



REOPENING WITH RESILIENCE:

Lessons from remote learning during COVID-19 in South Asia

Introduction

The COVID-19 pandemic and ensuing school closures have exacerbated pre-existing inequities in learning for children in South Asia. Despite considerable progress in the last two decades towards increasing access to education, significant gaps remain. Prior to the pandemic, nearly 12.5 million children at the primary level, 16.5 million adolescents at the lower secondary level and 64 million young people at the upper secondary grade level remained out-of-school in South Asia (UNESCO, 2019, p. 4). Gains in access have also not translated to increases in children's learning. Learning poverty rates, which indicate the share of children who are unable to read and understand a simple text by the age of 10, range from 15 per cent in Sri Lanka to 93 per cent in Afghanistan (World Bank, 2021). The regional average Harmonized Learning Outcomes¹ (HLO) score is the lowest among all regions in the world (Angrist et al., 2021) (see *Figure 1*). There also remain acute equity challenges in education access and learning across gender, income groups, social groups, children with disabilities and rural and urban areas (Dundar et al., 2014).



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The purpose of this report is to provide evidence-based insights about the reach and effectiveness of remote learning in South Asia, and how to improve approaches and strategies going forward. School closures in countries in South Asia were among the longest in the world. Between February 2020 and August 2021, schools in South Asia were either fully or partially closed for an average of 366 days (UNESCO Global Education Tracker, 2021). In Pakistan, Afghanistan, and Bangladesh, school closures have affected between 60 and 90 per cent of scheduled

school days. In India, school closures lasted 453 of the last 470 days of instruction, or 96 per cent of scheduled school days. These long periods of school closures, combined with low reach of remote learning (both access and usage), have deepened the learning crisis for 434 million school-going children and young people in the region (UNICEF, 2020). Across the region, ongoing school closures and reopening have rarely been nationally synchronized and vary by sub-region and education levels, risking widening existing disparities in learning (Nugroho et al., 2020).

¹ The Harmonized Learning Outcomes (HLO) is a database that enables comparisons of learning progress across 164 countries. The database combines results from seven different types of tests, which each cover between 10 and 72 countries. Scores were disaggregated by schooling level (primary or secondary), subject (mathematics, science and reading) and gender.

FIGURE 1. Harmonized Learning Outcomes by number of fully closed school days in South Asia (from February 2020 and August 2021)



Note: Data on learning outcomes pre-COVID-19 come from the Harmonized Learning Outcomes (HLO) database of 164 countries, learning outcomes from 2000 to 2017 (Angrist et al., 2021). Data on the duration of education systems being fully closed come from the UNESCO Global monitoring of school closures by COVID-19. The size of the circle represents the school-age population of a country with data from UNESCO Institute for Statistics.

Even brief interruptions in children's schooling can have long-lasting effects on learning and later-life earnings, and prolonged school closures increase the severity of this impact (Alban Conto et al., 2020, Meyers and Thomasson, 2017). A projection by the World Bank in late 2020 estimated that seven months of school closures could result in the equivalent loss of one year of learning for students. School systems in South Asia have long crossed

that seven-month mark. The economic impact of this learning loss in South Asia could be higher than the \$880 billion or 5 per cent of lifetime earnings loss estimated in late 2020 (Azevedo et al., 2020b). Furthermore, school closures mean that students miss critical services that schools provide outside of education, including nutrition and child protection programmes (Bakrania et al., 2020). School closures have been shown to have a particular impact on

women and girls with increases in violence, teenage pregnancy and early marriage (Bakrania et al., 2020). The suspension of school feeding programmes, which many children and households depend on, could result in lower health outcomes, educational attainment and income in the long term (Borkowski et al., 2021). School closures especially impacted children with disabilities, who often had limited or no remote learning options.

