagement was also plausibly heightened as they were the primary adults responsible for children’s education in the absence of teachers and schools. One study reported that a higher number of children in households with household heads who were “better-educated” (compared to those with lower education), reported receiving educational services (LIR-NEasia & ICRIER, 2021). Moreover, children might have benefited from support in using technology and self-learning strategies. Parental education, and specifically maternal education is found to be positively and highly associated with learning outcomes of children (Vernekar et al., 2021), which in turn can contribute to participation and retention in school.

A study assessing the relationship between a low-tech and teacher support intervention on learning time of children in pre-primary schools during COVID-19 reported on the significance of maternal education in mediating this relationship (Vernekar et al., 2021). Further, another found that about 4 percent and 19 percent of households in their sample cited “parents are illiterate” and “parents had other responsibilities” as important reasons for not attending on-line classes regularly (Vegas et al., 2021).

### 3.4.8

#### Private Schools versus Government schools

As per U-DISE (2019–2020), nearly 37 percent of the school-going population in India were enrolled in private schools, prior to the pandemic (U-DISE 2019-20). A majority of private schools in the country are referred to as ‘low-fee’ schools (LFPs) or ‘budget’ schools. While the definition of LFPs vary, it is largely agreed that these schools are ‘affordable’ to the economically disadvantaged with some categorizing schools as LFPs on the basis of fees charged (Bose, Ghosh and Sardana, 2020; Aggarwal, 2000). Secondly, it is largely agreed that, either as a function of ensuring affordability or otherwise, these LFPs run on low costs per child with operational expenditure largely relying on the influx of fees from students (Ashley et al., 2014).

This then put LFPs, and consequently the students enrolled in LFPs, in a precarious position when the COVID-19 pandemic hit India. The economic shock to households meant many who were enrolled in private schools were no longer able to afford fees. Where schools shifted to remote modes of education, many parents found little value in them and demanded fee waivers. As a result, High Courts across several states ordered private schools to waive fees for months altogether, and/or suspend fee hikes for the new academic year (Vineet Ruia v. Principal Secretary, Department of School Education, Government of West Bengal;<sup>22</sup> Ashish Kumar Garg and others v. State of Haryana and others;<sup>23</sup>). The Delhi High Court further ruled that private unaided schools would need to cover the cost of devices for students enrolled under the 25 percent quota of the Right of Children to Free and Compulsory Education Act, 2009<sup>24</sup> and that the state would reimburse such costs. However, this order was later stayed (Master Divyam Bhateja v. Bhai Parmanand Vidya Mandir<sup>25</sup>).

22 Vineet Ruia Vs. Principal Secretary, Department of School Education, Govt. of West Bengal & Ors, WPA 5890 of 2020.

23 Ashish Kumar Garg and others v. State of Haryana and others, CM-1747-LPA-2020 and LPA-646-2020 (O&M)

24 Section 12(1)(c), Right of Children to Free and Compulsory Education Act

25 Ashish Kumar Garg and others v. State of Haryana and others, CM-1747-LPA-2020 and LPA-646-2020 (O&M)

On the other hand, already under-resourced LFPs were unable to invest in digital infrastructure to shift to remote modes of education altogether, salaries of teachers employed in LFPs were delayed or unpaid for months at a time, and ultimately, hundreds of LFPs across the country were forced to shut down (Alam & Tiwari, 2021).

Both these demand side shocks – unaffordability of school fees and perceiving digital modes of education as less valuable—as well as supply side shocks—schools closing down, lack of resources, and lack of capacity—led to a mass exodus of students from private to government schools. While anecdotal evidence of this exodus began to appear early into the pandemic, waves of ASER data confirmed the same at a significant scale for rural India. ASER Wave 2 found 70.3 percent of students between the age group 6–14-years were enrolled in government schools compared to 65.8 percent and 64.3 percent in 2020 and 2018 rounds, respectively. It further reported a corresponding decline in student's enrollment in private schools from 2018 to 2021 from 32.5 percent in 2018 to 28.8 percent in 2020 and 24.4 percent in 2021 (ASER Centre, 2021).

While students shifting from private to government schools would not be considered as part of the OOSC population, several households might choose not to continue attending government schools due to adversarial perceptions of the same (Lahoti & Mukhopadhyay, 2019; Sarin & Vernekar, 2018) despite no longer being able to afford private schools. Thus, to understand OOSCs during COVID-19, this exodus is significant as students might have dropped out of private schools and not enrolled in government schools for a variety of reasons.

Further, in the shift out of private schools, households faced several challenges including issuance of report cards and transfer certificates (TCs), especially in the face of being unable to complete the payment of fees—all of which might have caused delays in students' accessing schools. This brought to the fore renewed conversations around mandatory issuance of TCs and admission of students without TCs to protect students' ability to access schools despite logistical delays.

Further, it is crucial to understand whether students enrolled in different types of schools were impacted differently by the pandemic. On this, results across surveys were mixed.

Vegas et al. (2021) found that the difference between private and government school students in terms of access to smartphones was 26 percent, and for internet phones was 31 percent in their sample, with private schools having better access. The survey also found that government school students were reportedly 10 percent more likely than their peers in private schools to have no access to educational resources. Vyas (2020) reported that 23 percent of private school students did not have a device to

continue their education (with no comparison to sampled students from government schools).

On the other hand, a rapid assessment survey conducted in urban Ahmedabad found students in private schools, compared to their government school counterparts, were less likely to report receiving educational materials from teachers (The Times of India, 2020). Finally, the National Council for Applied Economic Research (2021) reported no statistically significant differences between students enrolled in private and government schools on access to devices and internet connectivity. Instead, they found vast heterogeneity in access to devices within private and government schools.



# 4. Discussion

## Reasons for OOSCs and Non-Attendance during COVID-19

Across sources, there are vast inconsistencies in estimations of OOSCs. Moreover, these sources do not provide much insight into sites and mechanisms that have led to drop-outs, non-enrollments and non-attendance in education during the pandemic. We thus delve into some of the reasons reported across compiled studies.

