

# REMOTE LEARNING DURING THE GLOBAL SCHOOL LOCKDOWN: MULTI-COUNTRY LESSONS



WORLD BANK GROUP



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## Executive Summary

The COVID-19 pandemic is severely affecting education systems across the world. While schools are closed (or partially closed), simulations across different countries suggest that learning gains previously achieved by students will [be partly lost](#). Children from disadvantaged backgrounds have suffered these shocks even more and can be at a higher risk of dropping out of school. To better understand the effects of these shocks, as well as to analyze the perceived effectiveness of remote learning solutions,<sup>1</sup> the World Bank Group's Technology and Innovation in Education (EdTech) team conducted a qualitative exploratory study synthesizing the main national education actions deployed by a group of selected countries to mitigate learning losses. This report is guided by the principles developed by the World Bank in the report, [Reimagining Human Connections](#), and the framework of the report [The COVID-19 Pandemic: Shocks to Education and Policy Responses](#).

This study includes three main sections that have been organized in a chronological order within this report: the first one, "[What can we learn from education emergency responses in low- and middle-income countries?](#)" analyzes the emergency education responses to the COVID-19 pandemic of over 120 governments from April until May, 2020. The second section, "Is remote learning perceived as effective? An in-depth analysis across five countries" discusses the

main national education responses deployed by Brazil, Kenya, Nigeria, Sierra Leone, and Peru, as well as the perceived effectiveness of these strategies conducted from May until August, 2020. The third section, "What works with remote and remedial strategies? an analysis across 13 countries" builds on key lessons learned during the analysis of the five multi-country experiences and presents global trends of remote learning implemented during school closures and the actions governments adopted to get ready for remedial learning, conducted from August until December 2020. The countries prioritized for the third section are [IDA borrowing countries](#) of which six are low-income countries: Afghanistan, Haiti, Malawi, Mozambique, Niger, and Rwanda; and five are lower-middle-income countries: Cambodia, Cameroon, Kenya, Nepal, and Pakistan. Additionally, two high-income countries, Estonia and Uruguay, have been included in the report.<sup>2</sup>

The overall study follows a *qualitative research approach* with the motivation to understand the perceptions of education experts regarding the effectiveness of remote and remedial learning programs implemented in their respective countries. When referencing the term effectiveness, this study follows a holistic approach by not only associating effectiveness to learning outcomes, but also to the effect of remote education programs and policies to increase student engagement, increase coverage and usage, and reduce implementation costs and time. As this study seeks to answer exploratory questions, a qualitative study is best suited for this research context because it

allows understanding of the perceptions that participants (education experts in each of the selected countries) attach to different categories related to remote and remedial learning, such as the effectiveness of delivery systems and the adjustment of the curriculum, among other categories detailed below. This research approach also provided an in-depth understanding of the context in which the research took place ([see box 1](#)).

The main trends across this report are discussed below and have been grouped in five themes: (1) Adopt **delivery systems** with an inclusive approach; (2) **Adjust the curriculum** to ensure effectiveness; (3) Secure sustained **teacher training** and in-service support; (4) Leverage institutional capacities while ensuring **sustained monitoring and evaluation**; and (5) Consolidate national strategies to **remediate learning** losses.



<sup>1</sup> In the context of school closures, the most common remote learning solutions or delivery systems were based on video, audio/radio, computer technologies, and/or printed material.

<sup>2</sup> Economies are currently divided into four income groupings: low, lower-middle, upper-middle, and high. Income is measured using gross national income (GNI) per capita, in U.S. dollars, converted from local currency using the World Bank Atlas method.

## 1. Adopt delivery systems with an inclusive approach

**Multimodal delivery systems are effective to increase coverage but need to be complemented with a clear communication strategy and contextualized according to the local needs.**

For instance, in the state of São Paulo in Brazil, the multimodal remote learning program reached a high percentage of the student population, as the strategy was complemented with a proactive communication campaign that included (1) ads on TV and social media to keep teachers and families informed about learning activities, (2) a task force that contacted families of students who were out of reach, and (3) daily conversations between the State Education Secretary and teachers.