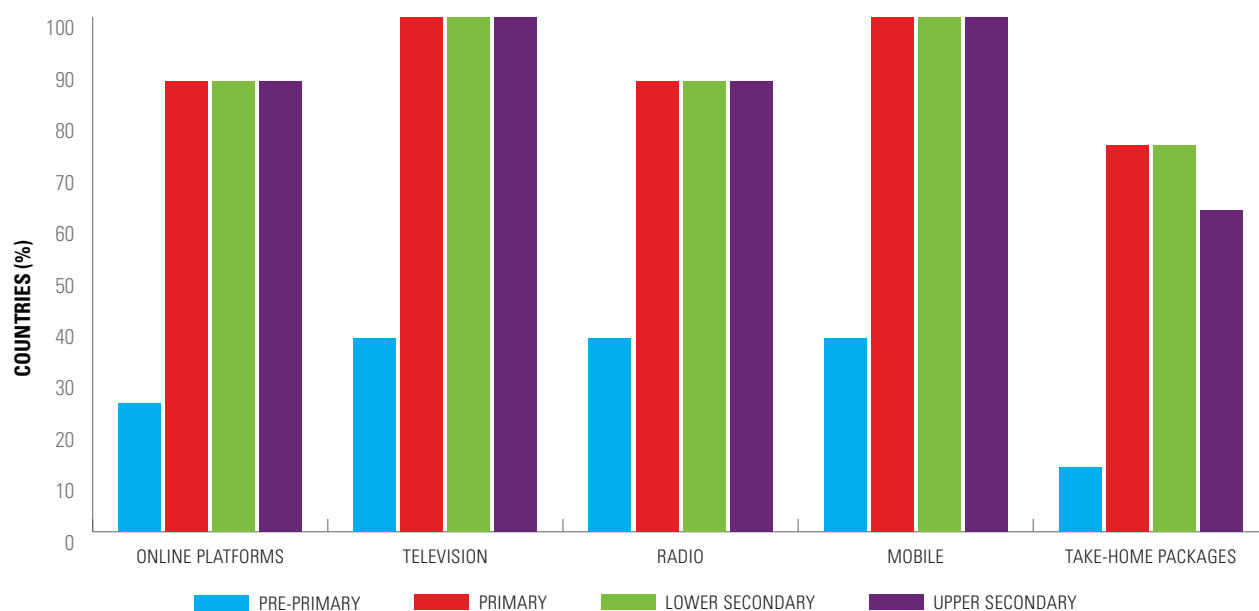


Remote learning responses in South Asia

To mitigate the effects of school closures, governments and education stakeholders in South Asia provided a range of remote learning programmes. Countries predominantly relied on a combination of online digital learning, television and mobile phones to reach school-age children through primary and upper secondary education levels (see Figure 2). Very few countries in South Asia reported remote learning modalities for children of pre-primary age. This trend is concerning given the strong evidence that investments in education in these early years has long lasting impacts for children and societies (Nugroho et al., 2021). It should be noted that these figures are based on self-reported data of remote learning by representatives from ministries of education and do not capture rates of actual supply and take-up by students. Also, these figures represent national responses to school closures and thus some decentralized remote learning initiatives that were launched may be excluded.²

Afghanistan was the only country that did not report using internet or online platforms for remote learning for any education level.

FIGURE 2. Remote learning modalities promoted by countries in South Asia²



Note: Data on remote learning modalities come from the joint UNESCO, UNICEF, World Bank and OECD surveys of ministries of education; the joint Johns Hopkins University, World Bank and UNICEF COVID-19 Global Education Recovery Tracker, 2021; UNICEF Bhutan, 2021; UNICEF Maldives, 2021; and UNICEF Afghanistan, forthcoming).

Supplemental, paper-based materials were used by fewer countries across education levels. While all countries report using television to deliver

remote learning at the primary education level to upper-secondary school level, the extent of the roll-out and take up by students varied

² Data are available from all countries in the South Asia region except Bhutan (i.e., Afghanistan, Bangladesh, India, Maldives, Nepal, Pakistan and Sri Lanka)

significantly from country to country. Surveys of students and families during school closures found that television was used for learning by only 4 per cent of children in Nepal (UNICEF, 2021), and 2 per cent of public school students (grade 1–4) in Sri Lanka (UNICEF Sri Lanka and UNICEF ROSA, 2021). In Pakistan, 30 per cent of youth (14–18 years) surveyed (UNICEF Pakistan and UNICEF ROSA, 2021) used television as their primary learning modality.

When considering the reach and effectiveness of different remote learning modalities, a useful distinction is to differentiate between high-tech and low- or no-tech modalities (see Figure 4). High-tech modalities include applications on phones, online learning through digital platforms

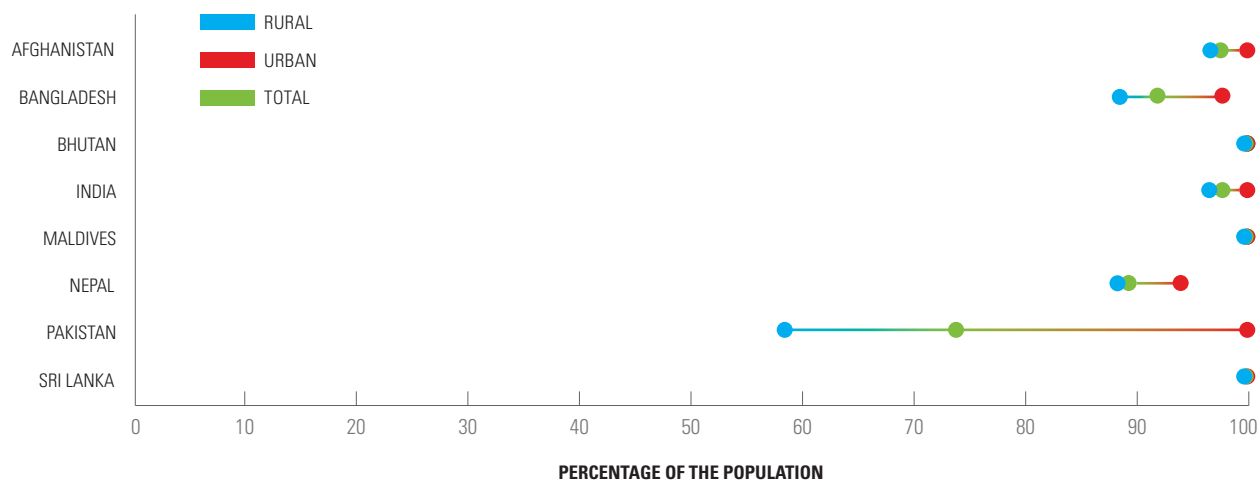
and live video classes. Low- or no-tech modalities include printed materials, radio, TV, phone calls and text messages. Low- or no-tech modalities are best placed to reach the most marginalized learners, particularly those who face significant barriers to accessing electricity, devices and connectivity.