At the height of the pandemic, fear of contracting COVID-19 prevented several children from going to physical schools or meeting with teachers physically (UNICEF, 2020). However, a range of other systemic issues was also reported, as mentioned below.

Consistent with pre-pandemic literature on OOSC populations, one of the most commonly cited reasons for non-enrollment and dropping out of schools was the unaffordability of investments in education (UNICEF, 2020; Oshikawa & Chakraborty, 2020).

Having a device was not a sufficient condition for participation in remote classes. Access to high-speed internet connectivity proved to be a major bottleneck for schools and students across the country (Kulkarni, 2020). Some of the earliest evidence of this comes from the Ox-fam study conducted in September 2020 which found that 75 percent of parents reported some combination of “low internet speed, no internet access, and expensive data” as challenges in supporting their child’s education and 18 percent of private school students did not have an internet connection (Vyas, 2020).

LIRNEasia & ICRIER (2021) reported that a higher number of households in their sample (across India), at 31 percent, who were “internet connected” received some online education, compared to only 8 percent of households in their sample who were categorised as “not internet connected”. Vyas (2020) reported that 50 percent of teachers in their sample (across 5 states) also faced issues of expensive data and slow internet.

### 4.1

## Access to and Effectiveness of Remote Modes of Education

## Costs associated with digital modes of education

### Sharing devices and internet access

The inaccessibility of devices was reported as the primary reason for non-attendance and non-participation in virtual modes of education. Especially for households with more than one child, ownership of the number of devices and the need to share devices among other members of the household or community determined regular participation in education. ASER (2020) reported that 35 percent of households in their sample (for rural India) cited an “insufficient number of devices” as a challenge to accessing education during school closures. Road Scholarz (2021) (across 5 states) reported a significantly higher number of 88 percent of students who did not have access to their own smartphones, making regular attendance to remote classes a challenge.

Implicit in the question of access to devices and internet connections were costs associated with the same. Several studies reported ‘device affordability’ as a constraint in accessing remote learning, with some surveys reporting that between 20–30 percent of households in their sample had cited costs as a primary constraint (Vegas et al., 2021; UNICEF, 2020; ASER Centre, 2020; National Council for Applied Economic Research, 2021).

Studies found households had purchased smartphones to access education during COVID-19. ASER Centre (2021) data found that at all-India level, 28 percent of households with children enrolled in a school had purchased a new phone for their children’s education since the lockdown began; LIRNEasia & ICRIER (2021) reported that 43 percent of households in their sample were motivated by the COVID-19 pandemic to purchase a phone; and Vernekar et al. (2021) found 23.7 percent households in their sample from urban Mumbai and Pune, reported purchasing a smartphone for their children’s education.

Moreover, 33 percent and 29 percent of households whose children were receiving virtual education cited ‘high data costs’ and ‘poor 3G/4G signal’, respectively, as impediments to their participation in virtual classes (LIRNEasia & ICRIER, 2021). UNICEF (2020) reported similar

numbers at 37 percent and 27 percent, respectively. High costs associated with data recharges would likely be a larger concern for economically vulnerable families or those with many children requiring access to online education (UNICEF, 2020).

For students attending private schools access to online education was also contingent on payment of school fees (Kulkarni, 2020). Vegas et al. (2021) reported that among their sample where 67 percent children were enrolled in private schools, 21 percent of them reported the inability to pay school fees as a reason for not attending classes during COVID-19.

## Perceived ineffectiveness of online modes of instruction:

This might have further reduced the likelihood of regular participation. For example, Ghatak et al. (2020) reported that 79 percent of parents shared that their children were learning “little” or “nothing at all” in online classes, whereas Vernekar et al. (2020) provided anecdotal evidence of parents reporting their child with a disability had stopped participating regularly due to the inability to follow lessons online.

## Discomfort with using technology:

LIRNEasia & ICRIER (2021) reported in their study that 53 percent of their sample aged 15 years and above were “not internet users” at the time of survey. The same study also reported that parents felt schools were not prepared to deliver online education, they received “too much” content, children were not attentive on online modes, and that they were not comfortable with allowing children to use the internet unsupervised (LIRNEasia & ICRIER, 2021).

## Time-use away from education:

Other studies that used time-use data or asked children questions about where they spent their time during the pandemic found that taking up care-work within the household or paid work to support the household financially were additional reasons for non-attendance. UNICEF (2020) reported 6 percent households would not send their child back to school as their families needed children to help earn an income.

Shah (2020) found 16 percent and 2 percent of students in their sample reported having “too much chore work” and “paid work”, respectively, as obstacles to learning. Another study on a sample of children who were engaged in child labour even prior to the pandemic reported that among their sample of children, who were engaged in child labour activities at the time of the survey (May-June 2020), spent up to 6 hours a day in paid work, which left little time to manage their education alongside (Bhargava & Pandey, 2020).

## 4.2

## Challenges faced by Schools and Teachers

Finally, inaccessibility of devices and the internet were not limited to households/students, but to teachers and schools as well. A rapid assessment conducted by Oxfam in May-June 2020 in five states found that 40 percent of teachers lacked the “necessary devices to deliver education digitally” (Vyas, 2020). Even among those with access to devices, several reported facing discomfort with using technology, and 84 percent of teachers in the sample reported facing challenges in delivering education digitally (Vyas, 2020). Another study reported that 54 percent of teachers’ knowledge and user experience of online platforms and the mode of teaching were inadequate (Azim Premji Foundation, 2020). 75 percent of teachers reported “access to students” as a challenge in teaching remotely. 36 percent and 30 percent reported that school tech infrastructure and teachers’ own access to technology were challenges to teaching remotely. (UNICEF, 2020).

