

COVID-19: How are Countries Preparing to Mitigate the Learning Loss as They Reopen Schools? Trends and emerging good practices to support the most vulnerable children

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Some countries are starting to reopen schools as others develop plans to do so following widespread and extended closures due to COVID-19. Using data from two surveys and 164 countries², this research brief describes the educational strategies countries are putting into place, or plan to, in order to mitigate learning impacts of extended school closures, particularly for the most vulnerable children. In addition, it will highlight emerging good practices.

KEY FINDINGS AND RELATED RECOMMENDATIONS

- 1. Identify and reach out to vulnerable children who are at greatest risk of not returning to schools.** Millions of children may not return to school following current closures but only a minority of countries have incorporated considerations to get the most vulnerable children back to school as part of their response plans. Good examples of this approach are proactive, putting teachers and communities at the centre, with the School Active Search in Brazil an example of a systematic approach.
- 2. Make supports for mitigating learning losses available to all children as schools return.** Many countries are planning initiatives to address learning loss as part of school reopening, with nearly 70 per cent intending to introduce remedial programmes. These should recognize that the experiences of children during school closures can vary greatly based on their home learning environment. To inform such supports, a number of countries are prioritizing an assessment of children's learning as schools return, but less than half have included assessment in their school reopening plans.
- 3. Leverage existing initiatives to support return to school.** Countries are relying on, modifying, or scaling up existing initiatives in their education systems to support students as schools reopen. These include using existing school-level programmes such as the Teaching at the Right Level approach to address learning loss and utilizing or building upon existing work on a country's Education Management Information System (EMIS) platforms to monitor progress and address areas of additional need.
- 4. Continue to monitor the effectiveness of initiatives and share lessons as schools reopen.** Understanding the impact of initiatives to mitigate the educational impact of COVID-19, school closures can inform the way countries face inevitable future crises and strengthen the resilience of education systems. In the short term, as countries are experiencing the current crisis at different rates, there are ample opportunities to learn from each other. Governments play a crucial role in tracking the impact of their initiatives and sharing good practices and lessons with the support of development partners.

1 The authors would like to thank colleagues from the Global Education Monitoring Report, the World Bank, and UNICEF country and regional offices who reviewed and provided valuable insights to this paper.

2 Two rounds of education tracker data from UNICEF country offices were used: In the period April-May 2020, 134 countries responded to the first round and 84 countries to the second, focused on school reopening. Data from a joint UNESCO-UNICEF-World Bank survey on educational responses to COVID-19 from May-June 2020, distributed to national Ministries of Education, included responses from 118 countries. Accounting for overlaps, information from 164 unique countries was considered for this brief.

CONTEXT AND RATIONALE FOR REOPENING SCHOOLS

COVID-19 was declared a pandemic by the WHO on 12 March 2020. As the virus presented in different regions, governments responded, with the largest number of countries closing schools in March. At the peak of school closures in early April, 91 per cent of the world's learners were affected, with the majority experiencing country-wide closures. As of this paper's writing in July, the number has now dropped to 61 per cent, with countries increasingly enacting localized rather than country-wide closures³.

UNICEF is calling for countries to prioritize the reopening of schools when safe to do so, issuing a Framework for Reopening Schools jointly with UNESCO, UNHCR, WFP and the World Bank to offer practical advice for national and local authorities. The basis for and timing of this decision is being debated in several countries approaching their scheduled school reopening dates. Concerns are being raised about the risks on children, families and teachers of reopening. However, the rationale for reopening schools considers the negative impact of extended school closures as well as the emerging public health evidence that children are unlikely to transmit or act as drivers of the COVID-19 pandemic (Ludvigsson, 2020; Rajmil, 2020).

Global school closures present what international organizations have called “an unprecedented risk to children's education, protection and well-being” (UNESCO et al, 2020). The World Bank estimates that approximately \$10 trillion in earnings could be lost to the current cohort of learners due to lower levels of learning and their potential for dropping out of school (Azevedo et al, 2020). In another estimate, children could lose more than a year's worth of learning following a three-month school closure due to falling further behind when schools reopen (Kaffenberger, 2020). In addition to lost learning time, it is estimated that between 7 and 9.7 million children will drop out of school due to the economic impact of the pandemic (*ibid*; Wagner and Warren, 2020).