All forms of technology-enabled remote learning require electricity. Although households' access to electricity is generally high in South Asia, in some countries there is still a large share of the population without access, especially in rural areas – this is of particular concern given the large proportion of rural households in South Asia. Pakistan has the lowest electricity rate of the region at 74 per cent of the total population, with

59 per cent of the rural population having access to electricity (see Figure 3).

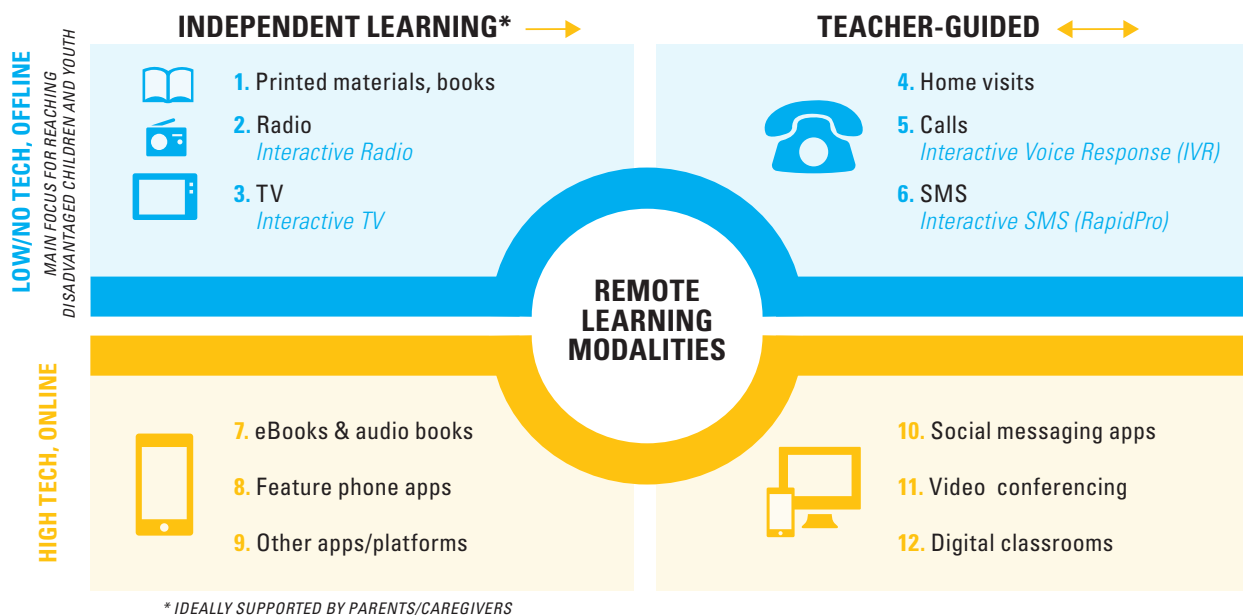
Apart from understanding the electricity and technology needed to deliver remote learning, another helpful way to differentiate modalities is through the type of engagement they enable between teachers and students. Across remote learning modalities, some enable more one-way interactions, usually top-down from teacher to student; others can be teacher guided and enable feedback loops among students and teachers (see Figure 4). When lessons are offered through printed materials only or via other one-way modalities, learners are expected to follow the material independently. In contrast, teacher-guided modalities such as phone calls and text messages allow for two-way engagement. A combination of two-way and one-way modalities is also possible. For example, a teacher could assign reading and exercises from a textbook via WhatsApp. Students could then use the textbook they have at home to complete their work, send a photo of their work via WhatsApp for assessment by the teacher who could then provide feedback via WhatsApp. This combination is especially relevant in South Asia, where WhatsApp penetration is generally high across all countries. In India, a survey found that almost 70 per cent of public school students and almost 90 per cent of private school students received educational materials via WhatsApp during school closures (Annual Status of Education Report (ASER), 2020). In Pakistan, WhatsApp was also used as a teaching tool, for example to share recordings of lectures for students to use as a reference for revision (Khan, 2020) as well as by creating student groups to facilitate discussion (Ahmed et al., 2020).

FIGURE 3. The percentage of the population with access to electricity, rural vs. urban share, in countries in South Asia



Note: Elaborated based on World Development Indicators, 2019.

FIGURE 4. Remote learning modalities matrix



Note: Information from the UNICEF South Asia Guidance on Distance Learning Modalities to Reach All Children and Youth During School Closures (2020, p4).

While seven of the eight countries in the region reported using digital learning through online platforms as one among many types of remote learning modalities, access to the internet is widely unequal in the region. The percentage of the population using the internet ranges from 63 per cent in the Maldives to only 11 per cent in Afghanistan (International Telecommunication Union, 2021). Variation in household internet access between urban and rural areas is also high (see Figure 5). For instance, in Nepal, 55 per cent of urban households had a fixed internet connection in 2016 compared with only 32 per cent of rural households (Wang et al., 2021).