# 5. Conclusion

We draw from over 20 studies, published between April 2020 to May 2022, to understand the status of out of school children during COVID-19 induced school closures in India – specifically capturing non-enrollments, dropouts, access and attendance of online learning. The compiled studies highlight the varying experiences of households based on demographic and socioeconomic characteristics, geographies and time periods.

Despite the several challenges they faced during COVID-19, are children back in school? Did COVID-19 induced school closures increase non-enrollment or dropouts in the traditional sense? The evidence is not clear. Nationally representative ASER data for rural India points to a marginal increase in the percentage of non-enrolled children during COVID-19, when compared to data collected in 2018. Whereas, U-DISE reported a continued declining trend in drop-outs from 2017-18 to 2020–21 round of data.<sup>26, 27</sup>

Insights from the regional surveys depict a more sobering picture. Even if children continued to be enrolled in schools, they remained absent for prolonged periods due to the overreliance on digital modes during school closures. Several studies have pointed to the exacerbation of existing disadvantages and deepening of educational inequalities. The studies in this compilation provide some early evidence on this and on newer sites of exclusions – among migrant communities, those that shifted from private to government schools, those with disabilities, children of younger ages, and others – that require further exploration.

The effects of the pandemic continue to be realised and observed in various forms. Therefore, as we try to bring children back to schools, it is critical to continue tracking and redressing the differential schooling experiences of children on the basis of their backgrounds. In the same vein, understanding the reach and effectiveness of remedial programmes and initiatives undertaken by the central and state governments remains pertinent as well.<sup>28, 29</sup> Encouragingly, early evidence suggests that some remedial programmes, such as the *Illam Thedi Kalvi* (ITM)<sup>30</sup> or “Education at doorsteps” programme implemented in Tamil Nadu has shown promise in successfully bringing children back to school and reducing learning losses (Singh et al., 2022). Its success underscores the strength of contextualised programmes implemented with augmented government capacity.

For the long term, the need to build a more resilient and adaptive schooling system, and specifically a more resilient public schooling system – through better infrastructure, facilities but also with greater capacity to mobilize and engage communities, and with empowered grassroots stakeholders at a decentralized level – has strongly emerged.

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26 Potentially a more clear trend may emerge by compiling data from the 2022 Project Approval Board (PAB) *Samagra Shiksha* (Ministry of Education) minutes, which remained outside the scope & review period of this study and will be explored subsequently. A basic compilation (done by the authors) of non-enrollment and OOSC numbers from the minutes are available [here](#).

27 Raw state-wise minutes can be accessed here: PAB Minutes – Samagra Shiksha, Department of School Education and Literacy, Ministry of Education, <https://dsel.education.gov.in/pab-minutes>.

28 The authors have compiled a set of such preliminary initiatives based on information available on educational ministries and department websites of different states and union territories that can be found [here](#).

29 More recent and systematic information on other initiatives can be accessed here: PAB Minutes – Samagra Shiksha, Department of School Education and Literacy, Ministry of Education, <https://dsel.education.gov.in/pab-minutes>.

30 ITM is one of the largest volunteer based education programmes in India with over 200,000 teachers providing remedial education to ~3 million students. See Agrawal (2022) for more details.



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# 7. Annexure

## Note: Definitions of OOSC during Covid-19

### Definition of Out of School Children

Complexities associated with defining and consequently measuring or estimating the number of out of school children in India go far beyond COVID-19. As per a government order issued in 2018 by India's erstwhile Ministry of Human Resource Development (MHRD), (now the Ministry of Education),<sup>31</sup> *"A child 6–14 years of age will be considered out of school if he/she has never been enrolled in an elementary school or if after enrolment has been absent from school without prior intimation for reasons of absence for a period of 45 days or more"*.

Despite this seemingly clear definition, India does not subscribe to a legal definition of OOSC. This, combined with debates and contestations on the correct ways to define and measure "drop-outs" or "absenteeism" are reflected for example, in the treatment of estimations of OOSC among different periodic representative or census surveys run by the state. The National Sample Survey defines children "never enrolled" in Class 1 or above, and "dropouts" as OOSC, but does not clearly define the term 'dropout'. The Census of India uses similar categories of non-enrollment and dropouts, and in the absence of a clear definition of the terms, captures parents' perceptions of their child's schooling status. On the other hand, the National Family Health Survey captures only enrollment numbers.

Similarly, Unified District Information System for Education (U-DISE) 2017–18 estimates that 3.51 percent children from Primary, 5.02 percent children from Upper Primary, and 18.93 percent children from secondary schooling had dropped out of school. During the same time, the 2018 round of the Annual Status of Education Report (ASER) survey found that 2.5 percent of children in the age group of 6–14 years in rural areas were not enrolled in any school. Estimations of the true out of school population are thus inconsistent across sources, and for a variety of reasons.

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31 [https://www.education.gov.in/en/sites/upload\\_files/mhrd/files/upload\\_document/OoSC.pdf](https://www.education.gov.in/en/sites/upload_files/mhrd/files/upload_document/OoSC.pdf)