Past experience has found that extended school closures can have long-term negative impacts on children's educational outcomes, such as reduced schooling attainment and cognitive skills over their lifetime (Meyers and Thomasson, 2017; Havari and Peracchi, 2015). Children already more vulnerable prior to the crisis, including girls and those with less-educated parents, are likely to be the most greatly impacted (Bandiera et al, 2019; Ichino, Winter and Ebmer, 2004; Adrabi, Daniiles and Das, 2020).

However, lessons from past school closures point to policies and initiatives with positive results in mitigating the negative impact of disruptions, including fee relief, a condensed curriculum, extended school year, drop-out prevention initiatives, remediation, and targeted support for vulnerable groups (Hallgarten,

2020, Akresh et al, 2017). Examples of these targeted supports include gender-responsive interventions for pregnant girls and new young mothers in Sierra Leone. While school closures due to Ebola led to higher rates of girls becoming pregnant, they also faced exclusionary policy and other challenges in returning to school (Hallgarten, 2020).

While schools were closed in the first half of 2020, countries directed resources to supporting continuation of learning through a mixture of distance learning models as appropriate to their school communities (Dreesen et al, 2020). The extent to which these alternatives have reduced the teaching and learning gap will only be fully understood after children return to school. As schools begin to reopen in some countries, this brief explores what countries are doing, or preparing to do, to mitigate the educational impact of their closures. The focus is on educational strategies and not on the health and hygiene aspects of reopening, important considerations covered in other key documents (e.g., WHO, 2020).

Plans to reopen schools after COVID-19 closures

As of 23 June 2020, half of government respondents to the joint UNESCO-UNICEF-World Bank survey reported dates set for the reopening of their primary and secondary schools. Most countries were planning nationwide reopenings, followed by a combination of gradual reopening by region/territory and phased reopening by level, grade or age. These figures vary by region and level of schooling (see Figure 1). For example, while the majority of countries reporting from Middle East and North Africa had dates for reopening, fewer than half of the countries in West and Central Africa and in Latin America and the Caribbean did. This difference is likely influenced by the timing and degree to which the pandemic arrived in different regions.

There were also differences by education level. Fewer countries (46 globally) had set a date for the reopening of pre-primary schools, despite the framework for reopening schools highlighting the importance of direct interaction with teachers for play-based learning with younger children and the development of foundational skills. The gap between pre-primary and other school levels was largest in West and Central Africa, where only three countries had set a date for the reopening of primary schools. Many countries were prioritizing students facing their final school exams.

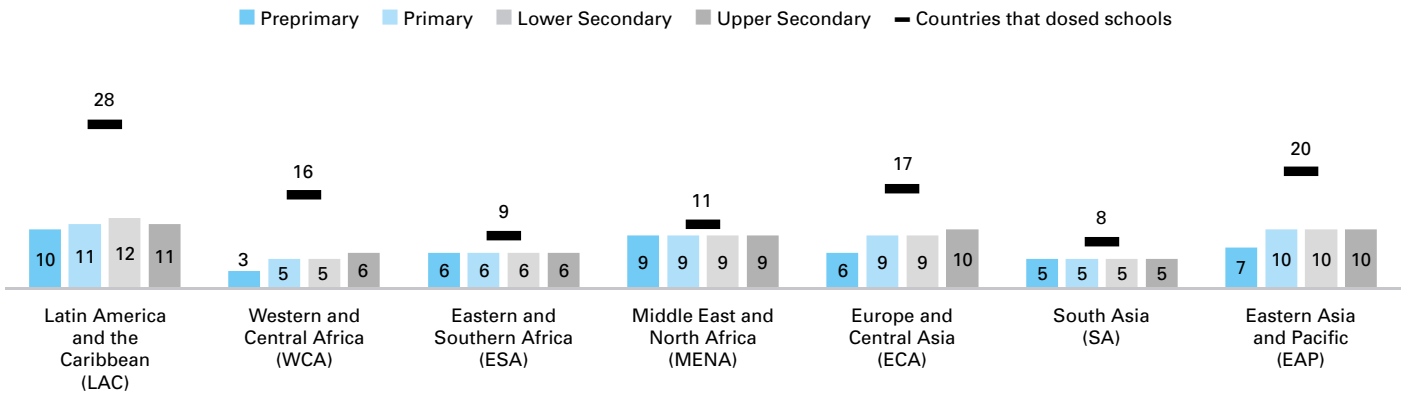
With uncertainties about the pandemic's trajectory, some countries have developed school reopening strategies dependent upon how long schools ultimately remained closed. The Gambia, for example, prepared short-, medium- and long-term closure strategies, with different actions identified in their reopening plans under each scenario (Ministry of Basic and Secondary