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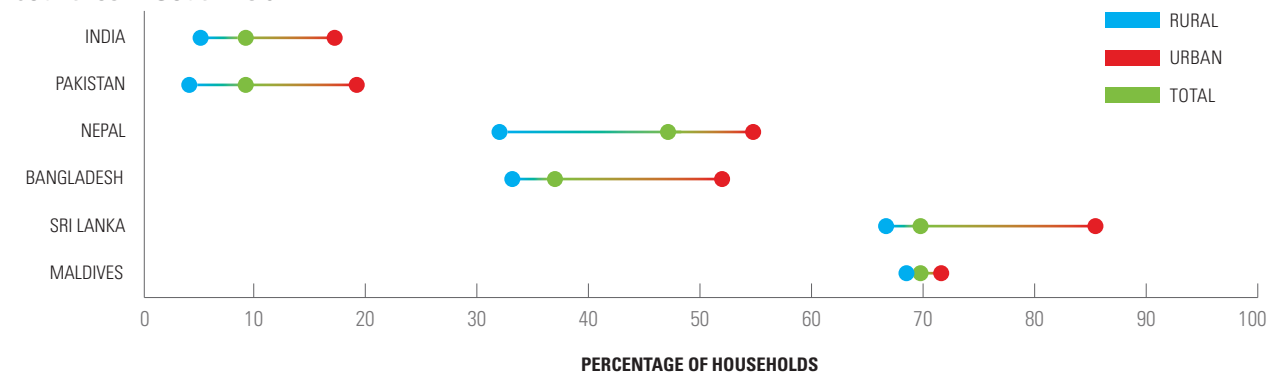
Also, household access does not automatically translate into regular, or even any, access for students. In Pakistan, only a fourth of children who had household access to devices could use them at all times (UNICEF, 2021). In India, while rates of smartphone ownership in households have more than doubled in the last two years (from 26 per cent to 62 per cent) (ASER, 2020), there are still issues with students' access and engagement with devices. A survey that investigated engagement of students, teachers and parents found that only a third of children in India had individual access to devices for digital learning such as smartphones or computers. Less than half of students with access to these devices in the sampled states spent at least one to two hours a day using these devices for learning (Datta and Robinson, 2020). Another survey across 15 states in India found that between 30 and 36 per cent of students could not study online because they did not own a personal smartphone (Dreze et al., 2021). Girls are much less likely to own and use a mobile device, and South Asia – with sub-Saharan Africa – has the greatest gap in mobile internet use between women and men (Carboni et al., 2021).

Television-based remote learning has the potential to reach almost 60 per cent of all students (from pre-primary to upper secondary levels) in South Asia (UNICEF, 2020). Afghanistan, Bangladesh, Bhutan, India, Maldives and Pakistan all developed and broadcast educational content on dedicated television channels for primary to upper-secondary ages at a national level (UNESCO, UNICEF, the World Bank and OECD, 2021; UNICEF Bhutan, 2021). While television ownership is above 50 per cent for countries on average, there are striking differences

between rural and urban ownership (see Figure 6). For countries with large rural populations such as Afghanistan, Bangladesh, India and Pakistan, this gap in access to television has large equity implications. Poor households from rural areas are less likely to have access to remote learning technologies to learn while schools are closed, while already starting from low levels of learning. For all countries apart from

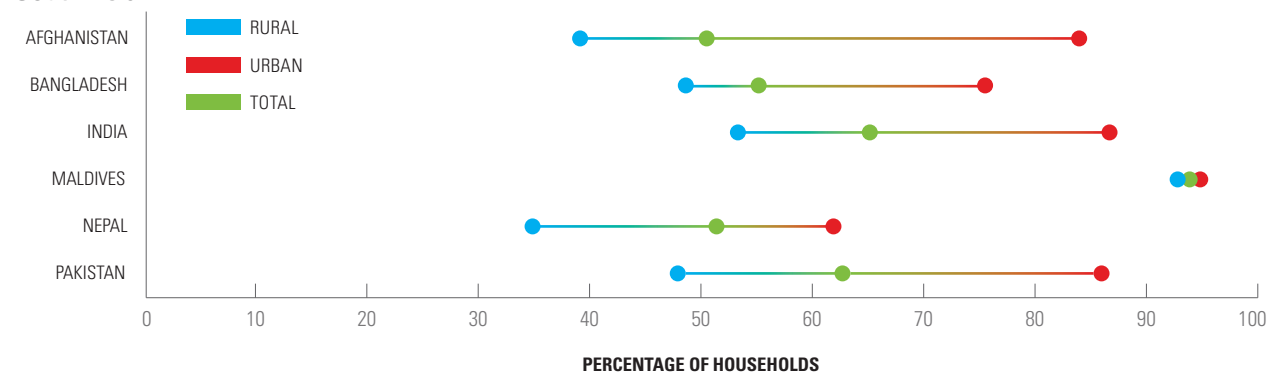
the Maldives, there is more than a 20 percentage point gap in television ownership between urban and rural settings. For instance, while 76 per cent of urban households in Bangladesh own a television, only 49 per cent from rural areas have access. Similarly in India and Pakistan, over 80 per cent of urban households compared with only half of rural households own televisions.