## 8.

## Appendix

**Appendix Table 1:**  
**COVID-19 Specific Studies reporting on Dropouts and Non-enrollments**

Sr. No.	Name of the Study/ Source/ Newspaper+Author	Reference Period	Region	Dropouts Reported (%/N)	Remarks
1	<a href="#">A Generation at Stake: Protecting India's children from the impact of Covid-19</a> (Shah, 2020)	June–July 2020	Bihar, Jharkhand, WB, Assam, Rajasthan, MP, Maharashtra, UP, Delhi, J&K, Odisha, Karnataka, and Telangana	3% (Programme Participants Group)  5% (Migrants group)	"Drop-outs" was captured as respondents who said they did not know if they would return to school.
2	<a href="#">Digital Education in India: Will Students with Disabilities miss the bus?</a> (Swabhiman Odisha, 2020)	July–August 2020	Odisha	43.5% (Children with disabilities)	Age-group: Teachers of, and children enrolled in grades 1 to12, and
3	<a href="#">Life in the time of Covid-19: Mapping the impact of Covid-19 on the lives of school going children especially girls in India</a> (Ghatak et al., 2020)	July–August 2020	Assam, Bihar, UP, Telangana, and Delhi	2%	A considerable 37% of sample did not respond to this question
4	<a href="#">Rapid Assessment of Learning during the school closures in the context of Covid</a> (UNICEF, 2020)	August–September 2020	Assam, Bihar, Gujarat, Kerala, MP, and UP	4% (Students unlikely [ever] to return to school)	8% reported they would "not return to school in the next three months"
5	<a href="#">Annual Status of Education Report (Rural) 2020 – Wave 1</a> (ASER Centre, 2020)	September 2020	26 States and 4 UTs	4.6% (Children between 6–14 years)	Children Not Enrolled in School by age-group: 1. Age 7–16 All: 5.2% 2. Age 7–10 All: 4.4% 3. Age 11–14 All: 3.9% 4. Age 15–16 All: 9.9%
6	<a href="#">The Pandemic and Disparities in School Education: Results from a Telephone Survey</a> (Oshikawa & Chakraborty, 2021)	September–October 2020	AP, Bihar, Karnataka, Kerala, MP, MH, Punjab, TN, Telangana, Tripura, UP, WB	4.3%	The study was undertaken with the rural HHs only  Age-group: in 3 age brackets of 6–14 yrs, 15–17 yrs, 18+ yrs
7	<a href="#">Delhi NCR Coronavirus Telephone Survey – Round 4</a> (National Council for Applied Economic Research, 2021)	December 2020–January 2021	Delhi NCR – Delhi, Haryana, UP and Rajasthan	8.4% (Unable to Enrol)	Most of these left out children were 6–7 years old.
8	<a href="#">Edtech and Educational Opportunity during the Covid-19 school closures: A case study of Chennai, Tamil Nadu</a> (Vegas et al., 2021)	February 2021	Tamil Nadu	2%	Age-group: Children enrolled in primary school
9	<a href="#">Annual Status of Education Report – Karnataka (Rural)</a> (ASER Centre, 2020)	March 2021	Karnataka	0.7% (Children between 6–14 years)	Children Not Enrolled in School by age-group: 1. Age 7–10 All: 0.2% 2. Age 11–14 All: 1.3% 3. Age 15–16 All: 7.4%
10	<a href="#">Access to Services during Covid-19 in "Digital India"</a> (LIRNEasia & ICRIER, 2021)	March–August 2021	National Level except Kerala	38% (Households with at least one child who dropped-out)	Only 20% school going children who were enrolled before the pandemic had continuity in education



## Appendix

Table 1: COVID-19 Specific Studies reporting on Dropouts and Non-enrollments

Sr. No.	Name of the Study/ Source/ Newspaper+Author	Reference Period	Region	Dropouts Reported (%/N)	Remarks
11	<a href="#">Starting from Scratch: Role of Parents, Teachers, and Tech in Early Childhood Education during Covid-19</a> (Vernekar et al. 2021)	April–June 2021	Maharashtra – Mumbai and Pune	1.3%	Age-group: 3 to 6 years
12	<a href="#">Annual Status of Education Report – Chhattisgarh (Rural)</a> (ASER Centre, 2021)	September 2021	Chhattisgarh	1.8% (Children between 6–14 years)	Children Not Enrolled in School by age-group: 1. Age 7–10 All: 1.1% 2. Age 11–14 All: 2.7% 3. Age 15–16 All: 11.5%
13	<a href="#">Annual Status of Education Report (Rural) 2021 – Wave 2</a> (ASER Centre, 2021)	October 2021	25 States and 3 UTs	4.6% (children between 6–14 years)	Children Not Enrolled in School by age-group: 1. Age 6–10 All: 5.0% 2. Age 11–14 All: 4.1% 3. Age 15–16 All: 6.6%
14	<a href="#">Annual Status of Education Report – West Bengal (Rural)</a> (ASER Centre, 2021)	December 2021	West Bengal	1% (children between 6–14 years)	Children Not Enrolled in School by age-group: 1. Age 6–10 All: 0.6% 2. Age 11–14 All: 1.1% 3. Age 15–16 All: 3.5%
15	<a href="#">Unified District Information System</a> (UDISE, 2020–21)	2020–21	All India	Primary (1–5): 0.8% Upper Primary (6–8): 1.9% Secondary (9–10): 14.6%	1. Primary (Boys): 0.8% 2. Primary (Girls): 0.7% 3. Upper Primary (Boys): 1.6% 4. Upper Primary (Girls): 2.3% 5. Secondary (Boys): 14.9% 6. Secondary (Girls): 14.2%
16	Newspaper Article: “Nearly 10% of Delhi’s Children are Out of School: Govt Data”, <a href="#">The Wire</a>	January 15, 2021	Delhi	9.8% (or 2,21,694 children)	Age group: 6–17 years
17	Newspaper Article: “Over 35 Lakh children out of school, states tell centre”, <a href="#">The Economic Times</a>	October 10, 2021	National Level	35 Lakh +	
18	Newspaper Article: “How Covid-19 has forced the dropout rate to shoot up in India and what can we do”, <a href="#">India Today</a>	November 21, 2021	National Level	15 Crore	Education Minister Dharmendra Pradhan quoted this number during an event
19	Newspaper Article: “In pandemic year, over 25k kids out of school in Maharashtra”, <a href="#">The Times of India</a>	April 29, 2021	Maharashtra	25,000	Data collected by education department of Maharashtra found that 7806 children were never enrolled and 17,397 students were counted as dropouts due to irregular attendance
20	Newspaper Article: “In Covid year, 2 lakh students move from private to govt schools in AP, 60,000 drop out”, <a href="#">The Indian Express</a>	July 24, 2021	Andhra Pradesh	60,253	Data collected by education department of AP also found that in total, 3,57,873 students either dropped out of school or took transfer certificates for moving to other schools