3 These estimates are regularly updated by UNESCO: <https://en.unesco.org/covid19/educationresponse>

Education, 2020). Similarly, UNICEF Djibouti worked with the country’s Ministry of Education in considering two scenarios for the reopening of schools. If schools had reopened by the end of May, the focus would have been on catch-up courses focused on certification

levels. Instead, with a September reopening, the strategy is focused on strengthening the monitoring of enrolments, school drop-out and absenteeism as well as providing psychological support for both children and teachers.

Figure 1: Countries that had set a date for the reopening of schools, by region and level



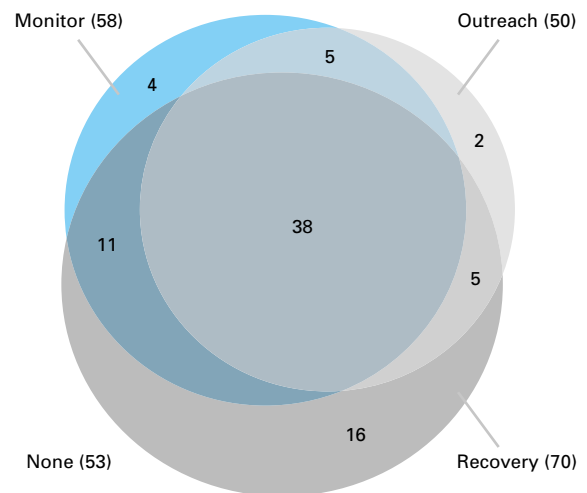
(Source: UNESCO-UNICEF-World Bank survey, May-June 2020)

Strategies to mitigate the education impact of school closures

According to reporting from UNICEF country programmes, the most frequently reported educational consideration in national responses to the reopening of schools were initiatives to recover lost learning time (70 countries included this), followed by the monitoring of re-enrolment/attendance of children (58 countries). Only 50 of 134 reporting countries were considering outreach to children who did not return to school.

There were significant overlaps in the consideration of mitigation strategies (see Figure 2). While 40 per cent of countries reported not including any of the three categories of strategies in their responses, 28 per cent were considering all three. Notably, 16 countries had not included any of these considerations in their national responses, despite having set dates for the reopening of schools. Most of these were small Pacific countries which, at the time of reporting, were only planning short school closure periods. In the remaining countries, school reopening guidelines had either not been prepared or were focused only on health and sanitation considerations.

Figure 2: Number of countries using three key reopening strategies in mitigating the educational impact of COVID-19



(Source: UNICEF Education Tracker Survey, 21 May 2020)

Initiatives to recover lost teaching time

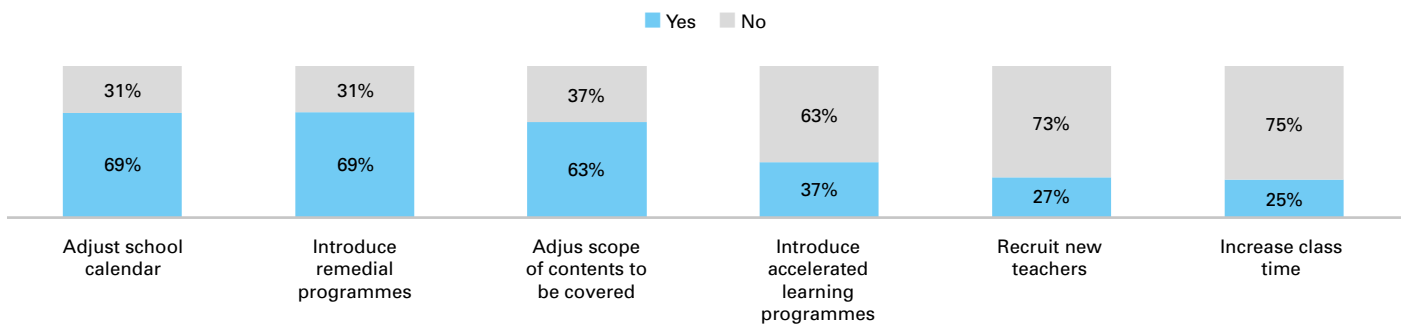
The Framework for Reopening Schools recommends countries implement large-scale remedial programmes to mitigate learning loss together with parallel accelerated education models to integrate out-of-school or over-age children. Indeed, across both surveys a majority of countries were considering initiatives to recover lost teaching time due to COVID-19 school closures. Most commonly, these initiatives were to take the form of remedial classes and adjustments to the school calendar and/or to the scope of contents to be covered (see Figure 3).