FIGURE 5. The percentage of households with access to internet connectivity, rural vs. urban share, in selected countries in South Asia



Note: Elaborated based on available Demographic and Health Surveys (DHS) and Multiple Indicator Cluster Surveys (MICS) data, 2010–2020 (source: Wang et al., 2021).

FIGURE 6. The percentage of households with access to TV, rural vs. urban share, in selected countries in South Asia



Note: Elaborated based on available DHS and MICS data, 2010–2020.

The prevalence of television within homes in the region presents opportunities for its use in education delivery; however, access does not necessarily translate to use for learning. In Sri Lanka, access to television was over 85 per cent for both private and public school students, although usage rates were lower than 5 per cent for both groups (UNICEF Sri Lanka and UNICEF ROSA, 2021). In Bangladesh, a rapid assessment conducted in May 2020 estimated that TV classes reached 10–15 per cent of non-formal education learners who live in remote areas (Chavez et al., 2021). Interestingly, in Pakistan, 32 per cent of youth in rural areas and 25 per cent in urban areas reported frequent and convenient access to state-broadcasted educational television (UNICEF Pakistan and UNICEF ROSA, 2021), even though access to TV in rural areas is significantly lower (48 per cent) than in urban areas (86 per cent).

Like other one-way modalities (radio and TV), paper-based materials are not as interactive or engaging but are important to consider for no- and low-tech environments, including where electricity is still missing. Afghanistan, Bhutan, India, Nepal, Pakistan and Sri Lanka all reported distributing take-home packages to students across primary, lower secondary or upper secondary grade levels (UNESCO, UNICEF, the World Bank and OECD, 2021; UNICEF Bhutan, 2021). In South Asia, due to technology adoption constraints and access limitations, textbooks and other take-home learning materials become essential resources for learning. A UNICEF survey in Sri Lanka found that students relied highly on printed packs created and distributed by the government – some 45 per cent of sampled learners in government schools and 17 per cent in private schools reported using these special printed packs as the main source of



learning during school closures between March and August 2020 – in addition to textbooks and other learning materials (UNICEF Sri Lanka and UNICEF ROSA, 2021). In Nepal, regardless of whether children were studying at home or in private or community schools, textbooks were the most widely used tool for learning (UNICEF, 2021). In Bhutan, the government also created self-instructed learning materials (SIMs), which schools were asked to provide to students in rural areas, and particularly to those without phones and TV facilities and connectivity at home. In total, 246,984 SIM booklets were distributed to households through schools across the country (UNICEF Bhutan, 2021). The independent and autonomous learning that is expected to occur through these resources can be challenging for students, particularly those in the lower grades who have not yet developed foundational literacy skills. To overcome this issue, schools in Bhutan reported combining these SIMs with other modalities like home visits. Contact with teachers through social media applications also helped to ensure SIMs were accompanied with follow-up activities. However, due to challenges in monitoring

the initiative, it is unknown how widespread these home visits were, highlighting the importance of improving monitoring systems for learning when schools are closed (UNICEF Bhutan, 2021).

While there are still issues around using mobile technology for education delivery, mobile phones are by far the most promising accessible resource for remote learning in South Asia. For example, in Bangladesh, only 6 per cent of the households from the poorest quintile own a television while over 92 per cent have a mobile phone. Even in Afghanistan, where internet penetration rates are low, over 85 per cent of households in rural areas have mobile phones (see Figure 7). Despite limitations such as individual access (especially for girls) to phones, connectivity in remote areas, the effects of using small screens on cognition and uptake (Ghamdi et al., 2015), the need for supervision (especially for younger learners) and the limited functionality of basic phones, mobile phones hold great potential for facilitating remote learning (UNICEF, 2020). Facilitators from an accelerated learning programme that supports over 3,700 children

in remote north-eastern Bangladesh used short mobile phone calls to give students individualized learning assistance in addition to paper-based materials and psychosocial support. Programme staff were able to reach close to 80 per cent of learners from the accelerated learning programme for 10-minute calls every two days, to share general information about COVID-19 as well as follow up on learning activities (Chavez et al., 2021). In India, Pratham Educational Foundation used curated text messages (SMS) and WhatsApp messages, differentiating instructions based on the kinds of phones households owned, (e.g., basic phones vs. smartphones), to engage with students and parents daily to support continued learning during school closures (Pratham, 2021) (see Box 1). This use of mobile phones together with paper-based materials can increase the reach and richness of remote learning.

