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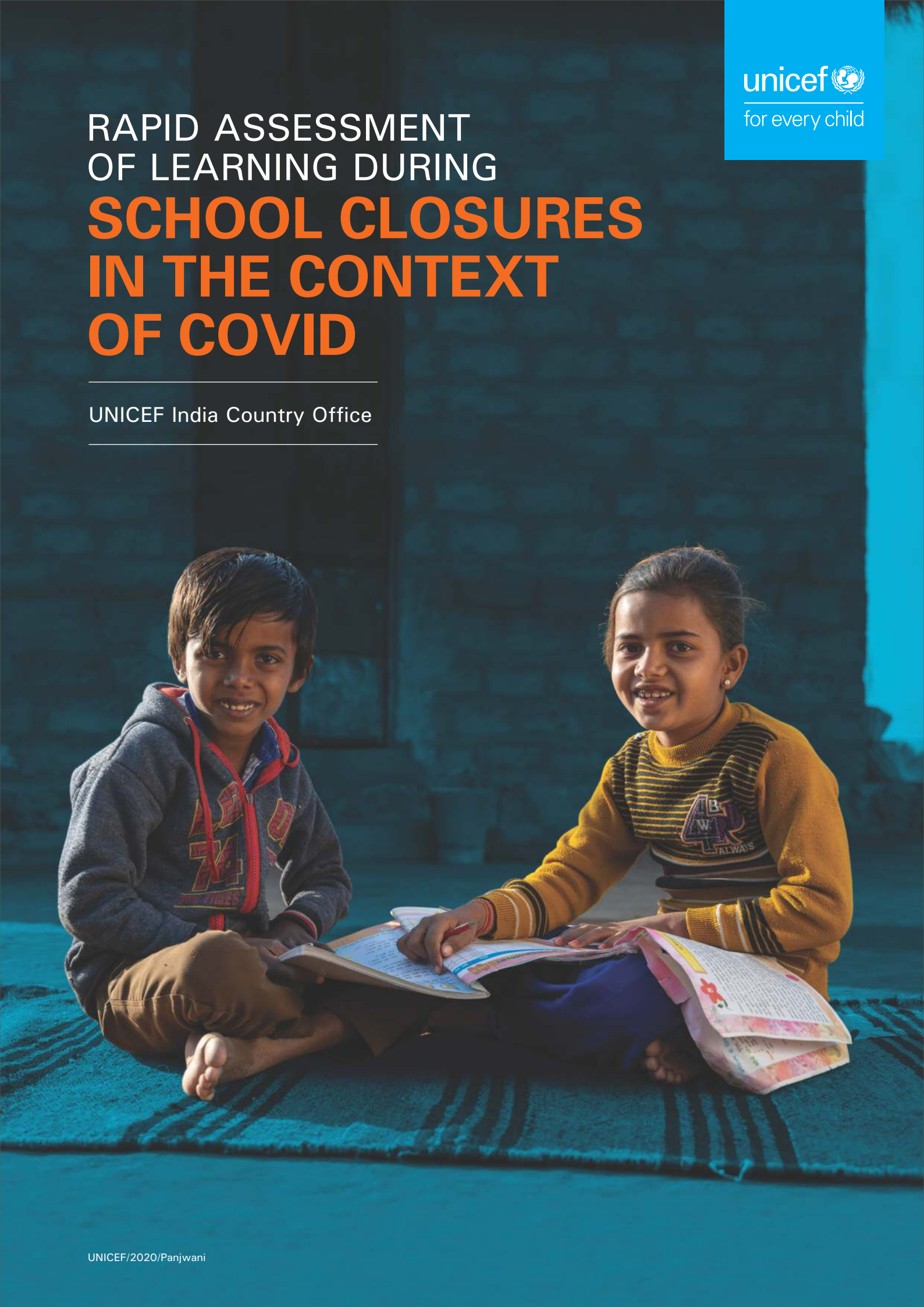
RAPID ASSESSMENT OF LEARNING DURING SCHOOL CLOSURES IN THE CONTEXT OF COVID

UNICEF India Country Office



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Acronyms

ASHA	-	Accredited Social Health Activist
BPL	-	Below Poverty Line
CATI	-	Computer Assisted Telephonic Interview
CSO	-	Civil Society Organization
DEO	-	District Education Officer
EMI	-	Equated Monthly Instalment
MoE	-	Ministry of Education
MoHFW	-	Ministry of Health and Family Welfare
NCERT	-	National Council of Educational Research and Training
PPE	-	Personal Protection Equipment
SHG	-	Self Help Group
SOP	-	Standard Operating Procedure
SC	-	Scheduled Caste
ST	-	Scheduled Tribes
TV	-	Television
UDISE	-	Unified District Information System for Education
UT	-	Union Territory

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Preface

In response to the COVID-19 pandemic, schools across India, as in many other parts of the world, were closed in mid-March impacting approximately 286 million students (48 per cent girls) from pre-primary to upper secondary education. This is in addition to the more than 6 million children (48 per cent girls) who were already out of school prior to the COVID-19 crisis.

During school closures, measures were taken by Ministry of Education (MoE) and the National Council of Educational Research and Training (NCERT) from the national level; by Governments in states and union territories (UTs) to implement programmes to support distance/home-based learning for children by varying degree of teacher interaction and follow-up and by parents. Different means, including television, radio, online platforms and paper-based materials, have been used to provide distance/home-based learning. These efforts have also been supported by civil society organizations and other agencies including UNICEF.

While these strategies and initiatives aim to ensure continued learning for all children, there is a lack of clear evidence of the extent to which children, particularly from the most marginalized groups, are able to access learning from home and the modalities and means that are the most effective in reaching them. Globally, data show that, in general, the poorest and most marginalized children are missing out on schooling compared to their counterparts.

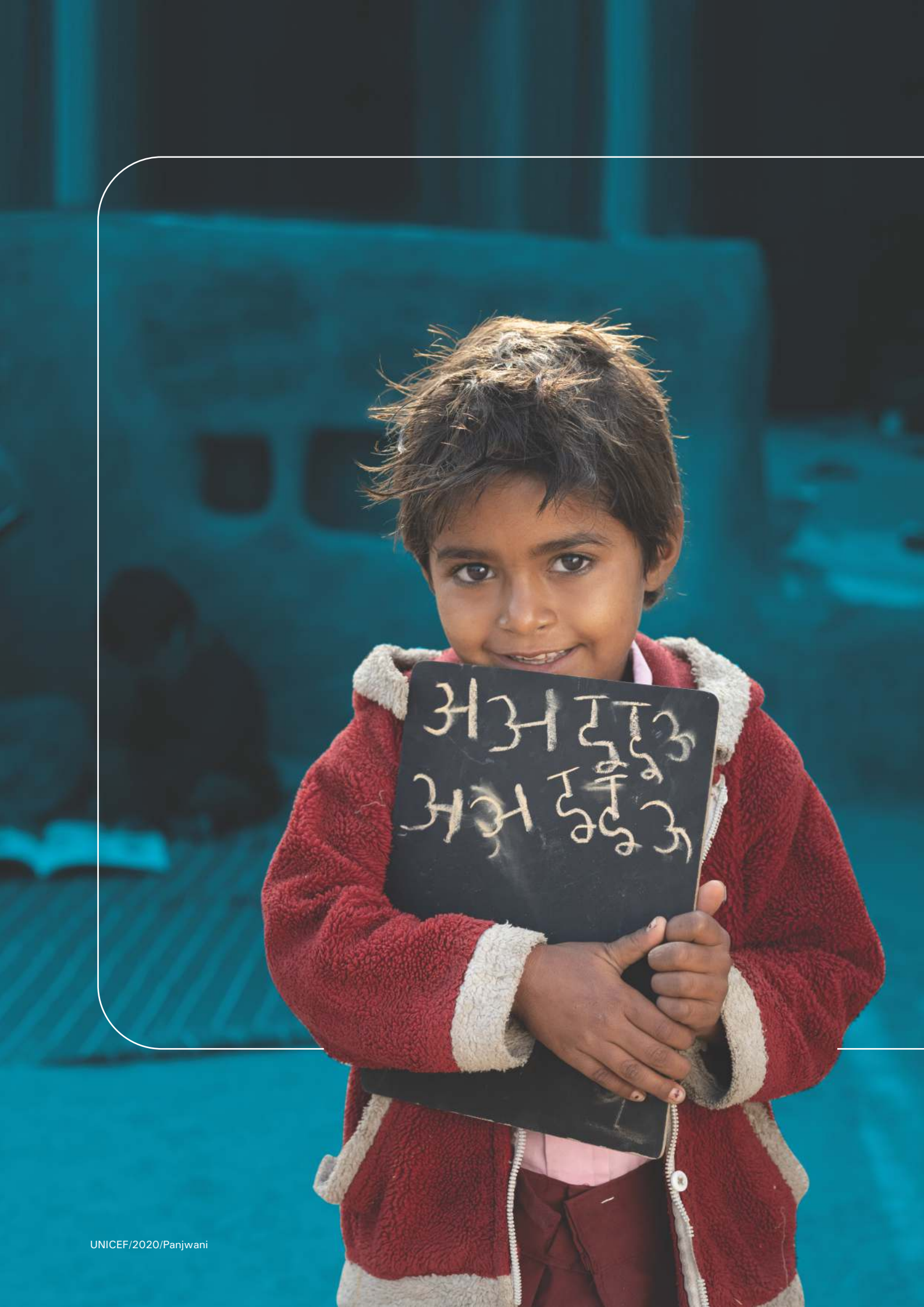
In this context UNICEF undertook a rapid assessment to fill the data and evidence gaps, to gain an understanding of which interventions may be most effective in supporting distance/home-based learning of children, particularly from the most marginalized groups, during school closures. This report would be able to inform states to better prepare the education system to ensure continued learning of children moving forward and in case of future crises.

This rapid assessment has been conducted by Dalberg Advisors. UNICEF would like to acknowledge the efforts of Ms. Dayoung Lee and her team in not only conducting the assessment, but also in its conceptualization and design.

UNICEF is grateful to officials from the different state governments for sharing their valuable insights on the efforts that have been made to support distance/home-based learning for children during school closure. In addition, UNICEF would like to give its appreciation for the representatives of various civil society organizations who were most willing to share their field experiences and learnings, which have enriched this report.

Extremely thankful to Prof. R. Govinda (former Vice Chancellor National Institute of Educational Planning and Administration) and Mr. Frank Van Cappelle, Education Specialist UNICEF Regional Office South Asia, who as members of the technical advisory committee provided valuable inputs, guidance and feedback during the study.

Finally, our deepest gratitude to the parents, children and teachers who gave their valuable time for responding to the phone survey. Their valuable inputs will enable future efforts towards ensuring learning for all children, including the most marginalized in situations leading to school closures.



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Executive Summary

Despite government, private and civil society actors coming together to roll out a wide range of remote learning resources, students are falling behind during the physical closure of schools since March 2020, due to the COVID-19 pandemic. During the lockdown, students have been studying on average three to four hours a day. However, parents, students and teachers believe that learning and overall progress (including social and cultural skills, fitness, etc.) slowed down considerably. Only 60 per cent of students have used any remote learning resources; and even among those, nearly 80 per cent report that they are learning less or significantly less than in school. The study suggests that the main reasons are:

- **Digital channels are not as accessible as often perceived.** Ten (10) per cent of students overall do not have access to any of the following devices – smartphone, feature phone, television (TV), radio, or laptop/computer with significant variation between states. More than 10 per cent of students do not have access to mobile phones within or outside of their households.
- **Even when students have access to devices, awareness around using them for remote learning maybe low.** Of the respondents who did not use any remote learning opportunities, 45 per cent of them report not being aware of any resources from which to learn. Television (TV) and feature phones are particularly underutilised for learning.
- **Fewer girls, younger students, rural students and government school students use high-tech tools.** Use of WhatsApp and YouTube when compared for different categories; girl's usage was 8 per cent lower than that of boys; usage by younger students (5-13-year-old) was 16 per cent lower than that of older students (13-18-year-old); rural students' usage was 15 per cent lower compared to urban students and for students of class 1 to 5, government school students' usage was 10 per cent lower compared to students from private schools.
- **Availability of key offline resources, textbooks and teachers remain far from universal.** Despite many states distributing textbooks for the new academic year, nearly one in three parents still ask for support with textbooks and other learning materials. Nearly 30-40 per cent of students are not in touch with their teachers, though this varies significantly by state. A smaller proportion of younger students and rural students are in touch with their teachers.
- **Remote learning resources are generally perceived to be less effective than in-school teaching.** Other than home visits, more than half of teachers surveyed perceive remote learning materials and methods to be less effective than classroom teaching.
- **Poor mental health holds students back.** About a third of elementary students (as perceived by their parents) and nearly half of secondary students feel that their mental and socio-emotional health has been poor or very poor since May 2020.
- **Students from migrant and scheduled tribes (ST) families face more challenges.** While students from migrant and ST families use remote learning resources at similar levels to their peers, when parents were asked if their children were learning as much as before the pandemic, 15 per cent more migrant parents and 9 per cent more ST parents reported that their children were learning less now. Parents of children from migrant families (60 percent) and from ST families (53 per cent) rated their children's mental and socio-emotional well-being as poor or very poor compared to the status reported for the overall sample.

There are some bright spots. Certain states and schools have mitigated some of the impacts of school closures.

- While students in private schools mostly used WhatsApp, private tuition and live video classes, their government school peers mostly used textbooks, teacher home visits and YouTube for learning, so that there were no major differences in overall usage levels.
- Over half of the students who used remote learning did so across multiple resources. WhatsApp is the most used tool by students and teachers alike (over half of students and 89 per cent of surveyed teachers). Many parents, adolescents and teachers see value in technology tools, some even believe they are more effective than in-person learning. Of the teachers who found WhatsApp, YouTube and live video classes effective, approximately 40 per cent thought they were more effective than in-person learning.
- Moreover, students who are perceived to be learning more are also more likely to have used high-tech tools.

Parents and teachers have also identified important support needs to improve the remote learning experience and deal with safe school returns. Parents said they need help with data, devices and school

textbooks. Similarly, teachers requested help with devices and better network access during closures, as well as with having guidelines in place for safety and smaller class sizes once schools re-open, along with the provision of sanitation kits. These needs will extend beyond the pandemic period as they are important for improving the quality and equity of learning.

More than 90 per cent of students expect to return if schools re-open in the next three months, mainly to learn more and to better prepare for exams. But it was also observed that there is a serious risk of many students never returning to school due to pressures beyond just the immediate health risks - even after schools re-open. While health concerns are by far the largest deterrent to returning to school, a sizeable number of respondents cited financial constraints as well – 10 per cent of families could not afford to send children back to school and 6 per cent needed children to help earn an income.

These findings provide knowledge and inspire opportunities for further exploration of how we might enhance remote learning during the current school closures, better prepare for re-opening, and strengthen the education system over the long term.

In the immediate term, as schools remain closed:

- Reach the last mile students[1] and augment digital learning through textbooks/print materials.
- Create greater awareness of tech tools for remote learning through awareness drives as well as communications efforts, especially for TV and feature phones which are most underutilised. These must be gender-responsive to ensure that households invest in/ allow girls to use and own smartphones and computers equally as boys.
- Encourage greater teacher engagement to augment self-directed learning. Better monitor for teachers to stay in touch and provide proper protective equipment for those conducting home visits, and other enablers such as coverage of additional expenses like data charges. Encourage female teachers to follow up with those girls who are most at risk of being married, in coordination with child protection committees.
- Improve the most marginalized students' learning experiences through targeted efforts such as more local language content and immersive platforms with multiple access options for students with disabilities.
- Mitigate technology challenges by subsidizing or eliminating device and data costs for teachers, and deploying devices at community level for students.