**Appendix Table 2:**  
**COVID-19 Specific Studies reporting on access to remote learning,  
digital devices, and internet services**

Sr. No.	Name of the Study	Reference Period	Region	Doesn't have access to a smartphone/ digital device	Doesn't have access to Internet services	Doesn't have access to Online Classes
1	<a href="#">Status Report: Government and Private Schools during Covid-19 – Findings of Rapid Survey</a> (Vyas, 2020)	May–June 2020	Bihar, Chhattisgarh, Jharkhand, Odisha, UP	40% (Parents in Jharkhand reported not having right device to access digital education)  23% (Parents of students in private schools reported no access to device)	75% (Parents reported – no internet connection, unable to afford data, poor internet speed/ signal)  84% (Teachers reported facing challenges in delivering education digitally)	
2	<a href="#">A Generation at Stake: Protecting India's children from the impact of Covid-19</a> (Shah, 2020)	June–July 2020	Bihar, Jharkhand, WB, Assam, Rajasthan, MP, Maharashtra, UP, Delhi, J&K, Odisha, Karnataka, Telangana	97%	78% (Urban households not having internet access)  72% (Rural households not having internet access)	79% (Parents felt children were learning "little" or "nothing at all" in online classes)
3	<a href="#">Ground-level Covid-19 Pandemic Impact Report: A cross-sectional survey of students in Pune, India</a> (Nair et al., 2022)	June–July 2020	Pune, Maharashtra	20%	29%	56% (Schools had no instructions regarding remote schools)
4	<a href="#">Digital Education in India: Will Students with Disabilities miss the bus?</a> (Swabhiman Odisha, 2020)	July–August 2020	Odisha		74% (Children needing Wi-Fi and data support to continue learning)	86% (Do not know how to use the technology appropriately to continue the learning)
5	<a href="#">Life in the time of Covid-19: Mapping the impact of Covid-19 on the lives of school going children especially girls in India</a> (Ghatak et al., 2020)	July–August 2020	Assam, Bihar, UP, Telangana, Delhi	0.54% (“No Access”)  18% (“Never had access to a phone”)	54%	11% (Reported viewing/ listening to educational broadcasts on TV or Radio)
6	<a href="#">Rapid Assessment of Learning during the school closures in the context of Covid</a> (UNICEF, 2020)	August–September 2020	Assam, Bihar, Gujarat, Kerala, MP, UP	10% (Students do not use – smartphones, feature phones, TV, Radio, or Laptops/ Computers)	37% (Parents reported data cost as constraint to remote education)  27% (Parents reported poor network connectivity as constraint to remote education)	40% (Students had not used remote learning in six months prior to survey)
7	<a href="#">Myths of Online Education</a> (Azim Premji Foundation, 2020)	September 2020	Chhattisgarh, MP, Rajasthan, Karnataka, Uttarakhand	13% (Parents did not own smartphone)  78% (Parents did not have more than one smartphone)		54% (Teachers reported inadequate knowledge and user-experience of remote teaching platforms)  60% (Children cannot access online learning opportunities)

## Appendix

Table 2: COVID-19-specific Studies reporting on access to remote learning, digital devices, and internet services

Sr. No.	Name of the Study	Reference Period	Region	Doesn't have access to a smartphone/ digital device	Doesn't have access to Internet services	Doesn't have access to Online Classes
8	<a href="#">Annual Status of Education Report (Rural) 2020 – Wave 1</a> (ASER Centre, 2020)	September 2020	26 States and 4 UTs	38.2% ( <i>Enrolled children not having smartphone</i> )		
9	<a href="#">Covid-19 and Exclusion of Children with Disabilities in Education</a> (Vernekar et al., 2020)	September–October 2020	Andhra Pradesh, Karnataka, Kerala, Tamil Nadu			18% ( <i>Students reported no online classes were conducted or attended by them</i> )
10	<a href="#">The Pandemic and Disparities in School Education: Results from a Telephone Survey</a> (Oshikawa & Chakraborty, 2021)	September–October 2020	AP, Bihar, Karnataka, Kerala, MP, MH, Punjab, TN, Telangana, Tripura, UP, WB	48.1%		
11	<a href="#">Delhi NCR Coronavirus Telephone Survey – Round 4</a> (National Council for Applied Economic Research, 2021)	December 2020–January 2021	Delhi NCR – Delhi, Haryana, UP, Rajasthan	40%		40% ( <i>Children do not attend online classes regularly</i> )
12	<a href="#">Edtech and Educational Opportunity during the Covid-19 school closures: A case study of Chennai, Tamil Nadu</a> (Vegas et al., 2021)	February 2021	Chennai, Tamil Nadu	24%		19% ( <i>Children not attending any online classes</i> )
13	<a href="#">Access to Services during Covid-19 in “Digital India”</a> (LIRNEasia & ICRIER, 2021)	March–August 2021	National Level (except Kerala)	32% ( <i>15+ years population not having a smartphone</i> )	53% ( <i>15+ years population not the using internet</i> )  38% ( <i>households without internet access</i> )	
14	<a href="#">Starting from Scratch: Role of Parents, Teachers, and Tech in Early Childhood Education during Covid-19</a> (Vernekar et al. 2021)	April–June 2021	Maharashtra – Mumbai and Pune	11% ( <i>Households could not participate due to internet issues and unavailability of smartphones</i> )  45% ( <i>Households prioritized older children in use of phones for education</i> )  52% ( <i>Households had less than one device per child</i> )	98% ( <i>Households owning at least one smartphone with internet</i> )	2% ( <i>HHs said no teaching and learning happened for ECE</i> )  30–40% ( <i>Fall in enrolment in virtual classes</i> )
15	<a href="#">Locked Out: Emergency Report on School Education – SCHOOL Survey</a> (Road Scholarz, 2021)	August 2021	Assam, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Jharkhand, Karnataka, MP, Maharashtra, Odisha, Punjab, TN, UP, WB	23% ( <i>Urban children living in home with smartphone</i> )  49% ( <i>Rural children living in home with smartphone</i> )	57% ( <i>Urban ‘online children’ having connectivity problems “often” or “sometimes”</i> )  65% ( <i>Rural ‘Online Children’ having connectivity problems “often” or “sometimes”</i> )	23% ( <i>Urban parents who felt child had “adequate online access”</i> )  8% in rural areas ( <i>Rural parents who felt child had “adequate online access”</i> )  Age group: children enrolled in grades 1–8