While a clear communication strategy is a critical first step to let students and caregivers know the program, equally important is **adjusting delivery systems to local needs to ensure an effective use by the target population**. Access to the devices needed for remote learning, internet connectivity, prior experience with the delivery system, teacher preparedness and capacity, and quality of contents are among the contextual factors that need to be evaluated when designing and deploying remote education programs. Cambodia's government understood the country's infrastructure limitations and with support from the Global Partnership for Education (GPE) provided [school](#)

[block grants](#) to procure basic equipment to support continuous learning, including paper-based learning materials for the most vulnerable students. This large-scale paper-based strategy was complemented with short message services (SMS) and Telegram, a free instant messaging software, as the mobile penetration was high both in urban and rural areas. Sierra Leone's Teaching Service Commission (TSC) followed a similar approach by implementing a radio learning program as access to these devices were widely available. Moreover, the TSC had [prior experience with radio learning programs](#) that were implemented during the Ebola crisis back in 2015, and the Ministry Radio Broadcast House had invested in infrastructure required for this program, such as a radio studio [that was built with support from the United Nations Children's Fund \(UNICEF\)](#).

Equally important was to implement **delivery systems following a Universal Design for Learning (UDL) approach to effectively reach a diverse student population**. As students within a classroom have diverse needs, the UDL approach recognized that delivery systems should follow a design that took into consideration students' needs. In Peru, TV learning sessions were supported with [sign language](#), the web was adapted for students with special needs, and the radio content was delivered in [nine native languages](#). Likewise, in Mozambique, TV programs were supported with sign language, self-study materials were distributed to reach vulnerable children, and radio

learning programs had content both in Portuguese and other local languages (IPS News Agency, 2020).



**ADJUSTING DELIVERY SYSTEMS TO LOCAL NEEDS TO ENSURE AN EFFECTIVE USE BY THE TARGET POPULATION**

## **2. Adjust the curriculum to ensure effectiveness**

### **Adjustments to the curriculum and content curation are effective to reduce costs and use time more efficiently.**

Especially for countries that were experiencing distance education for the first time, lacked a repository of contents, or had limited TV or radio airtime, content curation and curriculum adjustments were necessary. For example, in Nepal, education experts perceived that adjusting the curriculum was a highly effective strategy to reduce costs when implementing remote learning programs; in fact, Nepal's Ministry of Education worked in collaboration with the Curriculum Development Center and nonprofit organizations to adjust the curriculum to just focus on core subjects and foundational knowledge for preprimary and primary schools ([UNESCO, 2020a](#)). In Afghanistan, education experts perceived that selecting core subjects, such as mathematics and science and prioritizing foundational contents within those subjects effectively reduced implementation time. Finally, while education experts in some countries perceived that curriculum adjustments and content curation were effective strategies to either reduce costs or use time more efficiently, other countries experienced both benefits. For example, [Pakistan's Ministry of Federal Education](#) selected English, mathematics, and sciences as [core subjects to be prioritized through the TeleSchool](#) remote learning program, and according to education experts in

the country, this strategy enabled the education departments to reduce costs, be more responsive, and ensure that the content was rolled out quicker. Thus, investing time in researching content that already existed and [curating it around the curriculum's learning objectives](#) were perceived as more effective strategies than creating new content that takes time and costs money.

**Curriculum adjustments should not only focus on academic competencies that are examinable but also on competencies that are relevant in the current situation of the pandemic.** Policy makers have to consider prioritizing nonacademic competencies to support students coping with challenging situations they might be facing at home due to the COVID-19 pandemic. For example, self-directed learning, care for oneself and others, and social-emotional skills are among those noncognitive competencies that are critical to ensure students' socio-emotional development and well-being. Countries that have considered these competencies have seen students [gain autonomy and discover new ways of learning](#). For example, in [Estonia, a study conducted by the Independent Polling System of Society \(IPSOS\)](#) and the World Childhood Foundation has shown that approximately 90 percent of students were satisfied with remote learning, and they were happier, healthier, and enjoying remote independent learning during the period of school closures due to higher levels of self-directed learning.