In the short term, as schools are about to re-open:

- Conduct gender-responsive re-enrolment campaigns to prevent students from dropping out and support to relieve financial challenges (e.g., targeted scholarships and cash transfers through social protection schemes).
- Count the number of students coming back to school, keeping a special track of girls and boys who do not come back and who are no longer living with their families. Work with school management committees, child protection committees and panchayats to ensure that these children have access to education wherever they are and adequate resources and services if they have been married or trafficked.
- Support students by assessing their learning levels and catching them up through remedial education and teaching at the right level.
- Provide non-academic support such as mental wellness and career guidance counselling.

In the long term, to further strengthen the system:

- Improve learning outcomes for the longer term through blended learning approaches, leveraging some of tech tools' advantages compared to in-person learning.
- Explore ways to increase effectiveness of commonly used tools like WhatsApp and deliver content in more personalised ways to deepen the quality of remote learning going forward.
- Continue to develop lighter applications that can be downloaded on low-cost smartphones and operate with 2G internet or work offline with only periodic connectivity.
- Improve basic digital infrastructure in schools and continue to invest in connecting remote areas to the digital ecosystem, such as setting up community hotspot facilities.

[1]These include children in remote rural locations, urban poor, children from scheduled caste and scheduled tribe communities, children with disabilities, children out-of-school and especially girls in these marginalized groups.

CONTEXT AND INTRODUCTION

> "Education is the most important necessity for us right now. I think it is as important as getting food. If [our children's] education doesn't continue, then it will be a problem."
>
> - Mukesh (40), a daily wage worker from Bihar, April 2020[2]

The COVID-19 pandemic has caused disruption to students' learning around the world.[3] In India, it has left over 286 million students from pre-primary to upper secondary school out of school since March 2020.[4] As most schools continue to remain closed, students, parents and educators are becoming increasingly concerned. Evidence from past prolonged school closures shows that such disruptions can set generations of children back for life. For instance, the 2005 earthquake in Pakistan led to an average 14 weeks of school closures resulting in affected children being put behind in their learning by approximately, about 1.5 to 2 years compared to their peers in other areas.[5] Losses during closures are likely to snowball after children return to school if lessons and curriculum do not match their learning level.

In India, in response to COVID-19 related school closures, a wide range of actors – the government, civil society, private companies, local communities and families – have come together to support children remotely through numerous channels. Actors, such as village panchayats and livelihoods related self-help groups, have stepped in to fill gaps. Solutions range from interactive live online classes to digital content shared over WhatsApp to distribution of textbooks and calendars with home-based activities.

Given the urgency of the crisis, speed has been rightly prioritised over carefully examining what works. The Minister of Education emphasized that students in the most remote parts of the country will get access to learning materials.[6] But what per centage of students have been receiving learning materials so far? Who is left out? When students have access, are they using these materials? Do they find them helpful? Which ones do they find most helpful and why? What are the barriers and enablers to remote learning tools? What kinds of support are parents and students looking for? How does all of this differ across geography, disaggregated by sex, age groups, and grade levels?

Six months into the closure of schools, it is now time to learn from what has happened so far and to inform what to do next. This study aims to provide timely guidance to policymakers, funders and implementers on how to better support students during continued school closures, and how to bounce back effectively, once schools re-open.

Building on the insights from various rapid assessments conducted so far, this study aims to fill key gaps and update and triangulate some of the findings. There are numerous government officials, teachers, practitioners and experts, parents, and students who have contributed to this study by sharing their valuable time and perspectives. UNICEF would like to thank everyone.

[2]Dalberg Interview, April 2020

[3]UNESCO, COVID-19 Educational Disruption and Response, 2020

[4]The Economic Times, Delhi schools closed: All primary schools shut as coronavirus spreads, 2020

[5]Research on Improving Systems of Education, Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005, 2020

[6]MoneyControl, Students in India's remotest parts will get access to education even during COVID-19: Ramesh Pokhriyal, May, 2020

PURPOSE AND KEY RESEARCH QUESTIONS

The purpose of this study is to assess the perceived impact on student learning due to school closures during the COVID-19 pandemic, and ways to better support student learning now and once the schools re-open. The study strives to identify the needs of parents, students and teachers for continued learning, current barriers to access along with effectiveness of solutions, and successful innovations across states and various other actors. This study attempts to take a holistic lens by including the voices of the marginalized populations, such as migrants and students with disabilities, while highlighting best practices for states to leverage both during the lockdown, and over the long term.

The evaluation, conducted between August and September 2020, is timely given the rapid deployment of remote learning solutions, and the surge of diverse innovations from which state governments can derive lessons or best practices to deepen their efforts. Since the closure of schools in March due to COVID-19, state governments, private education providers, and civil society have developed and rolled-out remote learning solutions. The ever-evolving situation and fast paced, albeit siloed efforts, provide us an opportune moment to take a step back and reflect on the access, and effectiveness of these solutions. Moreover, it will help the development of a much-needed set of lessons and practices to ensure continued learning for students. Documentation and cross-sharing of best practices are critical to minimize learning losses and drop-outs today, and over the long term.

The primary audience of the study is UNICEF and its state government partners, who can use the findings and recommendations to inform their efforts to support the continued provision of remote learning. The secondary audience includes school leaders, funders and implementers who can use the insights to guide their investments and interventions. This includes ensuring equitable access to education for all students by customizing solutions to their contexts, enabling accurate and impactful deployment of funds to support on-going efforts, and developing well-scoped nimble projects that can pivot to evolving educational needs of children and their families.

The research themes and questions that were developed to meet study objectives are detailed below:

01 Landscape offline/online interventions being used to ensure continued learning.

Interventions that are currently being used to ensure continued learning and education for children. We aim to gain a deep understanding of access to these interventions for key segments of interest (such as migrant families, girls, etc.).

a. Which learning/education opportunities are students experiencing during lockdown?

b. Which models of learning are being used across schools and states? How do they differ online/offline?

c. What are the opportunities/challenges to deliver education better, especially for children from marginalized groups?

02 Uncover perceptions of key stakeholders (parents/teachers/adolescents) towards access and effectiveness of remote learning tools during COVID-19.

Benchmarks were set of the needs, experiences, and perceptions of key stakeholders and users in relation to remote learning tools.

a. What are parents'/teachers'/adolescents' perceptions of the quality of learning during COVID-19? How does this differ for boys and girls?

b. What are parents'/teachers'/adolescents' plans and concerns for the future, in areas where schools are re-opening or expected to re-open soon?

c. What are parents' and adolescents' observations and concerns regarding mental health of the students in the context of COVID-19, and school closures?

APPROACH AND METHODOLOGY

The study uses a mixed-methods approach to draw a holistic picture, providing both data-driven evidence for policymakers, and bringing out the nuanced experiences of individuals. The study leverages five sources of data: telephonic surveys of parents, adolescents and teachers; in-depth telephone interviews with parents, adolescents and teachers; expert interviews; secondary research; and an online youth survey.

The study was conducted in six states: Assam, Bihar, Gujarat, Kerala, Madhya Pradesh and Uttar Pradesh. The states were chosen to capture voices from areas that are geographically diverse, experience different levels of COVID burden, and have varying educational capacity.

Figure 1: Our approach leverages five sources of data

Parent, adolescent and teacher telephonic surveys	In-depth telephonic interviews with parents, adolescents, teachers	Expert & ecosystem player telephonic interviews	Secondary research and analysis of existing data	UReport survey via the internet
5,800 parents, adolescents and teachers	50 parents, adolescents and teachers	30 experts	20 reports and dataset	4,000 adolescents

Surveys

Three surveys were conducted using Computer Assisted Telephonic Interviews (CATI). Parents of children aged 5 - 13 years (51 per cent fathers, 40 per cent mothers, and 9 per cent guardians), adolescents aged 14 - 18 years and government school teachers were surveyed. The sample was designed to be evenly spread across states and to provide a 95 per cent level of confidence. To ensure representation of marginalized groups - parents from migrant families, and from tribal and remote locations were included.

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Figure 2: Summary of sample

Description	Overall
1. Parents and adolescents survey	5,029
Parents of children between 5 to 13	2,774
Parents of children between 14 to 18	252
Adolescents aged 14 to 18	2,003
Marginalized populations	700
Migrants	321
Scheduled tribes and remote populations	379
2. Public school teachers survey	789
3. UReport survey of adolescents between the ages of 14 to 18	617
Total	**6,435**

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.[7] This ensured that respondents were selected across multiple districts (towns and villages within each) in every state to avoid clustering errors. For the teacher survey, teachers were randomly selected from a list of government teachers provided by state governments.

Figure 3: Parent and adolescent survey respondent details

Survey respondents by urban-rural, sex disaggregated, school type and grade (%)

Total N = 5,029

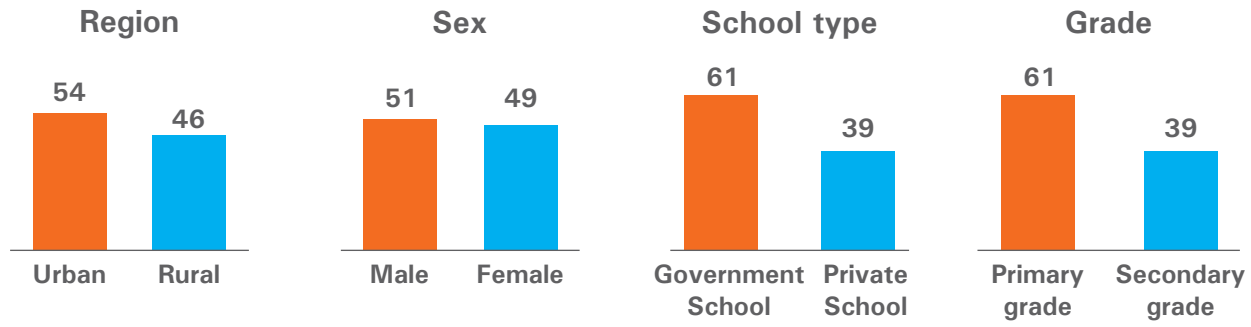
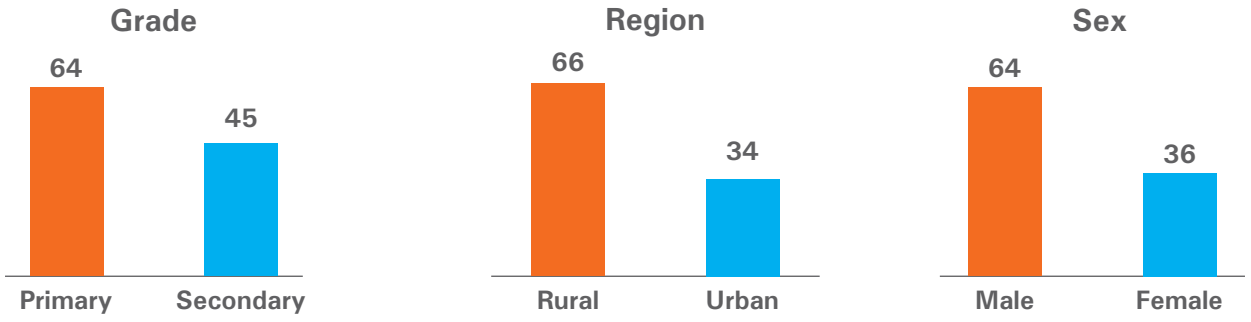


Figure 4: Teacher survey respondent details

Survey respondents by grade, urban-rural and sex disaggregated (%)

Total N = 780



[7]Databases created by Kantar, research partner of Dalberg

Weighting methodology: For the parent and adolescent survey, population weights were applied on the sample using the Unified District Information System for Education (UDISE) reports on enrolment in government and private schools. This allowed for appropriate reflection on the contributions of different states and groups.[8] Maintained by the Department of School Education and Literacy, Ministry of Education, Government of India, UDISE covers nearly 247 million children and 1.5 million schools as of provisional estimates for 2018-19, equivalent to nearly 74 per cent of school going children between the ages of 5 to 18 years in India. Data is collected annually from schools.

Student level data was used to control for state level populations, geography (i.e., urban/rural), sex, type of school children attended pre-lockdown (government versus private schools), current grade (elementary versus secondary) and social category (i.e., scheduled castes, scheduled tribes etc.). The weights were calculated and applied based on the formula below:

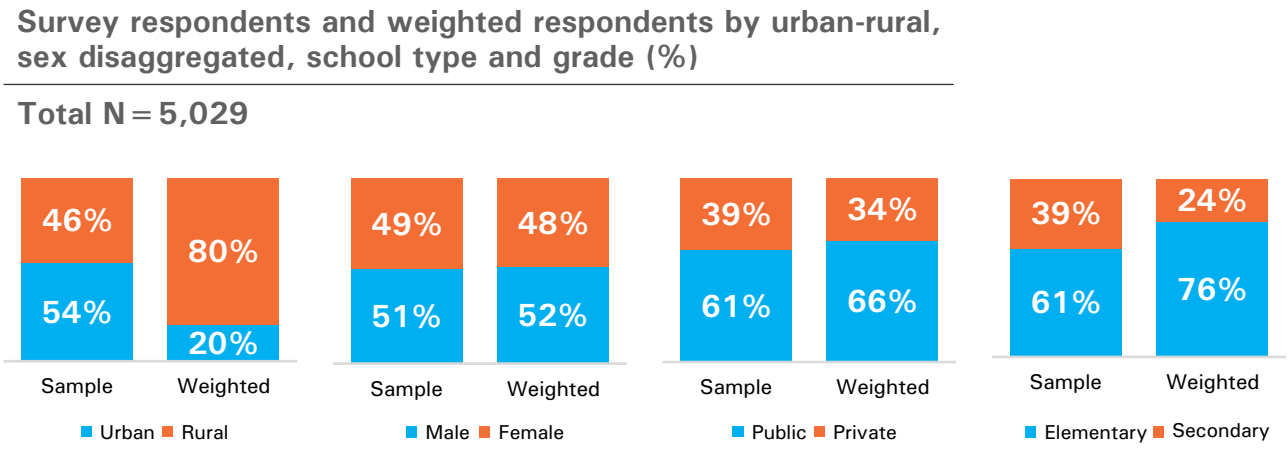
$$\text{weight for cohort} = \frac{\text{\# of children enrolled in the cohort based on UDISE}}{\text{\# of respondents in the cohort}}$$

Where, the cohort refers to combinations of state, region, sex, type of school, grade and social category. For example, the survey, when weighted, is 80 per cent rural, compared to the 54 per cent rural respondents who were surveyed.

For teacher data, weights control only for state level populations using data available on DISE. The weights were calculated and applied based on the formula below:

$$\text{weight for state} = \frac{\text{\# of public school teachers in the state based on UDISE}}{\text{\# of respondents in the state}}$$

Figure 5: Survey respondents and weighted respondents



[8]UDISE Reports on enrolment by sex, social category, region, and type of school. The data can be accessed here https://udiseplus.gov.in/

In-depth human centred design interviews

Sixty-minute in-depth interviews were conducted with approximately 50 parents, teachers and adolescents to better understand their behaviours, challenges, and aspirations. The interviews represent the voices from marginalized groups including migrant households and those with children with disabilities along with 'extreme users'[9] i.e., edge case parents/school-teachers and adolescents, enabling us to uncover innovative solutions as their needs and aspirations are often amplified.

Expert and ecosystem player interviews

The study has incorporated insights from approximately 30 experts and ecosystem players (14 civil society members, 8 foundations, 8 government officials and 1 EdTech company). These interviews helped shape the final questionnaires, nuance results from the surveys and in-depth interviews, surface best practices, and stress test recommendations so that they are actionable and more likely to be implemented.