Seventy per cent of respondents to the UNESCO-UNICEF-World Bank survey had adjusted or planned to adjust their school calendars by moving the end of the school year back or moving the start of the next school year forward. As a result, there will be no school break in Tajikistan for example, and in Papua New Guinea, two-week breaks are being halved. In the Seychelles, mid-term breaks will be cancelled and mid-year holidays will be shortened by two weeks. Curaçao and

Jordan were also planning to use some parts of summer school holidays for remedial education. Rwanda will be changing from a January-December academic calendar to one that runs from September to June. Meanwhile, a smaller group of countries (24 per cent) reported that they would increase class time when schools reopened.

More than two-thirds of countries reported that they intended to introduce remedial programmes. Many countries will dedicate time at the start of the new school year, after schools reopen, to review content covered by other learning platforms while schools were closed. Some countries plan to continue utilizing distance learning platforms to deliver reviews as schools reopen. The State of Palestine will have a one-month remedial programme in August combining in-school and virtual delivery. Importantly, more than two-thirds of UNICEF country offices, including Viet Nam, Nicaragua, and Somalia, reported that as part of their reopening plans, they had taken steps to increase investment in remote learning to prepare for future closures.

Figure 3: Countries' use of initiatives to address learning loss



(Source: UNESCO-UNICEF-World Bank survey, May-June 2020)

In many countries, such as Hungary and the Netherlands, schools were considered best placed to take the lead in identifying which students had fallen behind due to the closures and providing them with the required remediation. Meanwhile, the United Arab Emirates, Anguilla, and several island states in Oceania pointed to existing remedial programs in their schools that would be expected to continue providing these supports when schools reopened. In Uganda, for example, UNICEF is looking at the Teaching at the Right Level approach (see Box 1) which was already being scaled to 70 schools prior to the crisis as a promising candidate for a remedial approach.

Teachers undoubtedly play a vital role in the safe reopening of schools and subsequent efforts to mitigate the educational impact of school closures. One in four countries reported that new teachers will be recruited for school reopening. Although these countries were not asked to provide specific information on the roles newly-recruited teachers will play, the majority of countries who are recruiting new teachers also

Box 1: Teaching at the Right Level in Africa

Teaching at the Right Level (TaRL) is an evidence-based intervention proven to quickly equip children in grades 3-5 with basic skills. TaRL approaches are currently being implemented in 12 African countries. A UNICEF-supported pilot in Borno State, Nigeria for example, achieved impressive results in a small group of formal and Quranic schools, which contributed to the government's buy-in to scale-up the intervention in neighbouring states.

The TaRL approach consists of three simple steps: one-on-one oral assessment of children's reading and arithmetic skills; grouping children by ability level rather than age or grade; and dedicating a period of the day or year on foundational reading and mathematics using a combination of evidence-based activities. For more, <https://www.teachingattherightlevel.org/> contains further information about the approach and underlying evidence of its effectiveness.

reported that they will be introducing remedial programmes (which may include after- or before-school programmes, effectively increasing classroom learning hours). In most countries' responses to the joint survey, teachers of primary and secondary schools were required to continue teaching during school closures. Most countries were also providing their primary and secondary school teachers with instructions and training on the use of remote learning.

However, despite this, students' ability to access these remote learning options varies greatly between and within countries (Dreesen et al, 2020). It is encouraging therefore that assessing students' learning during school closures is a priority for school reopening in a number of countries. In Afghanistan, students will be assessed on their learning progress during the quarantine period and analysis of these results will be used to identify aspects deemed incomplete and requiring remediation. Similarly, Antigua and Barbuda, Honduras, the Cayman Islands, Kenya, and Benin are planning assessments to diagnose student learning needs following their return to school. Further reporting from UNICEF country offices found more than 40 per cent of countries were planning to assess children's learning levels when schools reopened.

Some countries will be instituting, or planning to introduce, initiatives to recover lost teaching and learning time, targeting groups of children considered most vulnerable in their contexts. Viet Nam, for example, is planning a number of special measures to close learning gaps including accelerated learning programmes targeting remote, hard-to-reach ethnic minority areas.