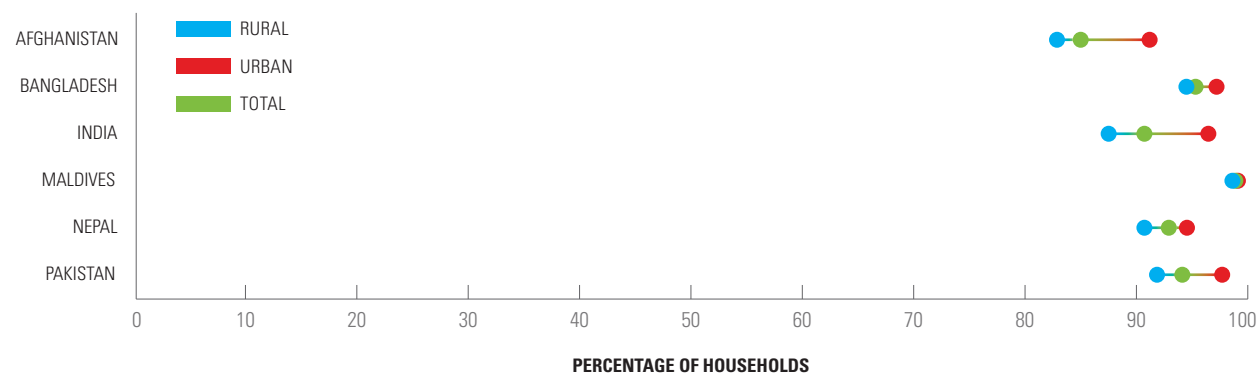
The use of mobile phones can enhance one-way forms of remote learning such as paper-based materials and broadcast media. Mobile phones not only increase interaction and follow-up, they also support assessment and feedback that can help monitor and improve remote learning outcomes. When used in combination with other modalities like take-home materials, or even broadcast media like television and radio, mobile phones have the potential to serve as a useful means both to deliver and collect information on engagement and learning from students (UNICEF, 2020).

Despite these efforts across the region, take-up of remote learning depends greatly on the household, school, and community contexts. At the household level, common limiting factors like ownership and

access to technology, low take-up among students, limited student-teacher interaction, as well as limited support from and to parents and caregivers, contributed to fewer learning hours for some students. These issues are particularly amplified in the context of children who migrated with their

families because of COVID-19 induced job-losses. At the school level, incomplete school records and contact information (such as phone numbers), as well as the digital divide faced by school leaders and teachers in terms of connectivity and access to devices, limited their options to support students.

FIGURE 7. The percentage of households with access to mobile phones, rural vs. urban share, in selected countries in South Asia



Note: Elaborated based on available DHS and MICS data, 2010–2020.

BOX 1. REACHING CHILDREN THROUGH MOBILE PHONES IN INDIA

In India, the non-governmental organization Pratham used mobile phones to reach children and families during the pandemic. Students were engaged through interactive text/video/audio content that included task-based learning activities across essential subjects like science, mathematics and reading, as well as art, music and theatre. Bite-sized content that conformed to the limitations of simple text messaging services was developed across multiple languages to ensure maximum coverage. Using an existing network of village volunteers, community members and teachers, Pratham maintained two-way communication to keep engagement high among both students and parents (Pratham, 2021).

Targeted support is required for younger students and parents and caregivers to ensure students are learning. The timing of the content is also critical, as in most households with only one mobile phone, children may not be able to access the device and engage with the content unless their parent is at home. Pacing the lessons to ensure daily learning in accordance with the curriculum is important to keep students on track for acquiring skills. This can be achieved through supplemental guidance and print materials for parents, and textbooks for students. Finally, ongoing learning assessments and reviews are required to target the educational content to the students' level of learning effectively (Pratham, 2021).

Teachers' contact with students was limited across the region. In an Asian Development Bank (ADB) survey in Bangladesh, almost 70 per cent of surveyed students reported not being contacted by teachers during the pandemic (ADB, forthcoming). In Pakistan, teachers typically used phone calls and messages to reach and communicate with students; however, no teachers reported using these modalities for learning, perhaps due to limited guidance and support on how to teach using mobile phones. Only 17 per cent of urban teachers and 13 per cent of rural teachers reported being able to reach their students in the five days preceding the survey (UNICEF Pakistan and UNICEF ROSA, 2021). Teacher contact has also varied by school type, further highlighting the difference in resources available to teachers in private schools compared with their public-school counterparts. In Sri Lanka, 19 per cent of students in government schools (grades 1-4) were never contacted by teachers, and only 8 per cent were contacted five days a week, compared with 52 per cent of private school students (UNICEF Sri Lanka and UNICEF ROSA, 2021). In India, a study found that only 15 per cent of sampled students reported schools and teachers as a main source of educational activities during school closures (Brookings, 2021).

Increasing teacher communication and support to students results in improved student engagement and motivation. As a result of the pandemic, young people, especially girls and those from poorer backgrounds, are reporting higher levels of stress, anxiety, depression and other behavioral issues (Sharma et al., 2021). Regular engagement offers possibilities for protection and mental wellbeing

support, as well as enabling the continuity of teaching and learning (UNICEF, 2020). Support from teachers and the education system can mitigate common barriers to learning remotely like lack of motivation and a supportive environment for learning, especially in more sensitive or conservative contexts. For example, in Afghanistan, dedicated sensitization efforts from teachers and facilitators targeted at household and community levels are effective at helping disadvantaged students (especially girls) stay in school (Mashwani, 2017) (see Box 2).