Secondary research

Approximately 20 reports and datasets were leveraged to identify the landscape of solutions and indicators of reach and effectiveness of learning solutions. These reports were drawn upon, to form hypotheses, and prioritize questions, which were not already well researched. After receiving the survey data, existing reports and datasets, they were used to triangulate our findings and highlight the differences seen in the landscape over the last few months.

It is important to note that this report summarizes the key findings and recommendations. Responses for elementary students aged 5-13 and secondary students aged 14-18 are often separately shared, given the former are reported through their parents/guardians while the latter are reported directly by adolescents themselves.

[9]Extreme users are those that are on either end of the spectrum of using a product/service. In case of the study, they were parents of children or adolescents who have not used any remote learning ever, or those that were using multiple remote learning resources very frequently.

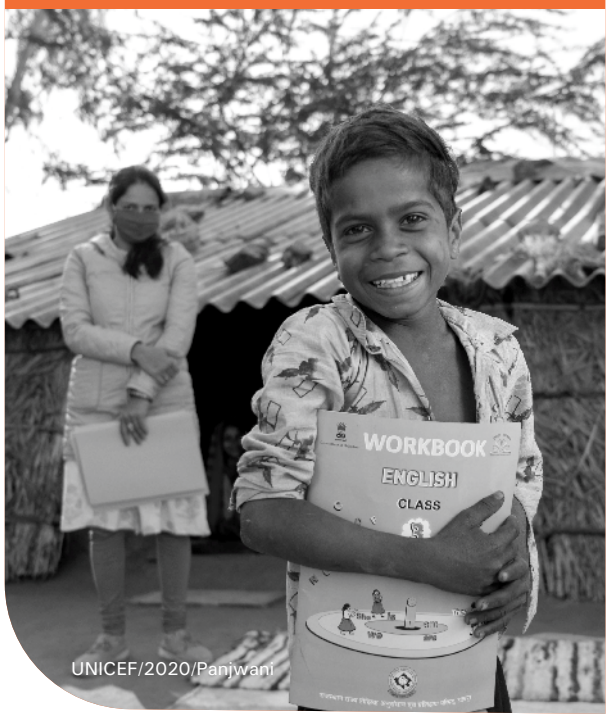
FINDINGS

The key findings from the assessment are presented below:

Almost all students are spending time on self-study while schools are closed, but less time on learning overall than when schools were open.

On a typical day,

97% of students spend three to four hours studying and learning, per day on average.



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Almost all students currently spend a few hours per day studying. On a typical day, 97 per cent of students spend some time studying and learning, three to four hours per day on average. Hours spent studying (whether self-study or remote learning)[10] increase slightly with grade i.e., grade 1-5 students spend 3.15 hours, grade 6-8 students spend 3.44 hours, and grade 9-12 students spend 3.95 hours per day. Adolescents in rural areas spend slightly less time than those in urban areas (3.69 hours vs. 3.99 hours). There are no significant differences by sex.

This is less than the time spent on instruction and self-study when schools were open. Three to four hours of studying per day is lower than the amount of study when schools are in session. The Right to Education Act, 2010 stipulates an average school day of 4 hours over 200 days a year for grade 1-5 students and approximately 4.5 hours a day for 220 days a year for students in grade 6-8.[11] Grade 9-12 students typically receive more instructional time. In addition, students typically spend time on homework, tuitions and other self-directed learning activities.[12] In fact, the time spent studying at home while schools are closed is only slightly more than the amount of self-study that students were doing while schools were open. In 2018, parents spent an average of about two hours per day helping their children with homework,[13] and another 2018 survey found that 40 per cent of Indian students aged 12-19-years spent two to four hours per day on homework.[14]

[10]Distance education delivered by schools, governments, NGOs or private tuitions

[11]Times of India, Indian kids spend too much time at school?, 2014

[12]Global Education Census Report, 2018

[13]Where Parents Help Their Kids with Homework, World Economic Forum via The Varkey Foundation

[14]https://www.cambridgeinternational.org/Images/514611-global-education-census-survey-report.pdf

Access: Education actors have rolled out a range of widely and easily accessible remote learning tools across multiple channels.

Over the past six months, India's education sector has witnessed a surge in solutions to support continued learning of students during the COVID-19 lockdown.

This includes core remote learning solutions like:

01

Traditional tools such as textbooks and home visits

02

Tech-enabled and mass communication solutions such as WhatsApp, YouTube, TV, and radio

03

Blended solutions that combine face-to-face with e-learning as well as learning enabling solutions such as distribution of mid-day meals, distribution of sanitation kits, and monetary support

The central and state governments have launched a range of initiatives for continued remote learning. The central government has created repositories of learning content (such as DIKSHA (a digital infrastructure for school education), SWAYAM[15], e-Pathshala, etc.) to drive access. For example, the DIKSHA portal has video lessons, worksheets, assignments, etc. in multiple languages.

All six surveyed states provide learning content through a combination of tools and channels, including learning programmes through TV, WhatsApp groups, radio programming, digitized content on DIKSHA, and other learning applications. One state focused on distributing QR coded textbooks. According to the states themselves, some form of remote learning (including textbooks) is provided to all students, regardless of location.

Civil society organizations (CSOs) are providing some innovative solutions using blended tools and supporting students' mental well-being, though their reach is limited to their beneficiary base. For example, Educate Girls leverages youth volunteers to create learning circles of students and pool in digital resources in the community to bridge the technology gap, and provide counselling to students. Pratham uses a hyper-local neighbourhood model that combines SMS, calls, and in-person interaction with both parents and students.

Many private ed-tech players also provided free access to their platforms. This included live video classes, worksheets and exam preparation material for the first few months post closure of schools. These players have witnessed a sharp rise in their user base, especially from Tier 1 and 2 cities. For example, Unacademy witnessed three times increase in learners in March alone.[16]

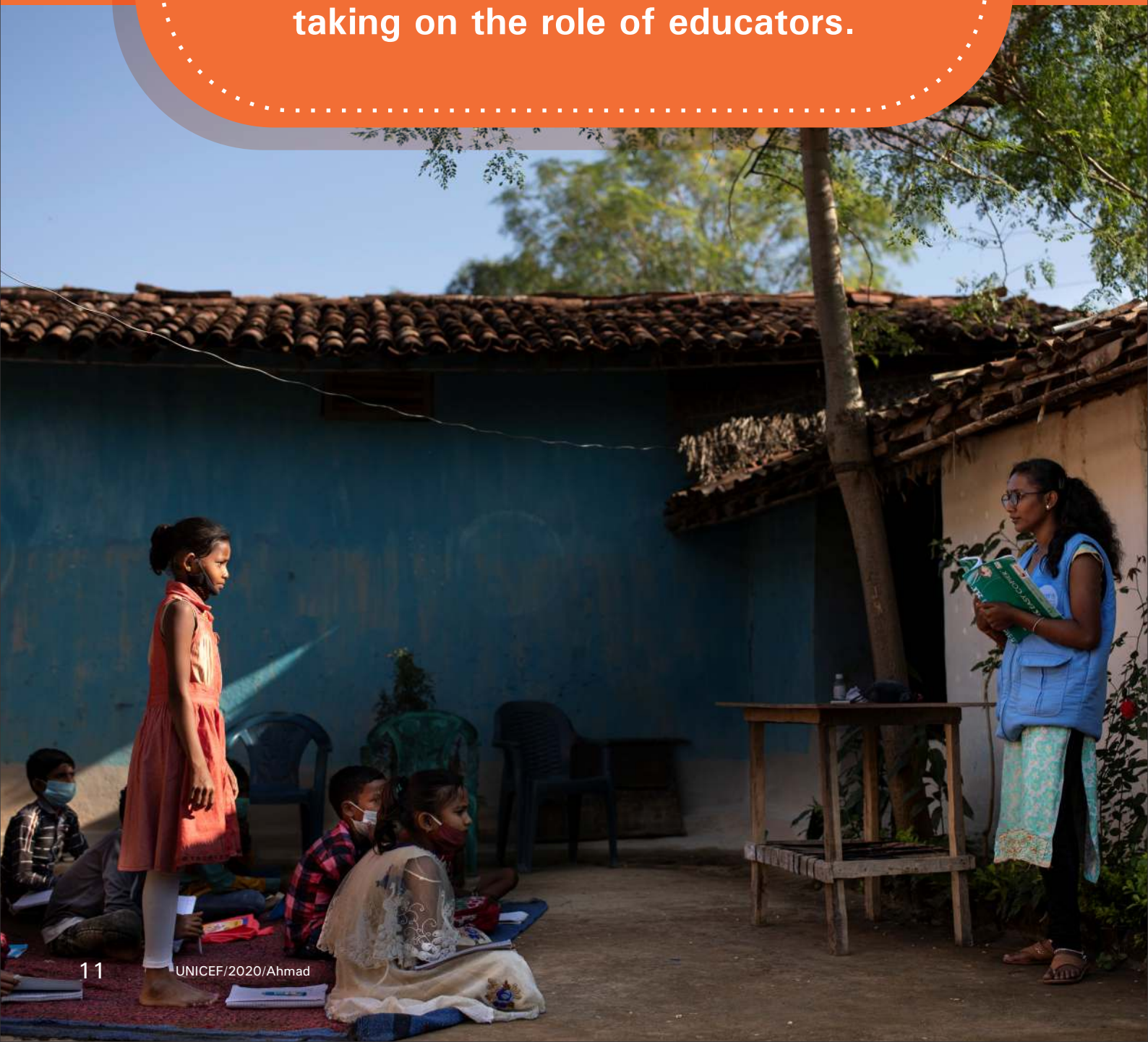
However, access to technology remains far from universal. Across the six states, 10 per cent of students do not use any of the following devices – smart phones, feature phones, TV, radio, or laptops/computers - for any purpose, whether privately owned or accessed within or outside of the household. This ranged from as low as under 2 per cent to as high as 23 per cent for elementary students. Students use smartphones (76 per cent of secondary and 66 per cent of elementary) and TV (71 per cent of secondary and 69 per cent of elementary) most, followed by feature phones. Laptops/computers are used by less than 20 per cent, and radio is least used. Contrary to the belief that access to radio is high, the study suggests that this technology may be outdated for today's students.[17]

[15]SWAYAM, a Government of India programme with objective to take the best teaching learning resources to all, including the most disadvantaged. It seeks to bridge the digital divide for students who have remained untouched by the digital revolution.

[16]Deccan Herald, Coronavirus impact: People flock to digital classrooms, spike in e-learning, April 2020

[17]The survey question was – "Does {name}/do you personally own or use any of these items? (either owns a device personally, uses a household device or uses outside the household)"

In rural areas, village youth and community members have stepped up to fill some of the access gaps. This includes teachers using offline resources such as loudspeakers, families and communities pooling digital devices to share, and older children taking on the role of educators.



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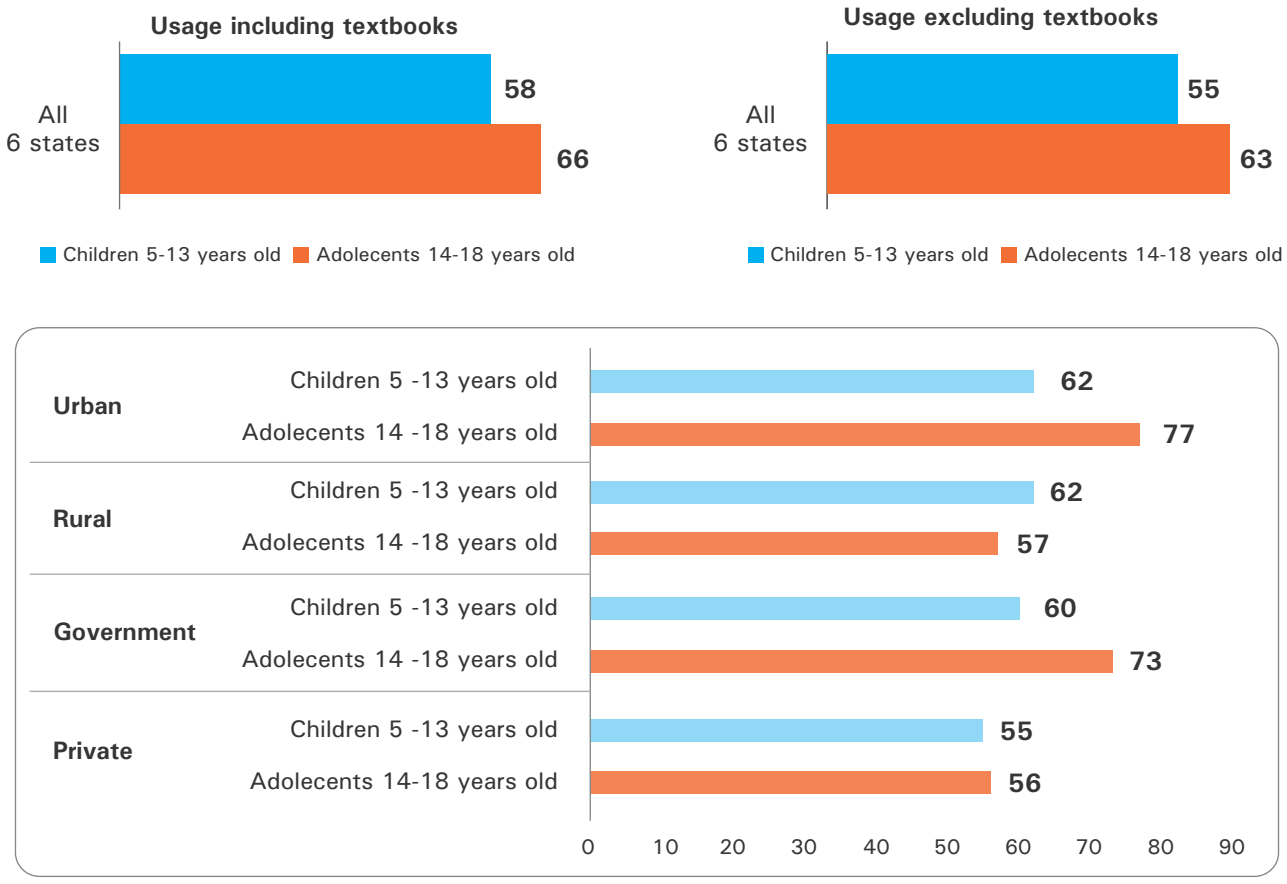
Usage: Despite the availability of remote learning resources across multiple channels, many students are not using these tools.

40% of students in the six surveyed states did not use any form of remote learning in the past six months.

Many students are not yet using remote learning. Forty (40) per cent of students in the six surveyed states did not use any form of remote learning in the past six months. This means they have not used any of the following for remote learning since the schools shut down: textbooks, worksheets, phone or video calls, WhatsApp to access materials or connect with teachers, learning programmes on radio or TV, YouTube videos, video classes, learning applications (e.g., DIKSHA), home visits by teachers and private tuitions, community teaching at local locations, other websites, blogs, and reading materials.[18]

Figure 6: Accessed any remote learning content/ resources to learn while schools were closed



[18]The survey question was – "Has {name} accessed any remote learning content or resources to learn while schools were closed in the past three months? (such as through mobile, TV, radio, or even textbooks and home visits by teachers)." The contrast to the near universality of students spending time studying/learning suggests that a significant proportion are studying on their own, and do not consider that as 'remote learning,' commonly interpreted as distance education delivered by schools, governments, NGOs or private tuitions

However, the usage of remote learning tools varies significantly by location. Students in some states are far ahead of those in others. Usage in surveyed states ranges from 91-94 per cent,[19] of children who have used at least one remote learning channel in one state versus 35-58 per cent in others. Students in urban areas use remote learning tools more than rural students do.