Globally however, less than one-third of countries reported the introduction of accelerated learning programmes as a strategy to mitigate learning loss following COVID-19 school closures (see Box 2). In contrast to remedial programmes, which are offered in formal schools, accelerated learning programmes are most commonly offered outside or alongside the formal education system, targeting over-age or out-of-school youth with the opportunity to return to mainstream schooling or to gain a terminal qualification. In some countries, these programmes are offered on flexible platforms. In Ecuador for example, the accelerated learning programme is offered to young people or adults who have not completed schooling over blended and distance modalities.

Finally, many countries were particularly concerned with the impact of the crisis on students who were in the final years of their education level. They are providing additional learning support and holding discussions on whether key finishing examinations will still be held this year. In Mauritania, for example, remedial courses are being prepared especially for children who are supposed to sit final exams at the end of the year. Singapore, Sierra Leone, and Pakistan are also preparing remedial programmes for students in terminal year levels.

Box 2: Accelerated learning programmes to bridge a return to formal schooling

The Guide to Accelerated Education Principles defines an accelerated education programme as "a flexible, age-appropriate programme, run in an accelerated timeframe, which aims to provide access to education for disadvantaged, over-age, out-of-school children and youth". The Framework for Reopening Schools recommends such programmes to integrate previously out-of-school and over-age children as part of the school reopening process. These programmes already exist in many countries, often forming part of UNICEF's and other development partners' support, especially in crisis- and conflict-affected settings.

UNICEF's Let Us Learn initiative for example, focuses on bringing educational opportunities to the most vulnerable children in five countries currently. These include accelerated learning programmes for children in remote and under-served communities in Afghanistan, working children and those who face other barriers to traditional schooling in Bangladesh and out-of-school-school girls in Nepal. A recent evaluation of the Nepal programme found that most participating girls went on to mainstream schools and were able to outperform their peers who had been in formal schooling from grade one.

Like formal school institutions, most of these programmes have had to suspend activities during the COVID-19 crisis. As the children served by these programmes are very unlikely to have access to technology-based learning materials, the programmes have been providing take-home learning materials.

Additionally, more than half of all countries in the UNESCO-UNICEF-World Bank survey had decided to postpone or reschedule high-stakes examinations, ranging in time from by four weeks to by more than 12 weeks. A few countries cancelled their examinations altogether, most commonly in Europe and in Latin America and the Caribbean. Around a quarter were continuing to hold high-stakes exams as planned (a smaller proportion for primary schools), with half of these countries reducing the curriculum content to be assessed.

Monitoring of re-enrolment/attendance

While recovering lost teaching time was a priority for the majority of countries, past experience with school closures also indicated that there would be an increased risk that some students – particularly those already most vulnerable – would not return to schools once they reopened.

Less than a third of the countries included considerations for the monitoring of re-enrolment/attendance as they reopened schools (see Figure 2). Countries in the Eastern and Southern Africa region were more likely to have considered these types of strategies. Djibouti's reopening plan, as mentioned earlier in this paper, includes the monitoring of drop-

out and absenteeism. In an example from Latin America, Venezuela, also intends to monitor re-enrolment and attendance levels upon school reopening.

Box 3: Data to support the re-enrolment of the most vulnerable children in Montenegro

The government of Montenegro responded quickly to support continuation of learning, establishing the #UciDoma (learn from home) initiative, providing students with distance learning materials online and on television within a week of the closure of schools, beginning 16 March 2020. Furthermore, teachers from every primary and secondary school were provided with training on the use of Office 365 digital tools for interactive learning. While television broadcasts are widely accessible, almost 30 per cent of the country does not have access to the internet (ITU, 2018). The extended school closure also risks worsening existing gaps in access to education. For example, although there is near-universal enrolment in primary and lower secondary education among children in the richest quintile, the enrolment rate among children in the poorest quintile is 93 per cent and among Roma children is only 77 per cent (MICS, 2018).

Holistic aid for vulnerable children, particularly ethnic minorities and children with disabilities, has been a key focus of UNICEF Montenegro's programming throughout the course of the pandemic response. Support includes cooperation with the Association of Youth with Disabilities to launch a peer-support platform for children and parents and day care centres for children with disabilities to provide psychosocial relief for families, paired with cognitive and physical development interventions.