Beyond student engagement, it is also important to consider perceptions of learning and time spent on learning through these remote learning modalities. A survey in Sri Lanka asked about parent and caregiver perceptions regarding the amount

they believed their child (randomly selected from a household roster in grades 1-4) was learning at home, compared with when schools were open. Some 72 per cent of parents with children in public schools and 60 per cent of parents in private schools believed their children were learning less compared with when schools were open (UNICEF Sri Lanka and UNICEF ROSA, 2021). In India, 80 per cent of children aged 14-18 years reported lower levels of learning than when physically at school (UNICEF India Country Office, 2021). A survey in Pakistan asked youths aged 14-18 years about factors that were preventing them from spending more time on their learning: 32 per cent reported their inability to access technology, nearly 20 per cent reported that they were not feeling motivated to study and 17 per cent indicated household chores as a major factor. A larger proportion of rural youth (34 per cent)

BOX 2. COMMUNITY-BASED EDUCATION IN AFGHANISTAN

Community-based education (CBE) in Afghanistan has helped children in remote or conflict-affected areas to continue their education. CBE provides a necessary alternative to formal education particularly for girls and other groups of students that are unable to attend schools due to insecurity, distance or other constraints. CBE has shown to have a strong positive impact on girls' enrolment and learning outcomes (Jantzi, Terrence, et al., 2019).

CBE schools have been active for around two decades in Afghanistan, even in contexts of adversity and conflict. The Ministry of Education's Education Quality Reform in Afghanistan initiative is using CBE to reach girls in grades 1-9 that don't have access to any school infrastructure (World Bank, 2020). UNICEF's Let Us Learn (LUL)

programme has been working in communities in Afghanistan to help 10-14-year-old students recover lost years of primary schooling through a three-year intensive CBE programme at Accelerated Learning Centres (ALCs). The programme has also supported students (especially girls) to access state secondary schools (Chavez et al., 2021).

During the pandemic, the LUL programme worked with teachers and communities to sustain engagement and education for children. Teachers went door-to-door to distribute learning materials to students and encouraged families to allow their children to return to ALCs the following year, (Chavez et al., 2021). Around 10,000 children were enrolled through CBE programmes during the first week of school reopening after nearly 12 months of suspension of all education activities (UNICEF, 2021).

reported a lack of access to devices as a barrier to spending more time on remote learning, compared with their urban youth counterparts (26.2 per cent) (UNICEF Pakistan and UNICEF ROSA, 2021).

Evidence suggests that households need to be supported with resources as well as guidance to facilitate remote learning for children, especially for those from low-income backgrounds. Competing responsibilities such as household chores and providing care to younger siblings, particularly among girls, and livelihood-related responsibilities force learners from poorer backgrounds to spend less time studying at home than their peers and they receive less household support for education (Heckman et al., 2006). Low-income children are both more likely to be engaged in child labour when not in school and less likely to return to school once they reopen (Park et al., 2020). Children from poorer families are more likely to be enrolled in public schools, where learning resources and facilities are lower than in private schools. In India, a survey of rural households found that nearly three out of four children were receiving some form of support from family members. Still, these numbers are driven by higher incidence among younger children and those that go to private schools (ASER, 2020). Another study based in Chennai found that students in private schools and those from high socioeconomic status households are more engaged in educational activities during school closures than their peers (Vegas, Shar and Fowler, 2021). In Nepal, students from higher income households spent more time studying (6.7 hours per day on average) than those from lower income households (6 to 6.2 hours per day on

average), who reported financial stress as one of the primary deterrents to learning (UNICEF, 2021).

Providing guidance to teachers and school leaders on how to support parental engagement can vastly improve learning outcomes (Brossard et al., 2020; Dreesen et al., 2020), but not all parents in the region are able to help their children study. A survey in June 2020 of the most vulnerable households in three provinces in Afghanistan found that over 30 per cent of households were unable to support their children to learn, citing parental illiteracy (60 per cent) and resource constraints (29 per cent) as the primary barriers. As a result, over 50 per cent of households surveyed did not practice home schooling for their children (World Vision,

2020). In Sri Lanka, parents with higher education backgrounds provided much more support to their children in learning at home (on average three to four hours per day), compared with parents with primary school education attainment or lower, who, on average, reported spending less than an hour every day supporting their children with their studies (UNICEF Sri Lanka and UNICEF ROSA, 2021). In India, a fifth of the families surveyed still needed support to be able to access textbooks and other physical learning materials for their children to learn (UNICEF, 2020). In another study, parents' inability to pay school fees and lack of access to remote learning devices were cited as the main reasons why students did not attend remote classes regularly (Vegas, Shar and Fowler, 2021).



Ongoing, contextualized professional development for teachers and school leaders is essential in strengthening remote learning. In addition to providing guidance on how to support parental engagement in education, teachers and school leaders also need to develop mastery on how to facilitate learning through a combination of different remote learning modalities. Further, even once schools reopen, teachers will need ongoing support – not one-off trainings – on how to integrate technology in their pedagogy in ways that avoid the replication of rote-based teaching. They will also need training and guidance on formative assessment approaches as well as hybrid and blended learning to prepare better for any future school closures (Chand et al., 2020). School leaders also need commensurate support and guidance on supportive supervision, coaching and instructional leadership practices to create time and opportunities in teachers' schedules to acquire and develop new skills (Burns and Lawrie, 2015).