Remote learning in urban and rural areas

Among students aged **5-13 years**

62% in urban areas

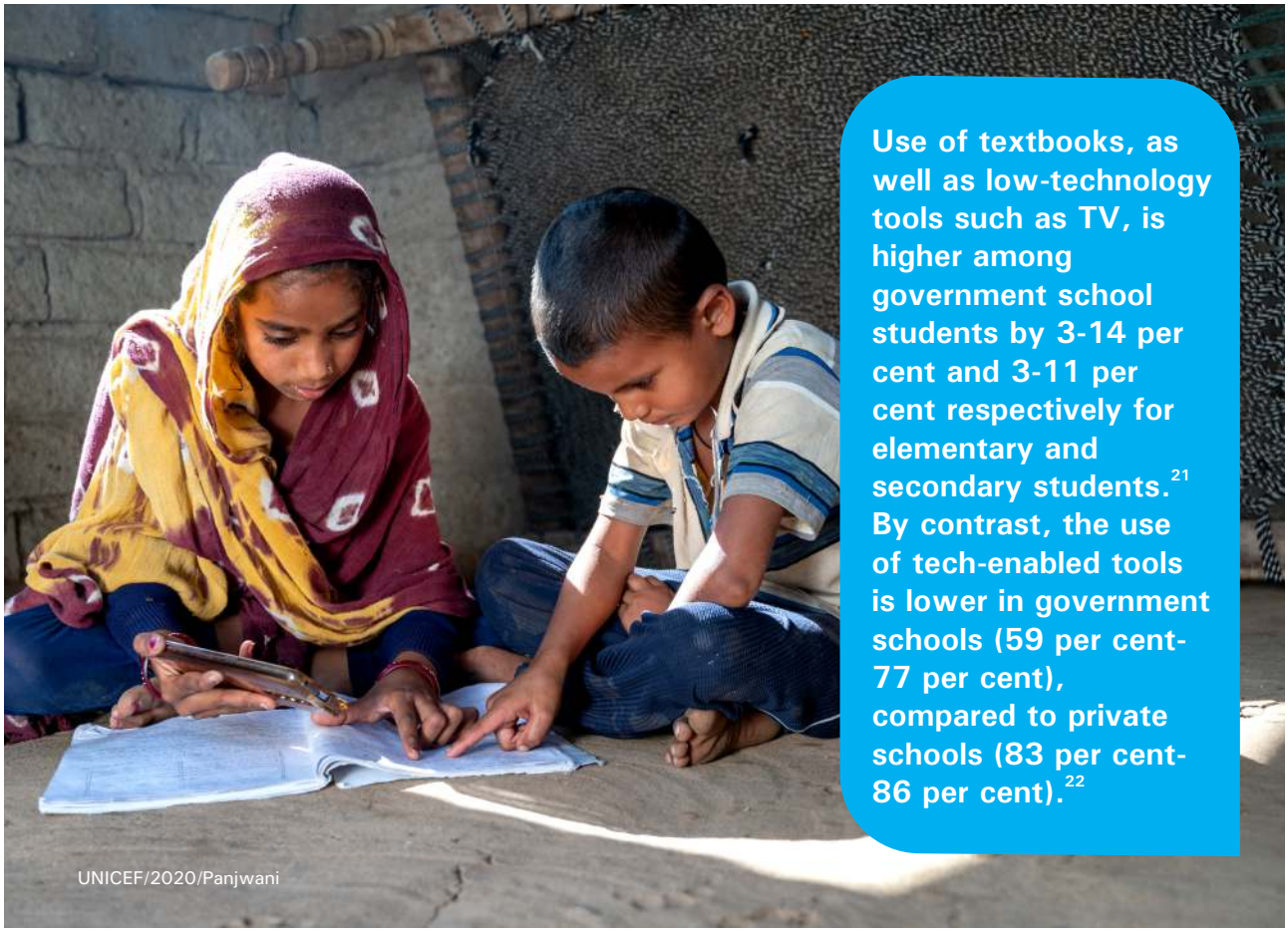
57% in rural areas

Among students aged **14-18 years**

77% in urban areas

62% in rural areas

Government school students use remote education as much as private school students. However, more private school students use technology-enabled learning tools. Across most surveyed states, a similar share of students from government schools accessed remote learning, compared to private school students.[20] In one surveyed state, adolescents in government schools use remote learning more than adolescents in private schools (by 21 per cent).



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Use of textbooks, as well as low-technology tools such as TV, is higher among government school students by 3-14 per cent and 3-11 per cent respectively for elementary and secondary students.[21] By contrast, the use of tech-enabled tools is lower in government schools (59 per cent-77 per cent), compared to private schools (83 per cent-86 per cent).[22]

[19]91-94 per cent means 91 per cent of children between 5-13 years are using one or more remote learning tool and 94 per cent adolescents between 14-18 years are using 1 or more remote learning tool;

[20]For students aged 5-13 years in the other states, usage is the same regardless of school type. Differences are more marked for adolescents (remote learning usage was 18 per centage points higher among government school students, mainly driven by students in Uttar Pradesh which were weighted to be over 40 per cent of the averages

[21]3-14 per centage points refers to gaps for students between 5-13 years and students between 14-18 years respectively; applicable to 3-11 per centage points

[22]59-77 per cent means 61 per cent of students between 5-13 years and 77 per cent students between 14-18 years in government schools used tech-enabled tools; applicable to 83 per cent-86 per cent range as well

Stories behind the data

For students who do not have direct access to remote learning, community members are proactively pooling in resources. Neighbourhood bonds play a crucial role in providing access to remote learning tools for households that don't own textbooks, digital or mass communication devices.

> "We have borrowed books from neighbourhood children to study, while the government does give books - we haven't got them yet, so we'll return neighbour's books after we receive the books from the government."
>
> - Male, Parent of children in 4th and 6th grade, Government School, Urban

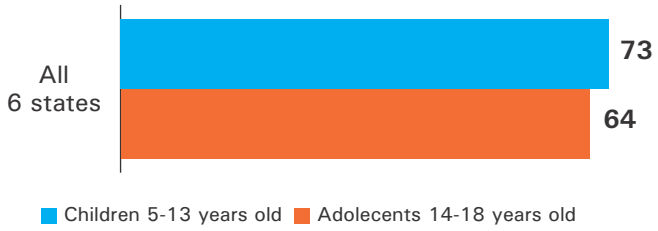
> "We don't have a TV or an android phone, so we aren't able to let him watch or listen to his music. There are other families in the neighbourhood who have TV... if there are educational programmes on TV then we will let him go and watch them there. Me or my wife take him to watch TV."
>
> - Male, Parent of child in 5th grade, Government School, Rural

Awareness is cited as the primary barrier to using remote learning. When students who did not use remote learning were asked why they did not use remote learning tools, the lack of awareness about learning content or resources was cited by approximately 73 per cent of those who do not use remote learning.

Figure 7: Student who did not access remote learning and who were not aware of any remote learning content or resources

Students not aware of any learning content or resources to learn from

(% of children between 5-13 and children between 14-18 who are not accessing learning materials; n = 886, 429)



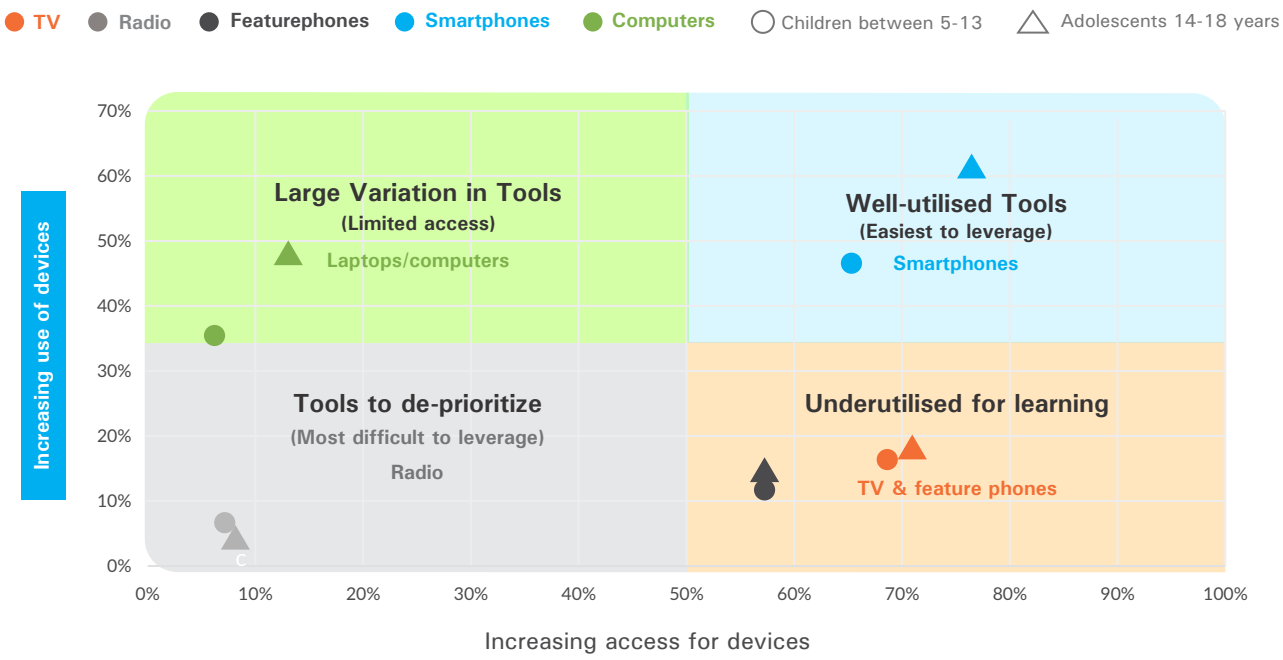
A sizeable proportion of students are using devices in general but not for learning. This gap is especially large for TV and feature phones. While radio is often touted as an easily accessible tool for especially low-income households, our survey shows that most students today are not using it in general or for learning.

> "I have not heard about YouTube; I don't know much about phones and learning on it. I will have to learn all this. I can only find out once I buy a cell phone. Right now, I don't think it's very beneficial to study through a cell phone, because I have not used it so I can't say."
>
> - Atul, Male, 16 years (10th Std), Government School, Rural

Figure 8: Utilisation of devices students already have access to for remote learning

Access to and use of devices for remote learning (All 6 state average)

(% of children between 5-13 and adolescents 14-18 years old)



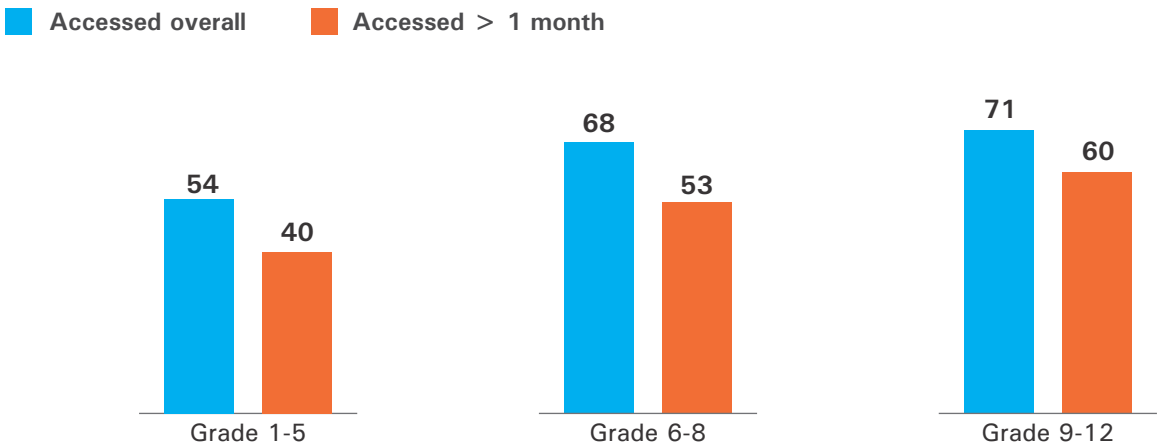
More students aged 14-18 years used remote learning as compared to students aged 5-13 years– and for a longer period. On average, 66 per cent of students aged 14-18 years and 58 per cent of students between 5-13 years have used at least one remote learning resource.

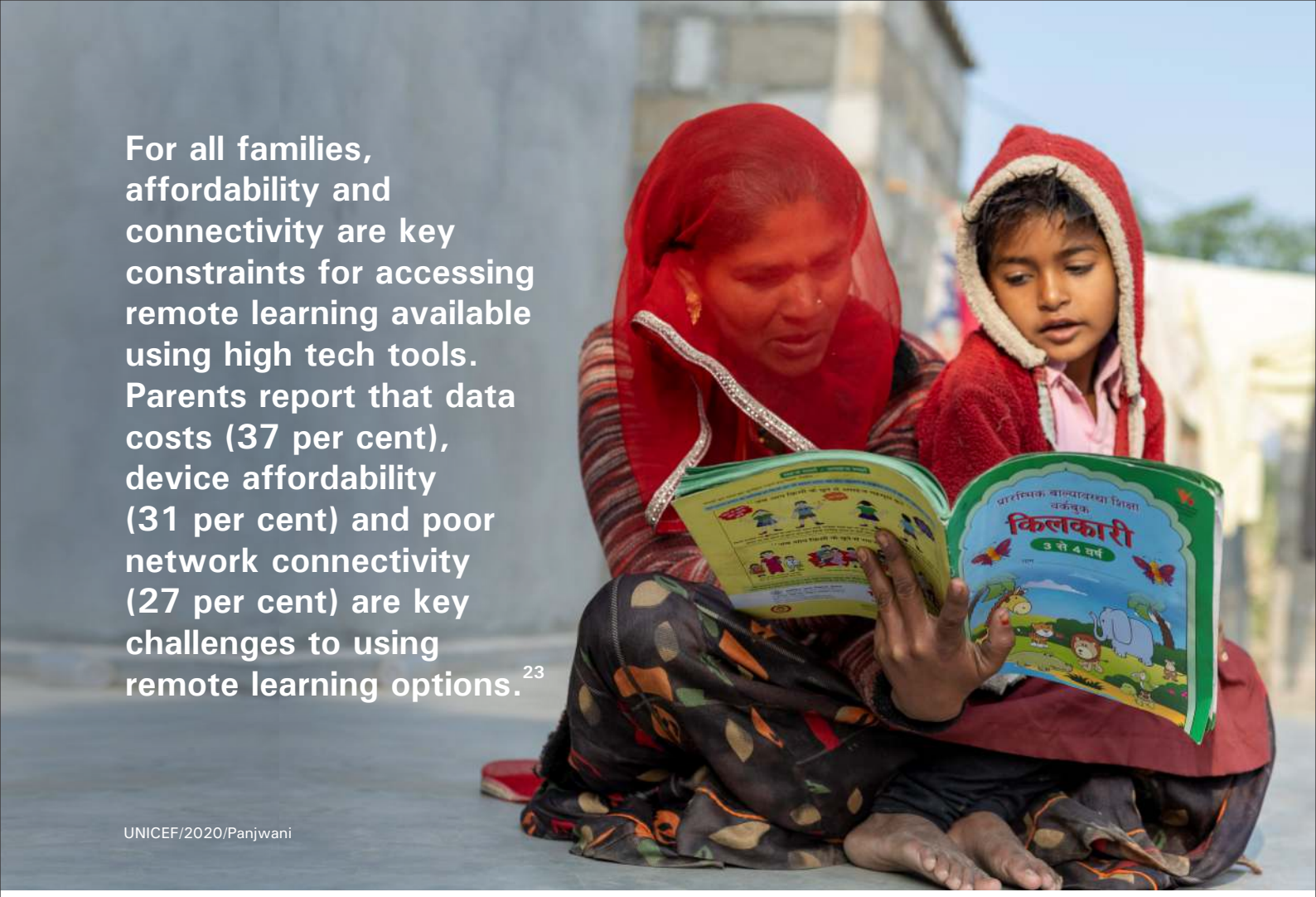
Experts believe that higher usage among older students may be due to greater awareness of learning tools, higher ability to use them without supervision, higher access/ usage of tech-devices, and given greater trust by parents. Moreover, among students using remote learning tools, adolescents spend up to 13 per cent more time compared to younger students.