These have demonstrated how data can be used to support vulnerable populations. UNICEF advocated to the Ministry of Education for a mapping of Roma children and supported the collection of this information from schools. Children in Roma settlements, particularly girls, are especially vulnerable due to extremely limited access to the technology-based alternative learning options on offer. The results of the mapping were used in data-informed programming to define activities to be used to support Roma children and their families, including the distribution of school materials and specific encouragement for Roma girls.

A number of interventions are being planned for when schools reopen to encourage and support a return to school, including targeted catch-up classes and workshops for Roma parents and children about the importance of schooling. These supports will rely heavily on EMIS data, i.e., the information provided through an EMIS-based module for the early identification of students at risk of drop-out. The EMIS-based module was developed in cooperation with the Ministry of Education IT Department and, following a pilot in 2018/19, was scaled-up to all primary and secondary schools in 2020. Drop-out indicators and thresholds were defined through a participatory process with schools and include the number of absences (justified and unjustified), and incidences of violence and child marriage.

As discussed at the start of this paper, experiences from past crises have shown that girls are at higher risk of not returning to school after periods of extended closure. The example of Montenegro's response to the current crisis (see Box 3) highlights the importance of using data in identifying groups of children facing additional challenges and in this instance, led to the addition of specific support for Roma girls. Further reporting from UNICEF country offices however, found that consideration of gender analysis is uncommon, with less than one in five countries including mechanisms to track the number of girls not returning to school (see Figure 4).

Monitoring of re-enrolment and attendance levels allows governments to prepare and adjust their responses to crisis. In Madagascar, where for some grade levels classes have resumed in all regions, early reports found that re-attendance rates were higher in main towns than in more isolated schools. UNICEF supported the Ministry of Education's preventative measures to address the issue.

The need to accurately monitor rates of re-enrolment and attendance as schools reopen is drawing attention to countries' existing systems and processes to monitor school enrolment and attendance. A functioning and comprehensive Education Management Information System (EMIS) is central to the successful monitoring of out-of-school children and children at risk of dropping out (UNICEF and UIS, 2016).

A strong EMIS has played a key role in targeting supports and services during and after school closures in Montenegro. In the Maldives, where initially teachers were provided with online forms for students or their parents to fill in after distance learning lessons, this process was simplified by incorporating attendance information to the country's EMIS. Meanwhile in Anguilla, the lack of an EMIS covering the entire education system was, even in such a small country, identified as a major challenge in being able to monitor and assess children's learning during closures.

Outreach to children not attending

Among the three key strategies in mitigating the educational impact of school closures, outreach to children who do not attend school was the least frequently reported national response (see Figure 2). While a broad group of countries, including Ghana, Lao People's Democratic Republic, and Zambia, were preparing mass back-to-school campaigns, there were far fewer examples of outreach activities specifically targeting children who are at greatest risk of not returning to school, either proactively or in follow-up to monitoring of re-enrolment/attendance. This highlights the difficulty of designing and implementing such targeted initiatives.

These types of outreach may occur at the local level. In Guatemala, teachers were reported to be going door-to-door to retrieve students who had not returned to school. System-wide initiatives, however, could support schools and local governments in reaching out to children in their local communities who do not return to school following the end of school closures. This may utilize existing systems or initiatives used to bring back children who had dropped out, or been left out, of the education system prior to the pandemic. In Brazil, the UNICEF-developed School Active Search system (see Box 4), is expected to play a crucial role in identifying and reaching out to students who do not return to school following the COVID-19 closures.

The importance of this work cannot be understated. As discussed earlier in this brief, past experiences have demonstrated that the most vulnerable children are likely to be the most greatly affected by the negative educational impact of extended school closures, and this impact can last for generations. Reporting from UNICEF country offices saw that just under half of countries were considering targeted campaigns to support the re-enrolment of girls, vulnerable groups and the provision of learning materials accessible to people with disabilities (see Figure 4). Furthermore, only a small proportion of countries were reviewing access policies for pregnant girls and young mothers, found to be a considerable barrier following the Ebola epidemic.