## Appendix

Table 2: COVID-19-specific Studies reporting on access to remote learning, digital devices, and internet services

Sr. No.	Name of the Study	Reference Period	Region	Doesn't have access to a smartphone/ digital device	Doesn't have access to Internet services	Doesn't have access to Online Classes
16	<a href="#">Annual Status of Education Report (Rural) 2021 – Wave 2</a> (ASER Centre, 2021)	October 2021	25 States and 3 UTs	32.4% ( <i>Enrolled children not having a smartphone at home</i> )		
17	<a href="#">National Achievement Survey, 2021</a> (National Achievement Survey, 2021)	November 2021	National Level	28% ( <i>Children not having digital devices at home</i> )		
18	Newspaper Article: <i>"India's school children were devastated by lockdowns and online classes"</i> , <a href="#">Quartz India</a>	September 6, 2021	National Level	30 million ( <i>Children not having access to smartphones or other devices</i> )		
19	Newspaper Article: <i>"A year into the pandemic – Does India consider running schools as an essential activity"</i> , <a href="#">News18</a>	February 17, 2021		97.3% ( <i>Have no access to computer</i> )	91.1% ( <i>No access to internet facilities</i> )	
20	Newspaper Article: <i>"Pandemic has increased school drop-outs"</i> , <a href="#">Times of India</a>	August 24, 2020	Andhra Pradesh	1 lakh ( <i>estimate from Andhra Pradesh Government survey</i> )		15% ( <i>Students enrolled in government schools not attending remote classes</i> )
21	Newspaper Article: <i>"Second year of Pandemic – No devices, millions of students stay offline"</i> , <a href="#">The Economic Times</a>	June 24, 2021	Bihar	14 million ( <i>Children having no access to digital devices</i> )		
			Maharashtra, Madhya Pradesh, and Jammu & Kashmir	70% ( <i>Children having no access to devices</i> )		
			Jharkhand and Karnataka	3 million ( <i>Children having no access to devices</i> )		
22	Newspaper Article: <i>"In pandemic year, over 25k kids out of school in Maharashtra"</i> , <a href="#">Times of India</a>	April 29, 2021	Maharashtra	40.2% ( <i>Children having no access to smartphones with internet</i> )		
23	Newspaper Article: <i>"Closure of 1.5 million schools in India due to Covid-19 pandemic impacts 247 million children"</i> , <a href="#">India Today</a>	May 29, 2021		25% ( <i>Children having access to digital devices and internet connectivity</i> )		
24	Newspaper Article: <i>"Covid-19 is undoing 70 years of girls' education progress in India"</i> , <a href="#">The Global Citizen</a>	July 15, 2020		28% ( <i>Women in rural areas having access to technology</i> )  33% ( <i>Women in urban areas having access to technology</i> )		
25	Newspaper Article: <i>"76% of Indian students faced learning losses during the pandemic"</i> , <a href="#">News18</a>	November 22, 2021		10% ( <i>Students having no access to smartphone</i> )		

## Appendix

Table 2: COVID-19-specific Studies reporting on access to remote learning, digital devices, and internet services

Sr. No.	Name of the Study	Reference Period	Region	Doesn't have access to a smartphone/ digital device	Doesn't have access to Internet services	Doesn't have access to Online Classes
26	Newspaper Article: "Education Ministry report – At least 40% school kids in 7 states lack access to digital devices", <a href="#">Indian Express</a>	October 9, 2021	Madhya Pradesh	70%		
			Bihar	58.1%		
			Andhra Pradesh	57%		
			Assam	44.2%		
			Jharkhand	43.4%		
			Uttarakhand	41.2%		
			Gujarat	40%		
27	Newspaper Article: "Ahmedabad – 30% of poor children yet to return to formal studies", <a href="#">Times of India</a>	December 18, 2020			40% (did not have access to smartphones with 4G connectivity)	