Figure 9: Accessed learning content by grade

Accessed learning content by grade

(% of children between 5-13 and children between 14-18; n = 2,774, 2,003)





For all families, affordability and connectivity are key constraints for accessing remote learning available using high tech tools. Parents report that data costs (37 per cent), device affordability (31 per cent) and poor network connectivity (27 per cent) are key challenges to using remote learning options.[23]

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But challenges also exist for non-tech learning: 21 per cent of parents cite lack of textbooks and other learning materials as a challenge and nearly 1 in 3 parents ask for support with this, suggesting that distribution programmes have not yet reached a significant number of students.

There is a positive correlation between states where device access is a bigger challenge and where more parents seek support with physical materials. Parents in most states with limited access to devices tend to ask for more support with textbooks and other learning materials.

Remote learning delivery: Most students use multiple resources. WhatsApp is the most commonly used channel.

WhatsApp is reported to be the most commonly used mode for remote learning, followed by textbooks. Among students who have used at least one remote learning opportunity, WhatsApp is used by 47 per cent of students aged 5-13 years and 55 per cent of students aged 14-18 years. The next most used mode to access remote learning are textbooks (46 per cent for children 5-13-year-old and 42 per cent for 14-18 -year-old) and home visits by teachers (33 per cent for children 5-13-year-old and 31 per cent for 14-18 -year-old). Radio is used by the least (1 per cent of students who have used a remote learning opportunity), since most students do not typically listen to the radio and radio learning content is often neither interactive nor tailored to meet students' needs.[24]

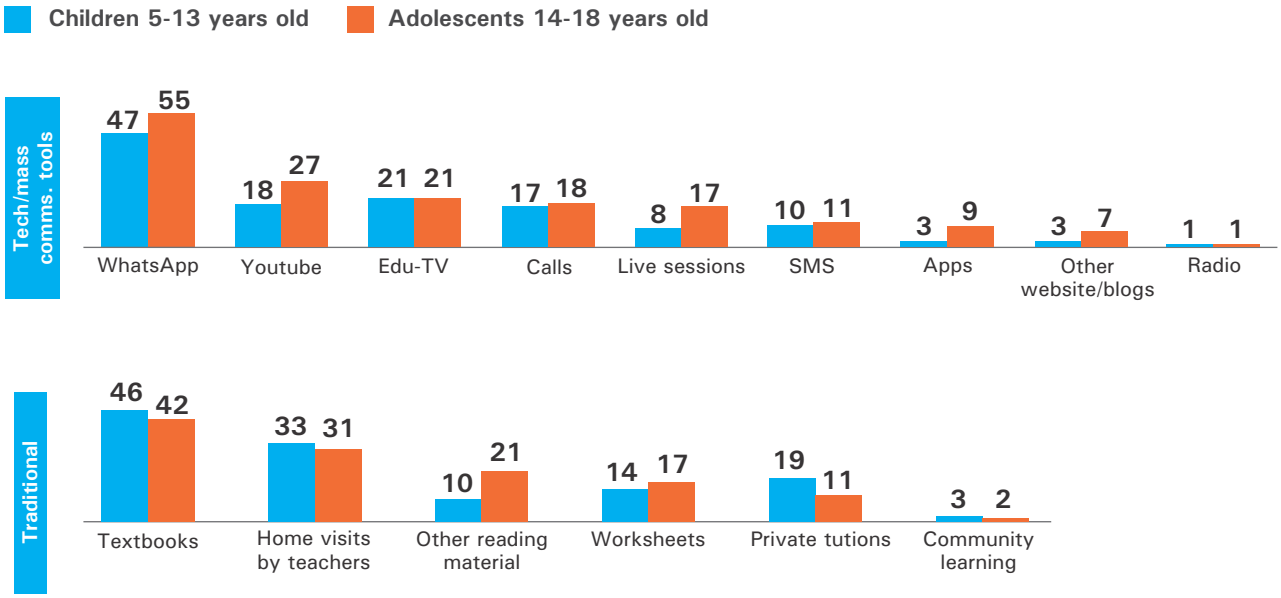
[23]Top challenges reported were internet recharge cost (37 per cent), device affordability (30 per cent), and poor network (27 per cent).

[24]Expert interview with Sonali Saini (Founder Director) from Sol's ARC

Figure 10: Materials and methods used to study and learn

Materials and methods used to study and learn

(% of children between 5-13 and adolescents between 14-18 years old who have used remote learning; n = 1,862, 1,537)



However, these channels do not uniformly reach all students. Fewer younger students, girls, government-school students and rural students use tech-enabled tools. Only about two-thirds (63 per cent) of students in grades 1-5 use technology-enabled tools, compared to 85 per cent of students in grades 9-12. Students aged 14-18 years are especially more likely to use YouTube, blogs, applications and live sessions, since they can independently navigate these and maintain attention span.

63%
Grades 1-5

85%
Grades 9-12

% of children who have used technology - enabled solutions

Even within age groups, there are differences. Eight (8) per cent fewer adolescent girls used WhatsApp vs. adolescent boys. 51% of adolescent girls and 59% of adolescent boys used Whatsapp, and this difference was statistically significant. Among students aged 5-13 years, private school students are more likely than government school students to use WhatsApp and they are more likely to use tech-enabled tools in general. Students (5-13 years) in government schools mainly use textbooks, home visits by teachers and YouTube. **There is a 24 per cent gap in usage of WhatsApp between urban and rural students aged 5-13 years, and 15 per cent gap for students aged 14-18 years.**

Most students who use remote learning do so through more than one channel with 48 per cent of students aged 5-13 years and 61 per cent of students aged 14-18 years using multiple channels such as a combination of WhatsApp and textbooks or WhatsApp and YouTube. Our in-depth interviews suggest that many students rely heavily on textbooks and use them to support learning through tech-enabled (e.g., WhatsApp/ Google Meet) and mass communication (TV/ radio) tools. There are certain combinations of remote learning tools that are more common than others. WhatsApp and textbooks are the most common combination. For students aged 5-13 years, WhatsApp and private tuition are also a common combination; for students aged 14-18 years, WhatsApp combined with home visits by teachers is common.

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> "Whatever comes on TV is related to the textbook, so we sit with the textbook when we watch the TV shows. Apart from watching TV we also study by following what's written in the textbooks."
>
> - Female, Parent of child in 6th grade, Government School, Rural

While teachers are engaging less, family support becomes more important – but not everyone can engage equally.

On an average, students engage with their teachers less than once a week and a significant minority is not in touch with teachers at all – especially younger students in rural areas and in government schools. Remote learning, by nature reduces opportunities for students and teachers to engage directly.

Forty-two (42) per cent of students aged 5-13 years and 29 per cent of students aged 14-18 years are not in touch with their teachers at all.

In fact, students in urban areas are in touch more frequently than students in rural areas. Forty two (42) per cent of urban students (versus. 35 per cent rural) aged 5 - 13 speak to their teacher more than once a week; 49 per cent of adolescent urban students aged 14 - 18 years (vs. 33 per cent rural) speak to their teachers more than once a week. This varies significantly by state from only 8 per cent of students are not in touch in one state to where more than half are not in touch in others states. More government school students were not in touch with their teachers compared to private school students; the difference is greater for younger students than for older students.

Many parents reported that they engage more to help their children learn while schools are closed, but they face challenges. **Nearly 45 per cent of parents (of students in grade 1-5), 31 per cent of parents (of students in grade 6-8) and 28 per cent of parents (of students of grade 9-12) reported spending more time helping their child learn, compared to their pre-COVID engagement.** Of the parents that engage with their children, 31 per cent teach their children using play and storytelling. This proportion increases by 5 per cent for parents of students in grades 1-5.

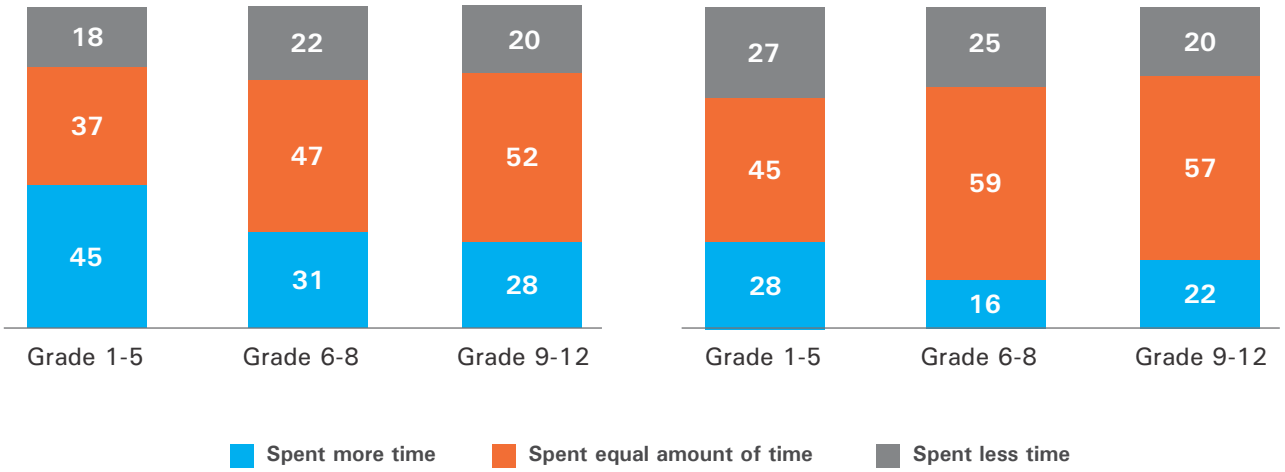
Figure 11: Change in time spent by parents and siblings with students' learning needs

Change in time spent by parents

(% of children between 5-13 and children between 14-18; n = 2,774, 2,003)

Change in time spent by siblings

(% of children between 5-13 and children between 14 - 18 who have siblings; n = 673, 488)



However, many parents feel ill equipped to fully support their child's remote learning. In-depth interviews with parents and experts suggest challenges such as an increased need for supervision and children's low concentration levels. For example, 11 per cent of parents report digital distraction as a key challenge to remote learning. These challenges are further exacerbated for working and less educated parents.

For students aged 5-13 years, parents spend an average 11 per cent of household income on education; they spend more on students aged 14-18 years (16 per cent). This burden is particularly hard to bear for families that have lost income during the pandemic and are unable to even meet day to day expenses, let alone school fees.

Stories behind the data

Parents are doubling up as educators in lieu of in-person interaction or two-way communication with teachers, but they face challenges around lack of time, tools and training for proper facilitation.

"We can't teach much ourselves, since we aren't that educated. I studied till Grade 9 only; I try to engage but all I can do is get her to copy stuff from the textbook to learn."

- Male, Parent of child in 5th grade, Government school, Rural

"During this time, the duty of guardian is more than that of the kid. It's because when schools are open, the child functions as the teacher says for the six hours that he/she is there. But now, we must double-up as both parents and teachers, adding to the pressure."

- Female, Parent of child in 6th grade, Government school, Urban

Parents believe that their efforts alone are not enough and that teachers' face to face supervision and engagement are critical to improving the quality of learning.

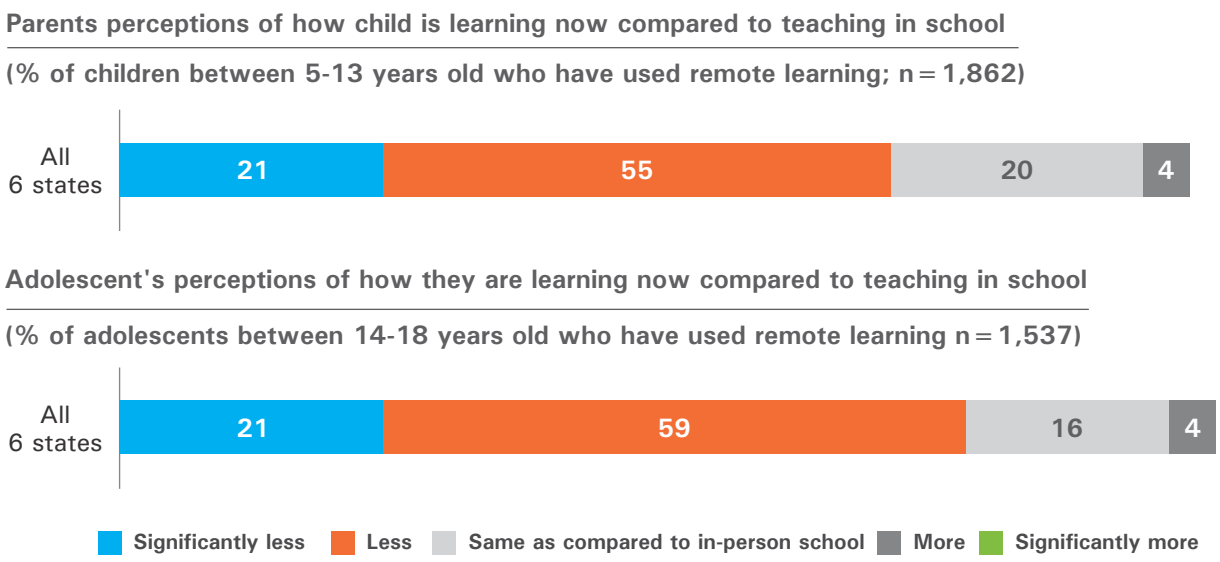
"I sit with my child when she is studying. When I am there, she studies herself, I help her out if she has doubts. I do not teach her like a 'teacher' since I don't know how. There is a lot of difference in how a teacher teaches and how we teach."

- Male, Parent of child in 5th grade, Government school, Urban

Effectiveness: Respondents feel that most students are falling behind.

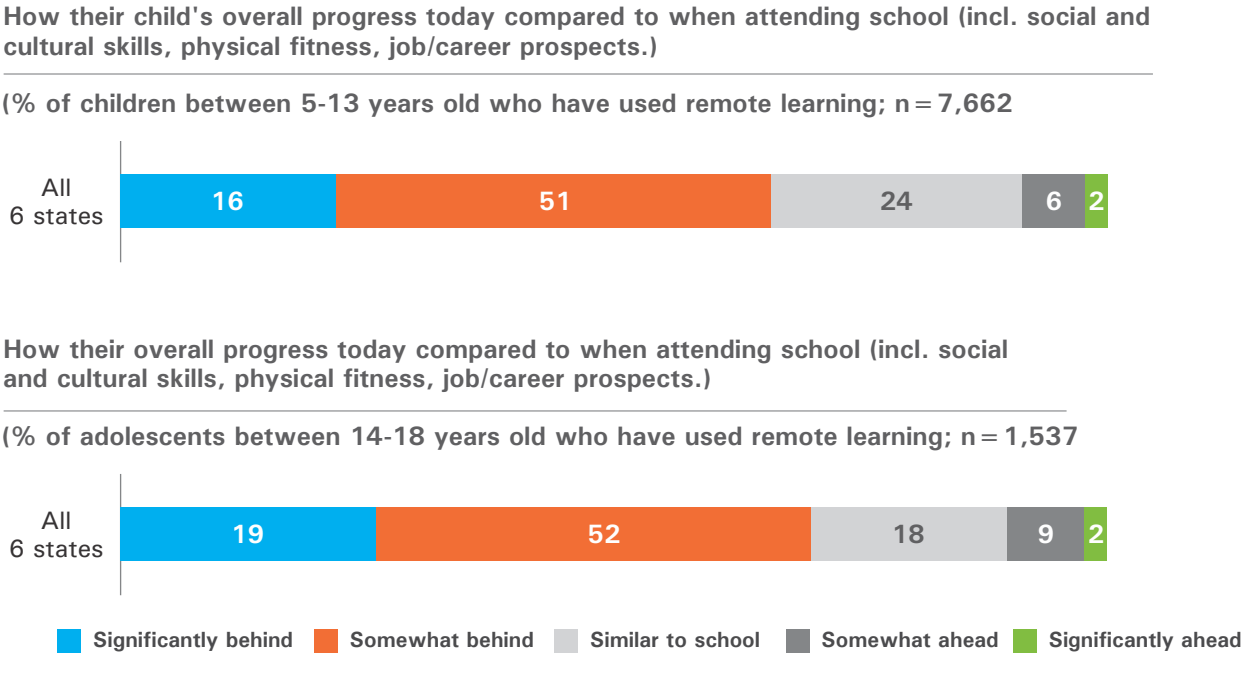
Most parents and adolescents feel that students learn less through remote learning than they would in school. Seventy-six (76) per cent of parents of students aged 5-13 years and 80 per cent of adolescents aged 14-18 years report that students are learning somewhat less or significantly less than they would in school.