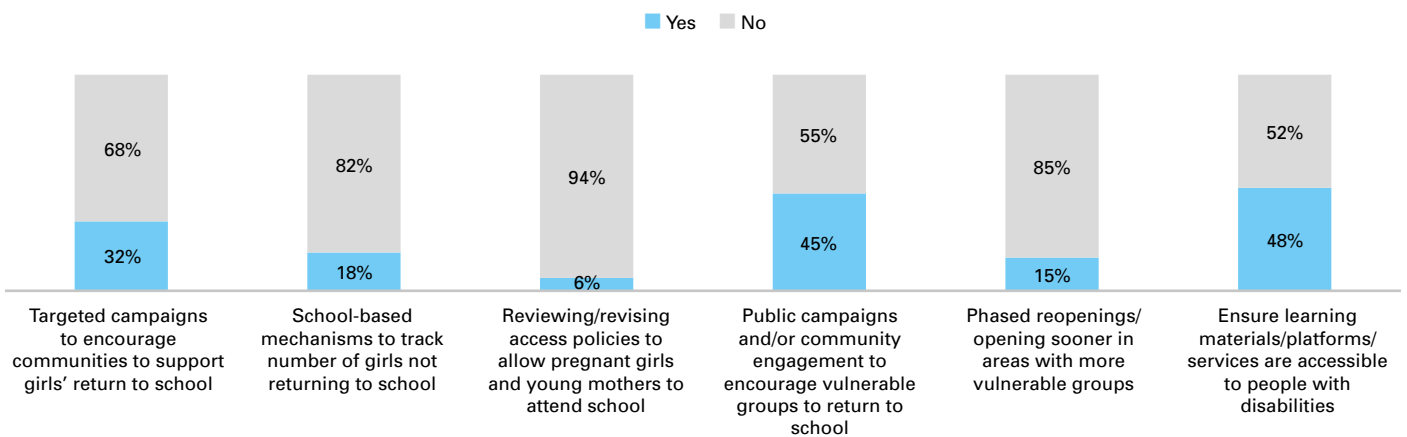
Box 4: Actively seeking and supporting children to fight school exclusion in Brazil

Busca Activa Escola or School Active Search is a free platform to support municipal governments in the identification, registration and monitoring of children and youth who are out-of-school or at risk of dropping out. Since its introduction in 2017, over 3,000 municipalities (out of 5,570) in Brazil have joined the initiative.

The platform brings together municipal representatives from the education, health, social assistance and planning sectors. Each area has a specific role. For example, community agents actively search for children and youth who are out of school and send alerts, institutional supervisors make necessary referrals to ensure enrolment and retention in school, and technical verifiers visit families to understand the reasons for school exclusion and analyse supports needed. The entire process is managed online but accessible on a range of devices including by SMS and printed forms for community agents and verifying technicians without access to mobile devices.

With schools still closed across the country, School Active Search activities are continuing remotely, including continued data entry and municipal community discussions taking place on WhatsApp. The State of Sergipe, for example, recently held an online discussion on the role of School Active Search during and after the pandemic.

Figure 4: Countries' inclusion of supports to girls and vulnerable groups in school reopening plans



(Source: UNICEF Education Tracker Survey, 22 June 2020)

WHAT'S NEXT: FROM CRISIS RESPONSE TO LONG-TERM RESILIENCE

This brief presents a number of key education initiatives that are, and could be, implemented to support the participation and learning of children as they return to school. These supports will also strengthen the inclusiveness and resilience of education systems in the long run. To better reopen, education systems should leverage investments in new ways of learning during

the crisis for long-term gains. Some countries, for example, intend to continue remote learning offerings as schools reopen and invest more in them to prepare for future crises. Furthermore, around the world children, families, and teachers have had to put into practice the idea that learning is not limited to the classroom. As schools reopen, these experiences can continue to inform the way teachers use digital tools to enrich both in and out-of-classroom learning, and how parents can support their children's learning at home.

Some countries have recognized that the ability to assess what children have (or have not) learned as they return to school and provide the support they need to catch up accordingly, should already be part of a responsive education system meeting students where they presently are. For other countries, the current crisis is the opportunity to build this system. Similarly, the ability to identify students not attending school and re-engage them will be crucial to recovery from the current crisis and can also pay dividends beyond. The systems and supports introduced to bring in these former students could – and should – also be used to re-engage those who left school prior to the crisis, or those who never attended.