**Appendix Table 3:**  
**Methodology and Survey Questions Across COVID-19 Specific Studies**

S.No.	Name of the Study	Reference Period	Region	Note on Sampling Methodology	Questions
1	<a href="#">Status Report: Government and Private Schools during Covid-19 – Findings of Rapid Survey</a> (Vyas, 2020)	May–June 2020	Bihar, Chhattisgarh, Jharkhand, Odisha, UP	<ol style="list-style-type: none"> <li>The study suffers from the limitations of having a small sample and self-reported data, which affects the external validity of the findings.</li> <li>In the case of private school parents and government teachers, it suffers from the limitation of a self-selecting sample since the data was filled online, which means that all respondents had access to a digital device and technical know-how to enter data on a Google form.</li> </ol>	<ol style="list-style-type: none"> <li>What is the status of the delivery of education during the lockdown? (Both Public and Private)</li> <li>What is the mode of education delivery during the lockdown?</li> <li>What are the challenges faced by the teachers during lockdown?</li> <li>Do you think that the prolonged school closures might lead to students drop-out from the school? (To the teachers)</li> <li>What are the challenges to parents in supporting their children to access education during lockdown?</li> </ol>
2	<a href="#">A Generation at Stake: Protecting India's children from the impact of Covid-19</a> (Shah, 2020)	June–July 2020	Bihar, Jharkhand, WB, Assam, Rajasthan, MP, Maharashtra, UP, Delhi, J&K, Odisha, Karnataka, Telangana	<ol style="list-style-type: none"> <li>The study adopted a cross-sectional design and primary data was collected through an online survey using SurveyMonkey</li> <li>The respondents for the study were randomly selected</li> </ol>	<ol style="list-style-type: none"> <li>Will you be returning to the school once it reopens?</li> <li>Are you using the internet for your learning?</li> <li>Do you have access to a computer to continue your learning?</li> </ol>
3	<a href="#">Ground-level Covid-19 Pandemic Impact Report: A cross-sectional survey of students in Pune, India</a> (Nair et al., 2022)	June–July 2020	Pune, Maharashtra	<ol style="list-style-type: none"> <li>The students aged between 9–17 of all genders were assessed for this cross-sectional telephonic survey</li> <li>All participants attended the Sopanrao Baburao Katke Primary School and were affiliated with the Jazz Hands Foundation</li> <li>All participants had a monthly HH budget for expenses below 20,000 INR.</li> </ol>	<ol style="list-style-type: none"> <li>Are you continuing your studies from home? If yes, how?</li> <li>Do you have access to a smartphone?</li> <li>How many smartphones are there in the family?</li> <li>Do you have access to the internet?</li> <li>Are you in touch with your teachers?</li> </ol>
4	<a href="#">Digital Education in India: Will Students with Disabilities miss the bus?</a> (Swabhimani Odisha, 2020)	July–August 2020	Odisha	Details on Sampling methodology is not provided in the report	<ol style="list-style-type: none"> <li>Are you going to continue your study?</li> <li>Do you know how to use the technology to continue your learning?</li> <li>Do you have accessible education?</li> </ol>
5	<a href="#">Life in the time of Covid-19: Mapping the impact of Covid-19 on the lives of school going children especially girls in India</a> (Ghatak et al., 2020)	July–August 2020	Assam, Bihar, UP, Telangana, Delhi	<ol style="list-style-type: none"> <li>HH Survey where one adult and one child in the age group of 10–18 years were individually interviewed</li> <li>The study was conducted in partnership with the organisations with presence in the field and hence the selection of HH was done on a purposive basis by them only.</li> <li>The states that were included in the study were not represented equally</li> </ol>	Will you be returning to the school once it reopens?

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Table 3: Methodology and Survey Questions Across COVID-19 Specific Studies

S.No.	Name of the Study	Reference Period	Region	Note on Sampling Methodology	Questions
6	<a href="#">Rapid Assessment of Learning during the school closures in the context of Covid</a> (UNICEF, 2020)	August–September 2020	Assam, Bihar, Gujarat, Kerala, MP, UP	1. The study uses a mixed-methods approach 2. To select respondents, pre-existing contact lists were used. For the parent and adolescent survey, a sample frame of 4 times the target number of respondents in each state was used, based on previously created databases 3. For the teacher survey, teachers were randomly selected from a list of government teachers provided by state governments.	Will the student be returning to school in the next 3 months?
7	<a href="#">Myths of Online Education</a> (Azim Premji Foundation, 2020)	September 2020	Chhattisgarh, MP, Rajasthan, Karnataka, Uttarakhand	The study primarily used survey tools that were implemented through telephonic discussions with teachers and parents across a large number of public schools in five states.  Three of these five states – Chhattisgarh, MP, and Rajasthan – have been implementing different forms of online teaching in public schools over the past few months, while Karnataka and Uttarakhand have not implemented any state-level initiatives for online teaching	
8	<a href="#">Annual Status of Education Report (Rural) 2020 – Wave 1</a> (ASER Centre, 2020)	September 2020	26 States and 4 UTs	The ASER 2020 household survey was conducted with a random sample of households with mobile phones drawn from the ASER 2018 data set, selected to generate estimates that are representative at state and all-India levels. In addition, head teachers or teachers from all schools in the ASER 2018 sample were included in the ASER 2020 school survey. Extensive pilots and experiments were conducted to check the feasibility of the ASER 2018 data set as a sampling frame for ASER 2020.	What is the enrolment status of the child?
9	<a href="#">Covid-19 and Exclusion of Children with Disabilities in Education</a> (Vernekar et al., 2020)	September–October 2020	Andhra Pradesh, Karnataka, Kerala, and Tamil Nadu	Purposive Sampling	
10	<a href="#">The Pandemic and Disparities in School Education: Results from a Telephone Survey</a> (Oshikawa & Chakraborty, 2021)	September–October 2020	AP, Bihar, Karnataka, Kerala, MP, MH, Punjab, TN, Telangana, Tripura, UP, WB	The survey was administered to rural HHs that had one or more members whose primary status was 'student'	Did any students in this household drop out from school/college during the pandemic?