Figure 12: Parents and adolescents' perception of learning now, compared to in-school learning



Moreover, most respondents feel that students are falling behind overall compared to where they should be, including social skills, physical fitness, and job prospects. Sixty-seven (67) per cent of parents of students aged 5-13 years and 71 per cent of students aged 14-18 years state that overall progress is significantly behind or somewhat behind, compared to what it would be in school.

Figure 13: Parents and adolescents' perception of overall progress now compared to if they were attending school



Beyond learning shortfalls, school closures have affected students' mental health. Over a third of students aged 5-13 years and nearly half of adolescents have poor or very poor mental health.[25] Interviews suggest that social isolation, disruption to learning, and family's financial insecurity are key reasons for poor mental well-being. While non-government organisations (NGOs) are trying to address students' well-being challenges, their reach is limited only to their beneficiary base. State-wide efforts are limited.

Stories behind the data

"I was in the school's kabaddi and basketball team; and I also like to play football. I am missing playing these sports and spending time with my friends, like we used to chat on the bus after schools also."

- Male, Adolescent in 9th grade, Private school, Urban

"There are a lot of problems, this is a year of compromise. A lot of effect on the growth and more work needs to be done to make online teaching better; the environment is different now."

- Female, Parent of child in 6th grade, Government school, Urban

"The education is getting disrupted since it's not continuous, and they are not getting proper schooling. Kids are getting restless at home and want to go back to school soon."

- Male, Parent of child in 6th grade, Government school, Urban

[25]The survey question asked was – "How has {name}/how have you been feeling mentally and socio-emotionally in the past three months?" and options provided were (i) very poorly, (ii) poorly, (iii) well, (iv) very well, (v) don't know, and (vi) prefer not to answer.

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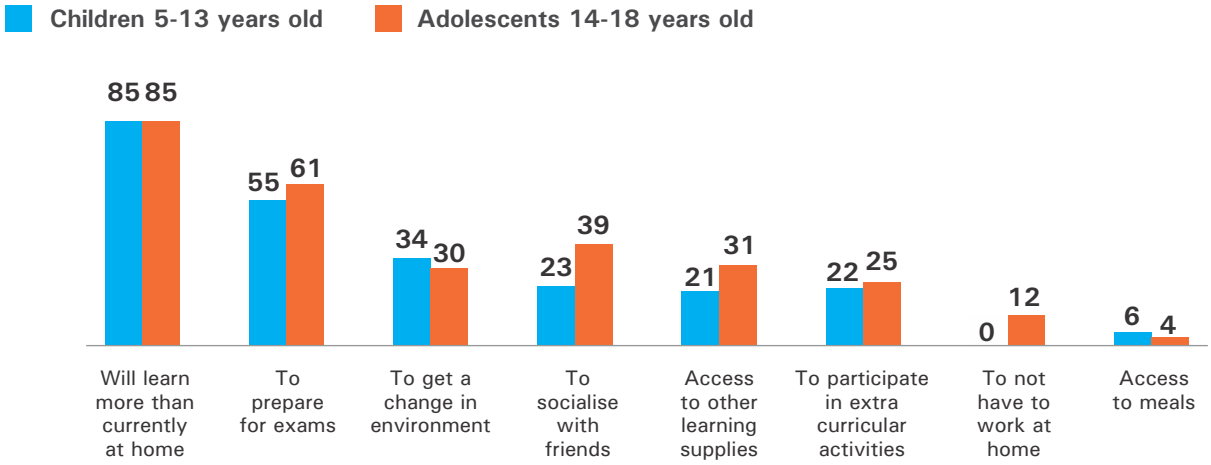
Looking forward: While most families have health concerns around school re-opening, some children cannot afford to return; they may drop out of school completely.

Improved learning and need to prepare for exams are top reasons for students to return to school; but health concerns are major deterrent. Most students will return once schools re-open, primarily because parents and adolescents believe that this will help their learning and exam preparation. Approximately eight (8) per cent of students will likely not return to school in the next three months or after, most of them (60 per cent) because of health-related concerns. Among the reasons against returning to school, a significant minority state lack of funds. Ten (10) per cent of families state they cannot afford to send children back to school and six (6) per cent say they need their children to help earn an income.

Figure 14: Main reasons for and against students returning to school in the next 3 months

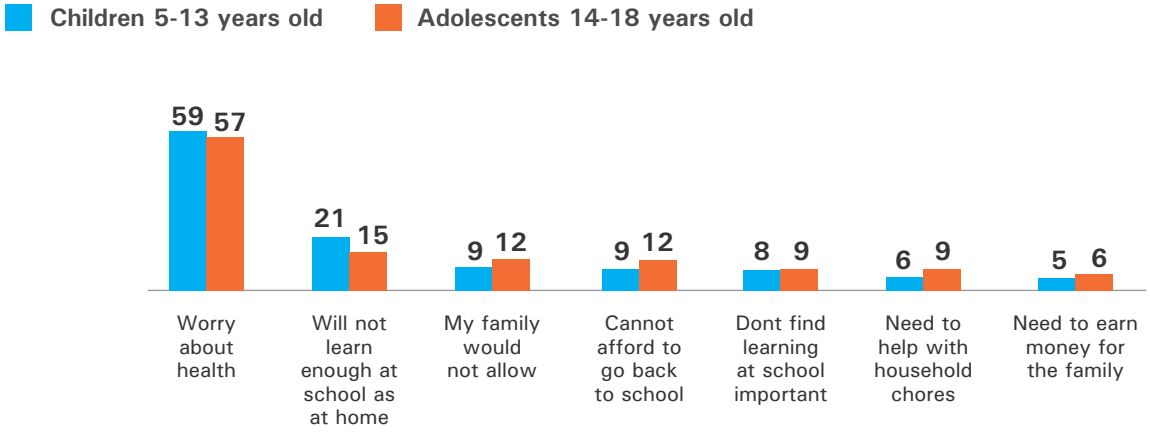
Main reasons in favor of students returning to school in the next 3 months

(% of children between 5-13 and adolescents between 14-18; n = 2,774, 2,003)



Main reasons against students returning to school in the next 3 months

(% of children between 5-13 and adolescents between 14 - 18; n = 2,774, 2,003)

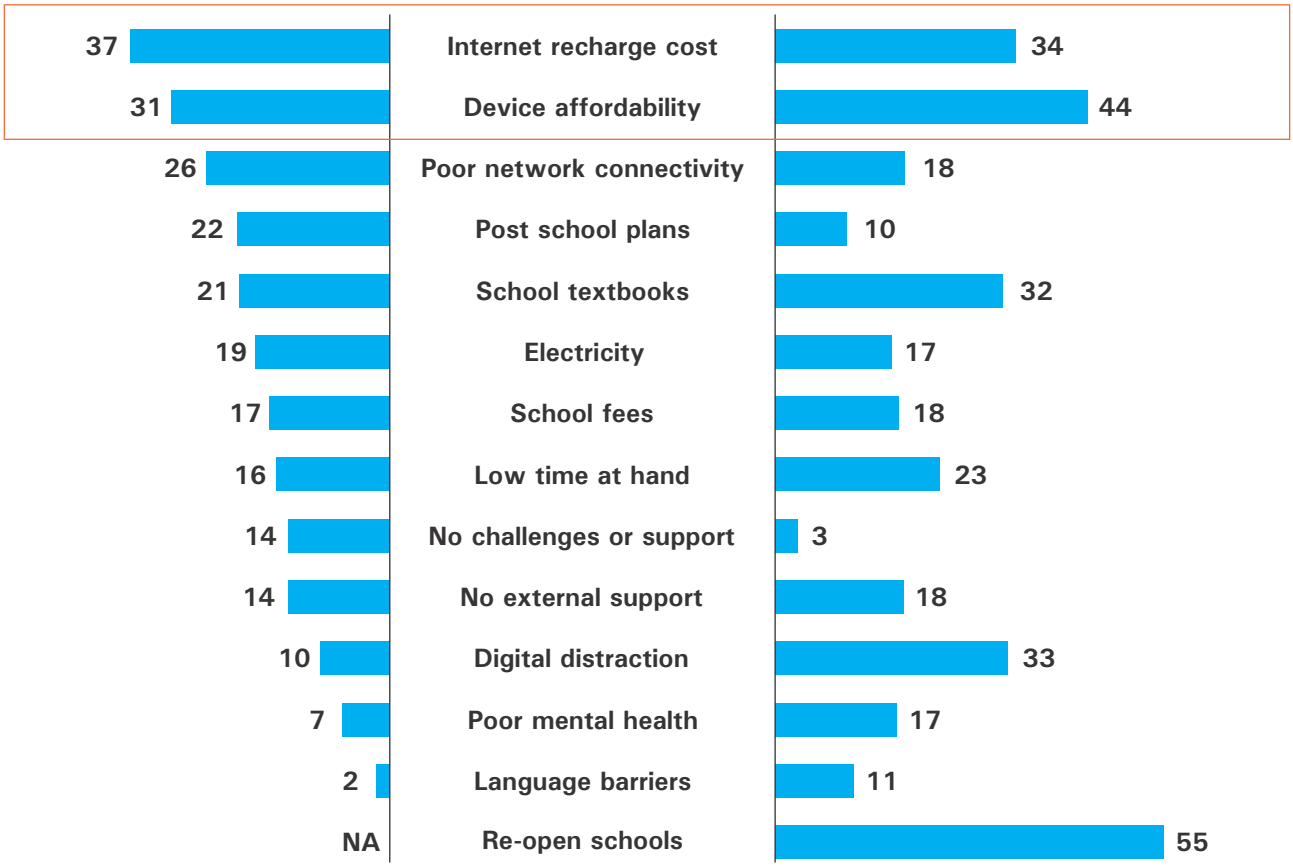


Four (4) per cent of students are unlikely to return to school even after three months.

Experts expect an increase in out-of-school children which has been validated by other research reports – approximately 10 million students are at risk of never returning to school.[26] This will require stakeholders to continue pushing efforts to bring children back into the education system. Once schools do re-open, experts and practitioners expect some transfer of students into government schools due to financial constraints, migration, and closure of low-cost private schools, though we do not see a meaningful net change planned from private to government schools from the survey.[27]

Parents want schools to re-open; in the interim they need better and more affordable mobile connectivity. Across the surveyed states and student segments, parents seek support for device (44 per cent) and data (34 per cent) costs, and in ensuring access to better mobile networks (18 per cent) for continued learning of their children. These were also highlighted as the top areas of challenges faced by families while engaging with remote learning. The majority (55 per cent) of parents also wanted schools to re-open soon to support their children's education.

Figure 15: Top challenges and support requested by parents of children between 5-13 years



[26]Save the Children, April-June, 2020

[27]The survey question asked to parents was – "Would you send {name} back to school if it re-opens within the next 3 months?" and for those who answered "Yes, we will enroll in a new school," we asked what type of school (i.e., government, private or don't know).

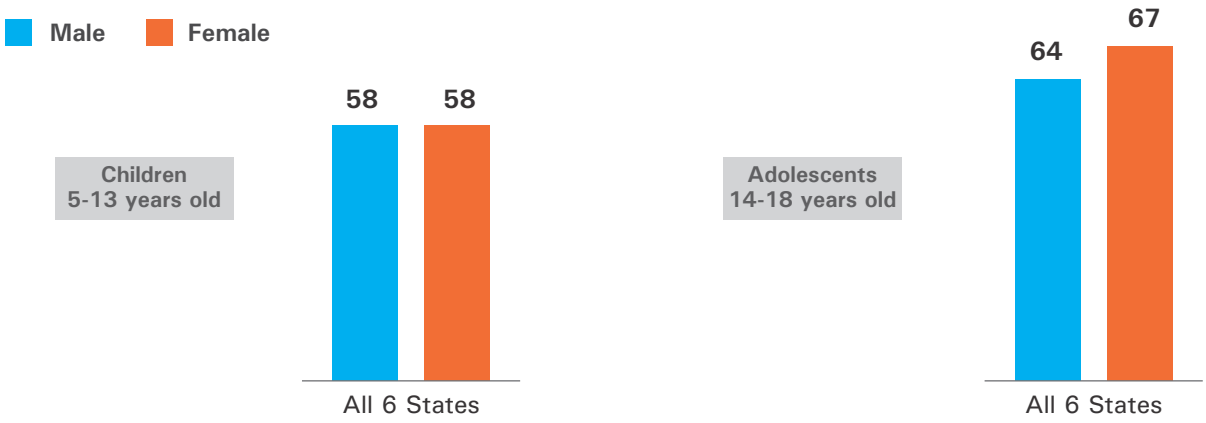
Students from marginalized communities: While they use remote learning at similar levels, learning levels and overall progress are perceived to be further behind.

Students from marginalized families use remote learning at lower levels than the rest of the population. Scheduled tribes (ST), scheduled caste (SC), and below poverty line (BPL) students report lower usage than the average, though the difference is only significant for SC students.[28] From the sample, there is little difference between girls' and boys' usage of remote learning. However, given parents' bias this may not be an accurate reflection of digital gender gaps.[29]

Figure 16: Accessed to any remote learning content/ resources (to one or more tools) by sex disaggregated and marginalized groups

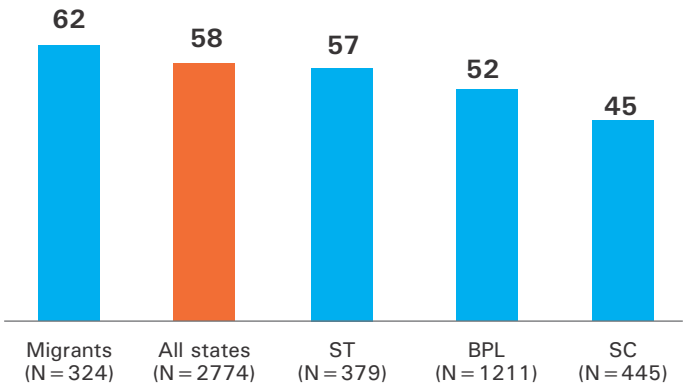
Accessed any remote learning content/resources to learn by gender

(% of children between 5-13; n = 1,366 + 988 females; 1,488 + 1,015 males)



Accessed any remote learning content/resources to learn by vulnerable groups

(% of children between 5-13; n = 1,366 + 988 females; 1,488 + 1,015 males)



More than others, students of migrant and ST families are falling behind in learning and overall progress. Seventy-five (75) per cent of parents (of children aged 5-13) feel their child is learning less or significantly less than in school and 67 per cent report that their child's overall progress is significantly behind or somewhat behind where it would be if schools were open. Migrant students and ST students are worse off i.e., 90 per cent and 81 per cent of parents of migrant children, and 84 per cent of parents of ST children aged 5-13 report that students are learning less than they would in school.[30] There is limited variation in parents' perceptions between girls and boys.