REFERENCES

- Akresh, R., et al., 'First and Second Generation Impact of the Biafran War', National Bureau of Economic Research Working Paper No. 23721, (2017). <www.nber.org/papers/w23721.pdf>
- Andrabi, T., Daniels, B., Das, J., 'Human Capital Accumulation and Disasters: Evidence from the Pakistan earthquake of 2005', RISE Working Paper Series, 20/039, (2020). <doi.org/10.35489/BSG-RISEWP_2020/039>
- Azevedo, JP, et. al., 'Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A set of global estimates', World Bank, conference edition, June 2020. <documents.worldbank.org/curated/en/885601592484683223/pdf/Simulating-the-Potential-Impacts-of-COVID-19-School-Closures-on-Schooling-and-Learning-Outcomes-A-Set-of-Global-Estimates.pdf>
- Dreesen, T., et al., *Promising Practices for Equitable Remote Learning: Emerging lessons from COVID-19 education responses in 127 countries*, UNICEF Innocenti Research Brief, Florence, 2020-10. <www.unicef-irc.org/publications/pdf/IRB%202020-10.pdf>
- Hallgarten, J., *Evidence on efforts to mitigate the negative educational impact of past disease outbreaks*, K4D Helpdesk Report 793, Education Development Trust, Reading, UK, 2020. <opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/15202/793_mitigating_education_effects_of_disease_outbreaks.pdf?sequence=6>
- Havari, E., and Peracchi, F., 'Growing up in wartime: Evidence from the era of two world wars', Center for Micro-Economic Policy Research, George Mason University, 2015, pp. 1-55, Fairfax City, VA. <cmepr.gmu.edu/wp-content/uploads/2014/01/havari-and-peracchi-wartime.pdf>
- Ichino, A., and Winter-Ebmer, R. (2004), 'The Long-Run Educational Cost of World War II', *Journal of Labor Economics*, vol. 22, no. 1., 2004, pp. 57 – 86. <uh.edu/~adkugler/Ichino&Winter-Ebmer.pdf>
- Kaffenberger, M., 'Modelling the Long-Run Learning Impact of COVID-19 Learning Shock: Actions to (more than) mitigate loss', RISE Insight Series, 2020/17, 2020. <doi.org/10.35489/BSG-RISE-RI_2020/017>
- Ludvigsson, J., 'Children are Unlikely to be the Main Drivers of the COVID-19 Pandemic: A systematic review', *Acta Paediatrica*, Vol. 109, pp. 1525 – 1530, 2020. <onlinelibrary.wiley.com/doi/epdf/10.1111/apa.15371>
- Meyers, K., and Thomasson, M., 'Paralyzed by Panic: Measuring the effect of school closures during the 1916 polio pandemic on educational attainment', National Bureau of Economic Research, Working Paper, No. 23890, 2017. <www.nber.org/papers/w23890.pdf>
- Myers, J. and Pinnock, H., *Guide to the Accelerated Education Principles*, Accelerated Education Working Group, UNHCR, Revised October 2017. <s3.amazonaws.com/inee-assets/resources/AEWG_Accelerated_Education_Guide_to_the_Principles-screen.pdf>
- Rajmil, L., 'Role of children in the transmission of the COVID-19 pandemic: A rapid scoping review', *BMJ Paediatrics Open*, Vol. 4, 2020, pp. 1-6. <<https://bmjpaedsopen.bmj.com/content/bmjpo/4/1/e000722.full.pdf>>
- Republic of the Gambia, Ministry of Basic and Secondary Education, *Education Sector Coronavirus (COVID-19) Response Plan*, 2020. <planipolis.iiep.unesco.org/sites/planipolis/files/ressources/gambia_education_sector_covid-19_strategy.pdf>
- UNESCO, UNICEF, The World Bank, WFP, *Framework for Reopening Schools*, April 2020. <www.unicef.org/media/68366/file/Framework-for-reopening-schools-2020.pdf>
- UNICEF and UIS, 'Monitoring Education Participation: Framework for monitoring children and adolescents who are out of school or at risk of dropping out', UNICEF Regional Office for Central and Eastern Europe and the Commonwealth of Independent States, Geneva, Vol. 1, 2016. <<http://uis.unesco.org/sites/default/files/documents/monitoring-education-participation.pdf>>
- Warren, H., and Wagner, E., 'Save Our Education: Protect every child's right to learn in the COVID-19 response and recovery', Save the Children, London, 2020. <resourcecentre.savethechildren.net/node/17871/pdf/save_our_education_0.pdf>
- WHO, 'Considerations for School-Related Public Health Measures in the Context of COVID-19', 10 May 2020. <www.who.int/publications/i/item/considerations-for-school-related-public-health-measures-in-the-context-of-covid-19>