Monitoring the impact of remote learning provision and strategies on learning outcomes for all children through data collection – including learning assessments – will help design targeted mitigation and remedial approaches. Some countries in the region have introduced automatic promotion, delayed examinations or internal assessments for grade progression for students in non-critical grades. This strategy is recommended as a tool to help all students return to school and reduce dropouts in exigent circumstances such as the extended school closures in the region. Additionally, promoting students with lower achievement does not hamper their or their peers' abilities to learn at a higher

grade (King et al., 2008). However, automatic grade progression must be accompanied by effective formative assessments during school closures and when children are able to return to school. Timely and practical information from these assessments, when designed well to inform teachers' practices, can help target remote learning strategies in the short term. In the medium term, schools can use these data to differentiate instruction to match students' knowledge and skill levels once they return to school (Pritchett and Beaty, 2015; Chavez et al., 2021). In the long term, this information can help educators assess the magnitude of the learning gap for students returning to school to target remedial strategies (UNICEF ROSA, 2021).

Climate and environmental hazards are a growing concern in South Asia where countries are among the most vulnerable to extreme climate-related events like heatwaves, storms, floods, fires and droughts. Nearly half the region's population is affected by these events every year, with children being particularly vulnerable to the resultant health, education and protection crises (*see Figure 8*). These climate-induced crises can directly lead to school closures or movements of populations. They have also been shown to increase incidence of conflict, further putting children's education at risk, especially those that are the most vulnerable or at risk. Learners, especially those from Afghanistan, Bangladesh, India and Pakistan, are at highest risk of experiencing disruptions to their education due to climate change (UNICEF, 2021). It is thus critically important to strengthen education systems in the region to facilitate effective remote learning as a response to future crises.



FIGURE 8. Harmonized Learning Outcomes by the Children’s Climate Risk Index (0–10)



Note: Shows the pre-COVID-19 learning level of countries using HLO by countries’ CCRI score. Countries which appear lower on the graph had lower pre-COVID-19 learning levels. The size of the circle represents the school-age population of a country.

Conclusion and recommendations

The evidence is clear that there is no replacement for in-person learning and that schools should reopen as soon as possible in times of emergency. The experience of the COVID-19 pandemic has shown the need to have robust remote learning systems that can effectively reach all students, if and when schools are forced to close. Investing in resilient education systems that include remote learning modalities to provide quality education delivery even in crises can help minimize the longer-term impacts of these adverse events (UNICEF, 2021).

The following are recommendations from the evidence base on remote learning to build resilient education systems in South Asia and beyond:

1 Address the remaining electricity and connectivity divides. Investment in last-mile electricity is critical to ensure that the most vulnerable children are able to engage in remote learning when schools are forced to close. Students from rural and poor backgrounds with the least access to both electricity and connectivity are those with already low levels of learning. It is imperative that these investments be made rapidly, so that existing disparities in



educational outcomes between groups are not further exacerbated during emergencies.

2 Increase teacher engagement with students for instruction, guidance and support as well as feedback. A large number of children in the region cannot afford to access learning content on high-tech modalities. These students

lack access to the engagement, interactivity and feedback that digital platforms can provide. Lower-tech modalities can be bolstered with regular and targeted teacher support. Adapted educational content is most useful when supplemented with regular interactions between teachers, students and parents. Even for students that can access digital learning, regular

contact from teachers and psychosocial support encourages student engagement and promotes curricular learning.

3 Support teachers, parents and caregivers to help children learn remotely. Teachers need comprehensive training on remote and blended learning, as well as support to enable them to teach from home during school closures (for example, free mobile data). Parents and other family members are essential partners in promoting learning at home. Household attitudes towards education are critically linked to learning outcomes for children. Engaging parents and caregivers in regular interaction can help reinforce the importance of continued learning for children instead of alternative activities – for example, child labour and early marriage. Regular guidance should be extended on how to motivate and promote learning for children at home.

4 Promote the use of mobile phones, in combination with other modalities to maximize the reach and effectiveness of remote learning. High rates of mobile phone ownership and broad connectivity of regular mobile networks suggest an enormous potential to reach students. During school closures, teacher strategies and educational content need to be tailored to support learning through mobile devices – for example, assignments and feedback through SMS or social messaging apps and phone calls. Feedback and assessments of learning levels and progress can be generated using these interactive elements, even with the most basic devices.



5 Develop implementation research to inform remote learning, monitor learning progress and the reach and effectiveness of remote learning strategies. Particularly for harder-to-reach students, data can support the choice of remote learning strategy, help reduce curriculum and skills level mismatch and prevent children from falling further behind or even dropping out of school. Research on which implementation strategies are best suited to reach even the most marginalized and hard-to-reach students is essential to ensure effective continuity of education for all. Continuous monitoring of the

reach and effectiveness of remote learning is also critical, both at the national and at the school level (UNICEF ROSA, 2020c).

6 Formative assessment is critical during school closures as well as when schools have reopened. Children are likely to require intensive remedial strategies to catch up on lost learning especially where there have been long periods of school closures. In order to target these efforts effectively, it is important to monitor individual learning levels continuously through formative assessments, once students are back in school.

Acknowledgements and contact details

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