[28] All states average refers to the average for the sample of students from marginalized and not the overall general population. The difference is significant only for Scheduled Castes when compared to the six states average

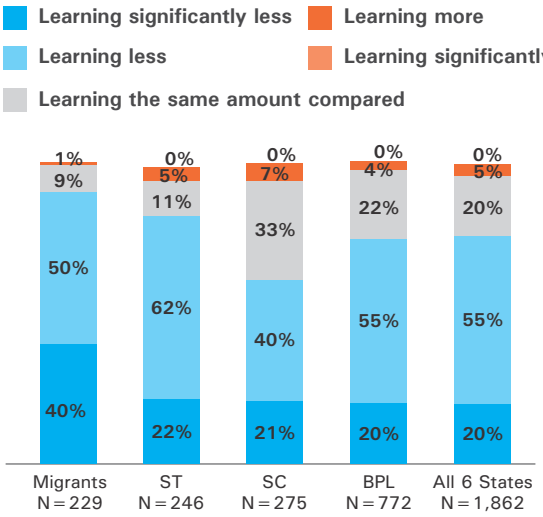
[29] In another recent study only 26 per cent of girls reported that they could access the household phone whenever they wanted, compared to 37 per cent of boys. (Centre for Budget and Policy Studies, Life in the Time of COVID-19, Mapping the impact of Covid-19 on the lives of school going children especially girls in India, November 2020)

[30] Poor refers to significantly less/ less for quality of learning and significantly behind/ somewhat behind for overall progress

Figure 17: Perceptions of learning and overall progress now compared to in school

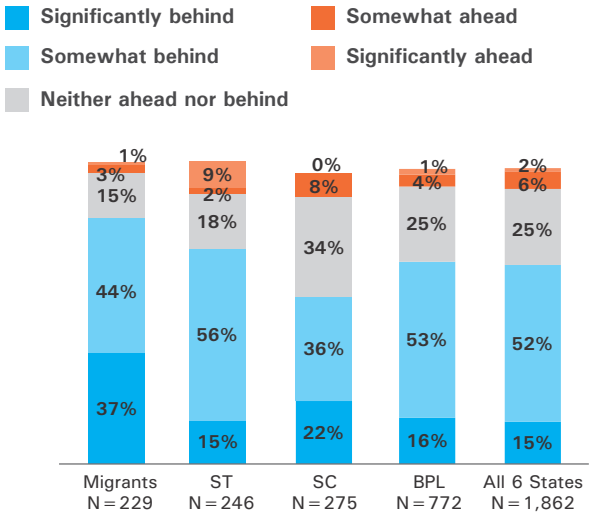
Parents perceptions of how child is learning now compared to teaching in school

(% of children between 5-13 who have used remote learning tools)



Perceptions of overall progress now compared to in school

(% of children between 5-13 who have used remote learning tools)



The perceived impact on mental health is much poorer for marginalized families compared to the general population. **From the survey, 52-63 per cent of marginalized families (migrant and ST) rated students' mental well-being as poor or very poor** compared to 35 per cent overall.

Teachers: Despite school closures, most teachers are at work - many use WhatsApp to teach; but face significant challenges.

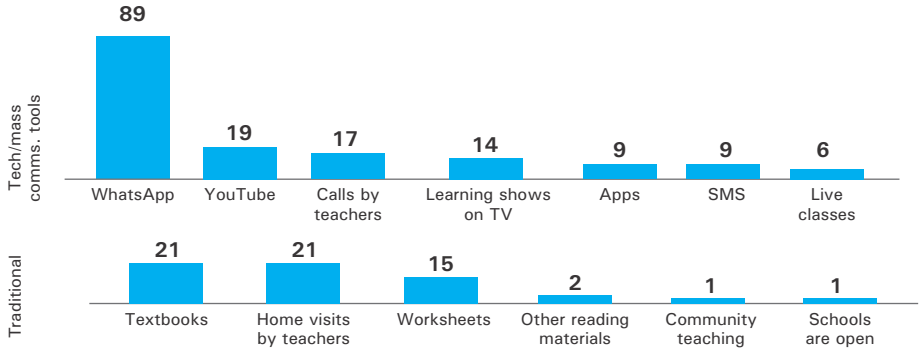
Despite school closures, 80 per cent of teachers are teaching; some are spending more time and money than before the crisis preparing and holding classes. Among those teaching remotely, 14 per cent of teachers spend more time, 21 per cent spend the same amount of time and 56 per cent spend less time teaching and preparing materials for class. **Fifty (50) per cent of teachers are spending more money on teaching materials now than before the closure of schools due to COVID.** Moreover, 9 per cent of teachers have additional duties, for which most (70 per cent) were not receiving compensation.

WhatsApp is the most commonly used remote teaching tool with 89 per cent of teachers using WhatsApp to provide remote education, followed distantly by textbooks (21 per cent), home visits (21 per cent) and YouTube (19 per cent).

Figure 18: Teaching tools used by teachers

Teaching tools used by teachers

(% of teachers teaching remotely or physically; n = 631)

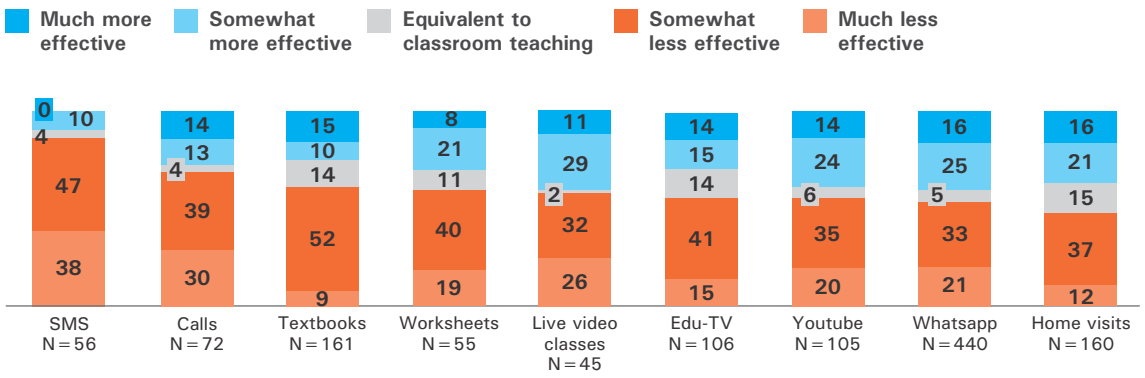


Many teachers perceive WhatsApp to be as effective or more effective than classroom teaching. Sixty-six (66) per cent perceive WhatsApp to be amongst the three most effective remote teaching tools available[31]; close to half of those said it was either equivalent to or more effective than classroom teaching. More than half believe home visits are just as effective or more than classroom teaching and over 40 per cent believe YouTube, Edu-TV and live video classes are equivalent or more effective.

Figure 19: Teachers' perception of effectiveness of remote learning tools in comparison to in-person classroom teaching

Teachers' perceptions of effectiveness by materials/methods vs. in-person

(% of teachers using the specific materials/methods who cite the specific tool as the top three most effective)



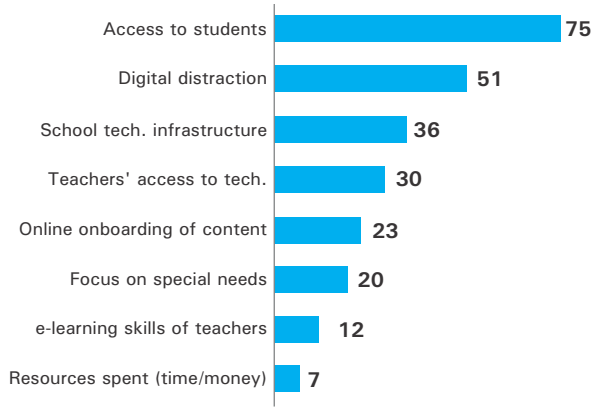
Nevertheless, teachers agree that students are falling behind overall. **Sixty-seven (67) per cent teachers perceive students to have fallen behind in their overall progress compared to where they should be pre-COVID if schools were open,** especially, for elementary students (70 per cent elementary grade teachers compared to 61 per cent secondary teachers). More teachers in urban areas (72 per cent) perceive students to having fallen behind compared to rural areas (62 per cent).

Teachers face several challenges with remote teaching and many see no benefits to teaching remotely over teaching in school. Teachers' top challenges are the inability to reach students (75 per cent) and lack of class discipline (51 per cent). Some consider a lack of e-skills (12 per cent) and additional expenditure (7 per cent) as barriers to effective remote teaching. **Moreover, 8 per cent of teachers do not have a personal smartphone or laptop. While many teachers acknowledged some benefits to teaching remotely, 33 per cent saw no benefits at all.**

Figure 20: Top challenges faced by teachers in teaching remotely

Top challenges teachers face in teaching remotely

(% of teachers, N = 780)



To support remote teaching now and once schools re-open, **teachers request access to devices, sanitation kits, and stringent guidelines. To support continued remote learning, teachers request cash/ in-kind support to purchase devices (57 per cent), data (44 per cent) and sanitation products (53 per cent). Once schools re-open, they request stringent guidelines (70 per cent) and smaller batch sizes (54 per cent) alongside the distribution of sanitation products (77 per cent).**

[31]We asked teachers to list the three most effective channels for their student's learning

RECOMMENDATIONS AND EXEMPLARS

The findings suggest several key opportunities to better support students during closures and as schools re-open:

In the immediate term, as schools remain closed:

01

Reach the last mile and augment remote learning through textbooks and other print materials

Many parents want support with textbooks and other print learning materials (approximately one third overall), suggesting that textbook distributions are far from complete. Many states still have a high proportion of students without access to any technology (10 per cent overall) and even within states with high overall access, pockets with zero to limited access exists. Distribution of textbooks and other print learning materials is especially relevant for states with a relatively high proportion of students without technology access and a relatively high proportion requesting additional support. These efforts can be combined with existing mid-day-meal ration distributions.

Textbooks and learning materials can be helpful even for students who are using tech-enabled resources. In-depth interviews with parents suggest that they trust textbooks to guide what their children should be learning and believe they help augment tech-enabled tools. Less than half of students engaged in remote learning used textbooks; about 1 in 4 used them along with WhatsApp. Other than ramping up distribution efforts, states and education providers can better map digital content to textbooks to aid the concurrent use.

02

Improve awareness of tech-enabled tools for remote learning and drive engagement of commonly used tools

Awareness is cited as the primary challenge for students not using remote learning and many students with access to technology are not using it for remote learning. Hence, improving awareness of these tools for learning through communication efforts seems to be a low-hanging fruit solution to drive up usage, especially for TV and feature phones where the gap is high between use in general and use for learning.

Special efforts must be made to sensitize parents to the importance of allowing their daughters to access and use phones as often and for as long as their sons.

For already highly utilized channels like WhatsApp, states and ecosystem actors can create more immersive content, and experience to drive up engagement and effectiveness. For example, instead of simple push content, some states encourage two-way interactions, conducting quizzes and requesting students to submit photos of their assignments.

03

Encourage greater teacher engagement

A sizeable number of teachers are not in touch with students (self-reported by 20 per cent of government teachers) and more than half are spending less time on planning and teaching. Yet, our interviews show that parents and experts value their engagement to reinforce and augment self-directed learning as a critical part of the remote learning experience.

District and Block Education Officers can work with schools to monitor, incentivize and support teachers' interaction with students through calls and messages and home visits,[32] a request made by both students and parents during the in-depth interviews. Open-air classes or learning circles with small groups of students in playgrounds, anganwadi centres, open spaces at school or around the community for regular classes,[33] where it is safe to do so, could also be explored as it would enable a two-way interaction between teachers, parents and students. This could be explored in areas where device access is poor. Such efforts need to be accompanied by proper protective health and sanitation equipment for those conducting in-person visits, in addition to support for covering additional expenses like data charges and loudspeakers.[34]

04

Mitigate technology challenges for schools and teachers by subsidizing data and device costs for teachers and deploying devices at a school and community level

Thirty-six (36) per cent of government teachers state a lack of computer access as a barrier to teaching, emphasizing the importance of improving basic digital infrastructure in schools.[35] As eight per cent of teachers do not have personal access to either a laptop or smartphone and approximately 50 per cent of teachers are spending more money on teaching materials relative to pre-COVID, it is also important to consider subsidizing device, and data costs.

Device and data affordability along with network connectivity are the largest challenges to continued learning during this time according to parents, and some of the top areas they are seeking support. State governments can continue to connect remote areas to the digital ecosystem by setting up hotspot facilities in areas with poor connectivity. Some state departments have also started deploying devices at community level. States can also explore partnerships with mobile network operators to provide free data for educational purposes to low-income and marginalized families (especially, those with girl children). This may be coupled with rations/ direct-benefit transfers to families during this time.

[32]In-depth HCD interviews with parents and students suggest a high demand for teacher visits to enable continued learning

[33]Experts suggest focusing on extensive two-way interaction between parents, teachers, and students through a combination of calls and in-person visits. This has proved to be successful in enabling remote teaching in areas where device access is dismal.

[34]Given that 50 per cent teachers state that they are spending more money now than before school closures

[35]Map government schools that lack basic computer facility and then seek in-kind support from electronics manufacturers (e.g., OEMs) to increase hardware access (e.g., desktop computer, printer and web-camera) in schools (e.g., Education Department of Andhra Pradesh distributed laptops in a pilot for personalized adaptive learning in 60 schools).Additionally, district collectors can also seek government support through donations of used devices and hardware (e.g., Citizens in Pune were encouraged to donate smartphones and laptops to be refurbished and distributed among low-income students during the lockdown)

05

Improve the learning experiences of children from marginalized groups

While marginalized groups are using remote learning resources at similar levels, migrant and ST students' learning is perceived to be more behind than their peers relative to when in-school. Ten (10) per cent of all parents state not having content in the local language as a challenge. States can work with District Education Officers (DEOs) to curate a list of languages majorly used across the state by different groups and ensure translated versions of all e-learning material be made available in those languages. Experts suggest a higher need for immersive platforms with multiple access options for students with disabilities (e.g., immersive reader tool, live captioning options, dial-in option etc.)

State education departments can collect data at a district level on the migrant, children with disabilities, and sex disaggregated student numbers across classes, alongside access to device, internet, and learning tools to map which students require additional in-person/ remedial support. For migrant students, states can track how many have access to relevant documentation to take admissions as schools begin to re-open and provide them with provisional admission until they can secure their documents.

In the short term, as schools plan and begin to re-open:

06

Drive re-enrolment campaigns to prevent students from dropping out and provide support to relieve financial challenges

States can conduct virtual (call/ SMS based) and in-person meetings with parents, and students to ensure re-enrolment in case students have dropped out of school/not re-enrolled. These meetings can also be used to encourage parents to ensure enrolment for the next academic year. Given the sizeable minority of students who face financial challenges in returning to school, state education departments can consider alleviating their financial burden through loans/ Equated Monthly Instalment (EMI)/waiver for school fees, as well as providing loans to private school operators to prevent them from going out of business/raising fees.