## Appendix

Table 3: Methodology and Survey Questions Across COVID-19 Specific Studies

S.No.	Name of the Study	Reference Period	Region	Note on Sampling Methodology	Questions
11	<a href="#">Delhi NCR Coronavirus Telephone Survey – Round 4</a>  (National Council for Applied Economic Research, 2021)	December 2020–January 2021	Delhi NCR – Delhi, Haryana, UP, Rajasthan	Delhi Metropolitan Area Study (DMAS) sampling frame of 132 villages and 138 urban blocks were used for DCVTS where 5200 HHs in Delhi NCR region were selected using 3 stage stratified cluster sampling.	What is the enrolment status of the child?
12	<a href="#">Edtech and Educational Opportunity during the Covid-19 school closures: A case study of Chennai, Tamil Nadu</a>  (Vegas et al., 2021)	February 2021	Chennai, Tamil Nadu	1. Drew our sample from a dataset that includes 3,035 HH that were part of the Tamil Nadu Integrated Child Development Scheme (TNICDS) 2. The TNICDS study had administered an in-person survey to 1,951 households of children attending anganwadi (early childhood) centres in Chennai 3. Of those households, 665 have a primary school-aged child (at least age 6). For this survey, we drew a simple random sample of 200 “primary” households	After schools closed, how many children discontinued their school enrolment?
13	<a href="#">Annual Status of Education Report – Karnataka (Rural)</a>  (ASER Centre, 2020)	March 2021	Karnataka	The survey was conducted in 24 districts of the district. This survey was able to reach children within the period that can be considered the 2020–21 “school year”.	What is the enrolment status of the child?
14	<a href="#">Access to Services during Covid-19 in “Digital India”</a>  (LIRNEasia & ICRIER, 2021)	March–August 2021	National Level (except Kerala)	Sample designed to be representative of 15+ population at: 1. National level (except Kerala) 2. Urban-rural level 3. Men vs. Women 4. Socio-economic classification 5. Age 6. State/Union territory level for: NCT of Delhi, Assam, Tamil Nadu, and Maharashtra	Did any of your children drop out of school due to COVID-19?
15	<a href="#">Starting from Scratch: Role of Parents, Teachers, and Tech in Early Childhood Education during Covid-19</a>  (Vernekar et al. 2021)	April–June 2021	Maharashtra – Mumbai and Pune	1. The HHs form part of two types of schools that were participating in the pilot program for the digital ECE model run by the Rocket Learning – Akanksha Schools and Balwadis 2. For Akanksha schools, the research team got a complete list of 815 students along with basic information on HHs – the data was collected from randomly selected 311 HHs – 139 enrolled in Mumbai and 172 enrolled in Pune 3. For Balwadis – from a total list of 2617 HHs, the data was collected from randomly selected 365 HHs located in 24 wards of Mumbai	Did any child in your household have to dropout or discontinue their education since the start of the pandemic?

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S.No.	Name of the Study	Reference Period	Region	Note on Sampling Methodology	Questions
16	<a href="#">Locked Out: Emergency Report on School Education – SCHOOL Survey</a> (Road Scholarz, 2021)	August 2021	Assam, Bihar, Chandigarh, Delhi, Gujarat, Haryana, Jharkhand, Karnataka, MP, Maharashtra, Odisha, Punjab, TN, UP, WB	<ol style="list-style-type: none"> <li>1. The survey by conducted by volunteers (mainly university students)</li> <li>2. The survey was conducted in the rural hamlets and urban bastis “inhabited by underprivileged families – the sort of families that send their children to government schools”</li> <li>3. The survey intentionally focuses on underprivileged HHs and the findings should be read in that light.</li> </ol>	
17	<a href="#">Annual Status of Education Report – Chhattisgarh (Rural)</a> (ASER Centre, 2021)	September 2021	Chhattisgarh	<ol style="list-style-type: none"> <li>1. The survey was conducted in Oct–Nov 2021 when children were in the 2021–22 school year</li> <li>2. It provides estimates at the district and state levels</li> <li>3. In each district of CH, 60 villages were sampled using PPS from the updated 2011 Census Village directory</li> <li>4. In each of the sampled villages, 20 randomly selected HHs were surveyed</li> <li>5. Schooling info was collected for all children aged 3–16 in each surveyed HH, and all children aged 5–16 were assessed on foundational reading and arithmetic</li> </ol>	What is the enrolment status of the child?
18	<a href="#">Annual Status of Education Report (Rural) 2021 – Wave 2</a> (ASER Centre, 2021)	October 2021	25 States and 3 UTs	The standard operating procedure for ASER includes recording a contact number from each household and school surveyed, where available. These phone numbers are used to monitor and cross-check the data collection effort in that survey year. The ASER 2021 household survey was conducted with a random sample of households with mobile phones drawn from the ASER 2018 data set, selected to generate estimates that are representative at state and all-India levels. In addition, head teachers or teachers from all schools in the ASER 2018 sample were included in the ASER 2021 school survey. Extensive pilots and experiments were conducted to check the feasibility of the ASER 2018 data set as a sampling frame for ASER 2020.	What is the enrolment status of the child?

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Table 3: Methodology and Survey Questions Across COVID-19 Specific Studies

S.No.	Name of the Study	Reference Period	Region	Note on Sampling Methodology	Questions
19	<a href="#">National Achievement Survey, 2021</a> (National Achievement Survey, 2021)	November 2021	All India	The States, Districts, and School level samples were based on UDISE+ 2019–20 data. Out of 733 targeted districts, the NAS-2021 was conducted in 720 districts on 12th November 2021.	
20	<a href="#">Annual Status of Education Report – West Bengal (Rural)</a> (ASER Centre, 2021)	December 2021	West Bengal	<ol style="list-style-type: none"> <li>1. The survey was conducted in all districts of WB (except Darjeeling) in Dec 2021 when children were in the 2021–22 school year</li> <li>2. The survey is representative at the state level</li> <li>3. In each district, 30 villages were sampled using PPS from the 2011 Census Village directory</li> <li>4. In each sampled village, 20 randomly selected HHs were surveyed</li> <li>5. Schooling info was collected for all children aged 3–16 in each surveyed HH, and all children aged 5–16 were assessed on their ability to read simple text and do basic arithmetic</li> </ol>	What is the enrolment status of the child?
21	<a href="#">Unified District Information System</a> (UDISE 2020–21)	2020–21	All India	Under the UDISE system, the schools feed the data manually at the school level in a paper version of the Data Capture Format (DCF) with reference date of 30th September of each year. UDISE provides school-wise data on enrolment, physical infrastructure, teacher, etc. These paper DCFs are computerized at block level or at district level, collated at State/UT level and thereafter shared with the Central Government to build a national database.	Enrolment status at the school level

Note: Where questionnaires for a study were unavailable, the research team has noted down “questions” as per reporting of findings in the respective reports/papers.