07

Publicize guidelines on re-opening and set-up monitoring units

State governments can set guidelines, many of whom have already started with consultation from experts and ensure these align to those released by the Ministry of Education and the Ministry of Health and Family Welfare (MoHFW). Based on our survey and interviews with stakeholders, the guidelines should include class-wise timetable, duration of sessions, per centage of students attending, safety procedures (i.e., sanitizing classrooms after each class and provision of personal protection equipment (PPE) kits) to be followed, and re-course steps, if COVID cases emerge. Along with clear and widely publicized guidelines, state government should also closely monitor, and widely publicize school compliance results to build trust within parents to send their children back to school, and to assuage the challenges identified by teachers. State governments can set-up monitoring units (e.g.,UNICEF school re-opening standard operating procedures (SOPs) include monitoring units). The data gathered can be used to assess if additional PPE kits, especially sanitizers, need to be provided, further sanitation protocols need to be taken, or in extreme cases, whether schools need to be closed.

08

Preparing to cater to students with a wide range of learning loss

As schools re-open, various actors can support students by assessing their learning levels and catching them up through remedial education, given most students (80 per cent) are perceived to be learning less or significantly less and 65 per cent of students are perceived to somewhat or significantly lag behind in their overall progress.

States can consider partnering with ed-tech platforms/ NGOs to establish an assessment system for remote learning. Experts suggest that these rapid assessment systems help with the personalized tracking of each student and targeted solution development. Assessments when schools re-open will help government schools understand what concepts need further teaching and how exams can be structured to ensure that the children are prepared to give those. This will help guide what extra remedial classes can be provided to those that require additional support. In addition, governments should consider providing students with non-academic support as they are falling behind, including in areas such as social skills, physical fitness, and career readiness.

09

Going beyond the basics to deepen the quality of learning and addressing the holistic well-being of students, teachers and parents

For states which have made significant progress in reaching students with remote learning, they can focus on deepening the quality of their offerings even further and addressing the well-being of the education system stakeholders more holistically.

Given mental health is a significant concern, especially among adolescents 14 - 18 years old (50 per cent state very poor to poor mental health vs. 1/3 students 5-13 years, according to their parents), states can consider appointing trained counsellors to schools to hold virtual sessions with students in the near term and in-person sessions as schools re-open. States can explore convening counsellor associations/ NGOs such as Association of Indian School Counsellors and Allied Professionals, Arpan, Children First, etc. and DEOs to help set-up school-counsellor collaborations wherein students receive counselling sessions online each week.[36] They can also consider launching community well-being drives for the key stakeholders in the lives of students to normalize mental well-being challenges and make resources available. This can involve district level training sessions of community 'well-being teams' made of select Accredited Social Health Activist (ASHA), anganwadi workers, and school-teachers equipping them with counselling skills and well-being resources (i.e., Helplines, CSO contacts, etc.) and protective equipment kits for their own safety.[37]

In the long term, to further strengthen the system:

10

Explore ways to increase the effectiveness of commonly used tools

WhatsApp is the most commonly used tool for learning by students and teaching by teachers. Forty-seven (47) per cent-55 per cent of students use WhatsApp for learning and 86 per cent teachers state that they use it to teach remotely and receive best practices by DEOs through it. Given the wide use of the tool, state governments along with experts can conduct further research and development to uncover strategies to improve effectiveness of tools that are widely available and used. These can also be included in the curriculum moving forward so that some aspects can be better delivered in that format, especially for students that are outside the formal education system or irregularly attending.

[36]NCERT and CBSE, alongside institutions such as Delhi University, launched tele-counselling sessions to address mental health needs and concerns amongst parents as well as students (NDTV, NCERT begins counselling services for school students, available here)

[37]Government of Chhattisgarh leveraged SHGs, anganwadi worker, ASHA, and schoolteachers to conduct digital training of women who received smartphones under the Sanchar Kranti Yojana

11

Develop lighter applications that can be downloaded on low-cost smartphones and operate with 2G internet

Parents state internet recharge costs (37 per cent) and poor connectivity (26 per cent) as key challenges to remote learning. Given that network connectivity will likely remain a challenge in the near term, state governments can focus on customizing existing learning applications to be lighter for example, limited animation and compressed images, that can be downloaded on low-cost smartphones and operate with 2G internet, or work offline with only periodic connectivity.

12

Taking advantage of digital tools to provide blended learning even after school resumes

Finally, there is an opportunity to improve learning outcomes for the longer term through blended learning approaches, leveraging some of tech tools' advantages compared to in-person learning that many experienced during the school closures. Some students, parents and teachers are now more comfortable with using remote learning tools, something that could have taken much longer to achieve without the pandemic. Schools and educators can continue to use technology to provide additional support to students who may require more guidance with particular concepts, provide targeted feedback based on online assessments and facilitate two-way communication with educators beyond the school walls (e.g., keeping in better touch over the holidays where learning levels often recede).

UNICEF/2020/Kaur

Recommendations for UNICEF

UNICEF's deep relationships with 17 state governments, connections with global experts and repository of robust research and best practices make it uniquely positioned to promote cross-learning and continue to build on previous out-of-school children efforts.

- Facilitate cross-sharing of best practices by convening UNICEF state teams to share lessons on standardizing content, driving access and deepening quality. UNICEF can convene government officials, ed-tech players, NGOs, foundations, etc. through knowledge sharing sessions to share innovative learning solutions observed across states, the private sector and civil society organizations. Finally, it can undertake follow-on studies around specific topics (e.g., best practices to launch blended learning or leveraging WhatsApp) and compile case-studies of successful remote learning solutions and share the results widely.
- Continue to support enrolment and expand out-of-school children efforts by assisting the government to link welfare schemes to school enrolment and attendance (learning from the success of mid-day meals for elementary students)[38]. UNICEF can also work with state education departments to establish flexible schooling models (based on suggestions by experts) for the next few years as remedial classes and open school, given that approximately 10 million[39] students are at risk of never returning to school.

Recommendations for CSOs

Civil society can support the government with last mile delivery and deepening quality through customized tools, as well as help students catch up once schools re-open.

- Support government with last mile delivery, especially among marginalized groups by working with local institutions like Self-help Groups (SHGs), ASHA, etc. beyond interventions of specific CSO themselves. Civil society can also work with state governments to track the numbers of marginalized students and run targeted campaigns. It can simultaneously leverage their existing relationship with communities to build trust and the habit of using state content.
- Support the government with customization and deepening of resource quality, along with developing more effective assessments, blended and WhatsApp-based solutions. CSOs can share best practices on local language and lighter application customization as they convert their own content. Finally, work with state education departments to design and launch remote assessments and blended/WhatsApp-based for students (e.g., shift to more project-based testing, weekly quizzes on WhatsApp that integrate with the state curriculum, etc.)
- Help students catch up through additional classes once schools re-open by providing short-term catch-up classes for students who have been actively studying remotely and long-term remedial programmes, alongside regular classes for students that are facing significant difficulties. CSOs can run these programmes in collaboration with government schools in their target intervention areas to ensure a smooth transition for students.

[38]The New Indian Express, HRD Ministry survey reveals mid-day meal scheme a big success, 2020

[39]Hindustan Times, 10 million children may never return to school after Covid-19 pandemic, 2020

APPENDICES

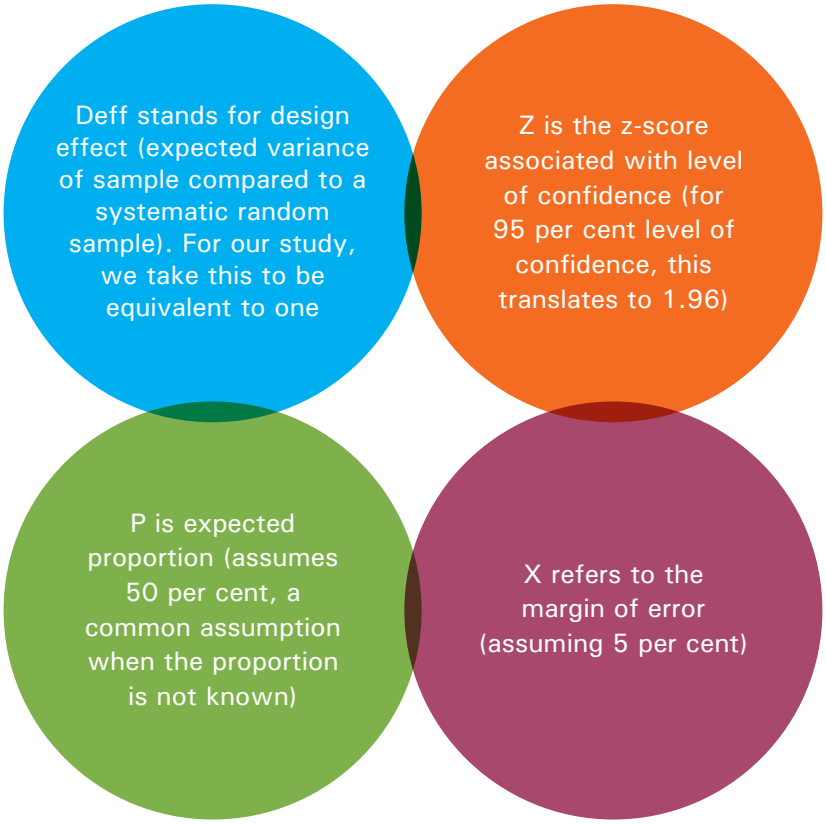
A: Analysis plan/ Framework

Sample size estimation

Using a one-time cross-sectional design, the sample sizes are estimated using the following formulae;

$$\text{Sample Size(N)} = \text{Deff} * \frac{Z^2 * p * (1-p)}{X^2}$$

Where;



Based on the above, the minimum sample sizes, assuming 95 per cent level of confidence and 5 per cent margin of error, translates to 384, while for 90 per cent level of confidence it translates to 270. For our study, we will meet the minimum threshold of 95 per cent level of confidence for all parents, as we survey 450 parents per state, or 2,700 overall. For adolescents, with a sample size of 1,950 (or 300 per state expect Madhya Pradesh which has 450 adolescents) we will meet the minimum criteria for 95 per cent level of confidence when estimating across all six states, however meeting only the threshold for 90 per cent level of confidence within a state. Finally, for teachers, migrant families and marginalized populations, we will estimate their response only at a combined level where we will meet the 95 per cent and 90 per cent level of confidence thresholds respectively. The table below summarizes the various levels of confidence in the target segments.

#	Research segment	Across all 6 states	Per state
1	Parents of children up to age 14 years old	95 per cent level of of confidence	95 per cent level of confidence
2	Adolescents between 14 to 18 years of age	95 per cent	90 per cent
3	Parents (migrant families)	90 per cent	Not applicable
4	Parents (families in tribal or remote locations)	90 per cent	Not applicable
5	Teachers	95 per cent	Not applicable

Respondent profile

A profile of the research segments has been provided below:

Research segment	Target population
Parents of children up to 14 years of age	Adults above the age of 18 years who have at least one child aged 6 years or above
Adolescents between 14 to 18 years of age	Adolescents between the ages of 14 to 18 years old who attend government schools
Parents (migrant families)	Adults above the age of 18 years old who have moved to the current place of residence in the last one year and have at least one child aged 6 years or above
Parents (families in tribal or remote locations)	Adults above the age of 18 years old, who reside in tribal or low-density populated regions and have at least one child aged 6 years or above
Parents (families with special needs children)	Adults (above 18 years of age) who are parents of students who have special education needs including, but not limited to, hearing disabilities, learning disabilities, attention disorders etc.
Teachers	Adults who are occupied as 1) teachers in predominantly government and government run schools and institutions and 2) teach students in the elementary or secondary grade

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B: Any relevant tables/data

Risks and mitigation strategies

These recommendations can help address short term barriers in providing remote education to all students and further strengthen education systems across states, such that they are better prepared for future challenges like the COVID-19 pandemic. In further refining and implementing these recommendations, stakeholders must consider the following risks and mitigation strategies highlighted in the table below.

Type	Risk	Severity	Implications	Mitigation strategies
Process/ implementation risks	Lack of alignment among school departments and state level teams to roll out the solutions	**High**	Delay in developing and rolling-out state-specific solutions	• Undertake an on-boarding exercise to secure buy-in with the recommendations and develop a delayed roadmap with roles/ responsibilities mapped to each stakeholder • Constitute mandatory check-ins to align on progress of implementation
	Lack of local level buy-in by community members/ teachers etc.	**High**	Delay in acceptance of community solutions and lags in execution of learning plan	• Establish direct lines of communication with block/taluka representatives to build trust • Engage people through awareness campaigns
	Lack of buy-in and collaboration with NGOs/ private sector	**Medium**	Stress on human capital and financial resources	• Convene a multi-stakeholder meeting to generate buy-in and sign MoUs with implementing partners • Develop a detailed execution plan with roles and responsibilities mapped to stakeholder requirements and needs plan, to increase convenience of onboarding
	Lack of available data to contextualize solutions to on-ground needs	**Medium**	Low access and/ or usage of solutions	• Collate all data onto one platform and identify gaps • Undertake data collection and run trends through experts across geographies, age/income/social groups to check relevance

Type	Risk	Severity	Implications	Mitigation strategies
Design Risks	Creation of content that has not been stress tested for quality	**High**	Potential to render the learning process ineffective due to low quality gains	• Constitute quality audits across learning resources through third-party curriculum consultants, such as XSEEED.
	Misalignment of learning goals/ outcomes due to reduction in syllabus	**High**	De-prioritisation of important lessons and varied learning trajectories	• Establish a working group of state board, CBSE/ICSE officials to align on common lessons to be reduced from curriculum • Enable regular student feedback to address specific issues in re-assessing learning goals
	Stress on short-term tools over long-term interventions	**High**	Reduced resilience of education interventions and potential lags in student learning and community interventions	• Develop community interventions in low device/ network/ internet access regions • Invest in digital infrastructure of schools with access
	Low understanding of mental health concerns	**Medium**	Ineffective detection of mental anxiety and delays in redressal	• Disseminate detailed digital brochures/ SMSs and run digital campaigns focusing on common anxieties and redressal mechanisms
	Excessive work burden on teachers	**Medium**	Staggered dis-incentivisation among educators to continue learning during school closures	• Ensure a rigid separation of teacher roles, within learning system and additional COVID work • Provide work-time flexibility, additional leaves, and community recognition to teachers as incentives

UNICEF/2020/Panjwani

Expert interview list

Organization	Name, Position
Action Aid	Kranti Nigam, Program Manager
Akanksha Foundation	Saurabh Taneja, CEO; Jayshree Oberoi and Sheetal Murudkar, Program team
Annual Status of Education Report (ASER) Centre	Nimisha Kapoor, Program Lead
Avanti Fellows	Vandana Goyal, Trustee; Panchali Dutta and Saksham Srivastava, Program Team
Central Square Foundation (CSF)	Harish Doraiswamy, Director, EdTech and Ratan Guha, Program Manager
Centre for Equity and Quality in Universal Education (CEQUE)	Uma Kogekar, CEO
CHETNA	Sanjay Gupta, Director
ConveGenius	Jairaj Bhattacharya, Managing Director
Educate Girls	Safeena Husain, CEO
Ignis Careers	Rennis Joseph and Imma Mary, Founders
I to WE Development Foundation	Parthesh Pandya, CEO
Mann Centre for Individuals with Special Needs	Beverly Louis, Head of Communications
Michael and Susan Dell foundation (MSDF)	Samar Bajaj, Program Manager
Nipman Foundation	Nipun Malhotra, Founder
Observer Research Foundation (ORF)	Leena Wadia, Senior Fellow, Policy and Advocacy in Education
Pratham	Karthik Menon, Co-Lead, Impact Measurement, Monitoring and Evaluation
Reach to Teach	Ratna Viswanathan, CEO
Sarthak Foundation	Kshama Hastak, Founder
Save the Children	Dr. Namrata Jaitli, Director - Policy and Programme Impact
Sol's ARC	Sonali Saini, Founder and Director
Teachers of Bihar	Shiv Kumar, CEO
Ummeed Child Development Center	Joyeeta Sen, Director; Sajida Vadgama, Program Manager

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