**ADJUSTMENTS TO THE CURRICULUM AND CONTENT CURATION ARE EFFECTIVE TO REDUCE COSTS AND USE TIME MORE EFFICIENTLY**

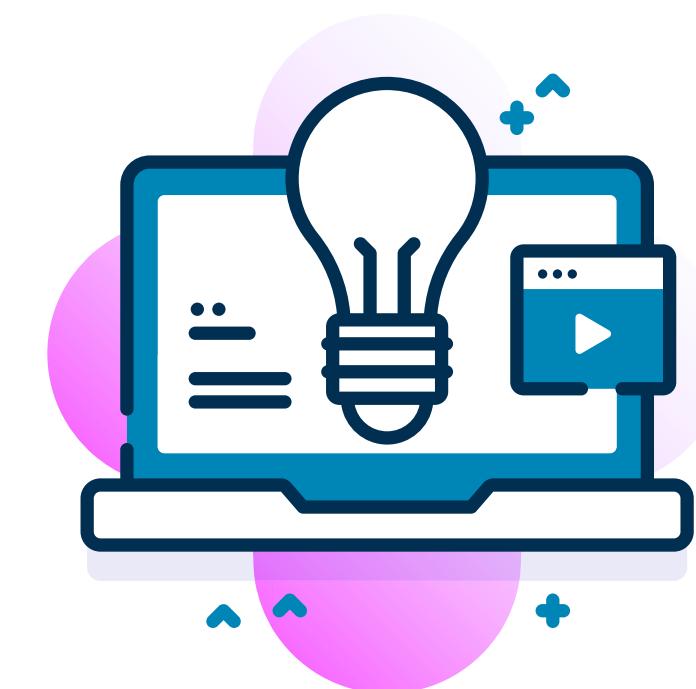
### **3. Secure sustained teacher training and in-service support**

**Sustained professional development through preservice and in-service teacher training, as well as remote coaching programs, are effective to equip teachers with the tools required for remote and remedial teaching-learning.** The state of Edo in Nigeria trained all [11,000 primary school teachers](#) who were part of the Edo-BEST program in the past two years to effectively use digital technologies in the classroom. Uruguay's [Institute for in-Service Teacher Training](#) (IFS—Spanish acronym) took a coaching program online that provided pedagogical support to teachers prior to COVID-19. Moreover, [Uruguayan teachers could access a comprehensive toolkit of teaching resources](#) such as discussion forums, virtual training, and guidelines for remote teaching through CREA, a Learning Management System that teachers had been using for several years. Over [90 percent of Uruguayans were satisfied or very satisfied](#) with the remote training received during the pandemic. Thus, prior training and coaching worked to pivot toward remote teaching-learning during COVID-19.

While preservice and in-service teacher training were relevant, during the pandemic, **remote education guidelines have helped to clarify the enhanced role of teachers, but an excessive administrative workload may generate burnout and reduce pedagogical effectiveness.** In specific cases, this

study found that the pandemic evidenced the need to recalibrate how teachers divide their time between direct teaching and an administrative workload, because too much attention was given to the latter. For instance, in some of the selected countries of this study, teachers were asked to complete frequent administrative reports of their lesson plans and the results of students' progress; thus, well-intentioned teacher support systems resulted in generating emotional and physical exhaustion. For example, in Peru, according to a [survey conducted by the Ministry of Education's Monitoring & Evaluation Unit](#), 40 percent of teachers said that they were performing a very hard job, as they had to submit daily [reports of their remote work with students](#). Estonia's Ministry of Education officials raised the concern that teachers' time allocation has changed, and distance learning affected well-being and burnout rates due to enormous pressures of dealing with COVID-19. In Brazil, according to a [survey conducted by Instituto Peninsula](#), 83 percent of teachers did not consider themselves being prepared to teach remotely, 67 percent were anxious and 38 percent felt tired, while less than 10 percent were happy or satisfied. A similar situation applied in other countries, such as England, where [headteacher job satisfaction has fallen](#) because they were worried about school budgets, keeping staff and students safe from COVID-19, and finding cover for sick or self-isolating teachers. In Chile and other Latin American countries, the [quality of life perception among female teachers was affected](#) due to the

COVID-19 confinement, and several studies reported that female teachers in the region did more hours of housework than male teachers. Countries took note of these problems and redesigned the reporting system to reduce the "burnout" problem. Efforts to free teachers' time from administrative tasks were critical in a time when students needed not only support to catch up but to deal with socio-emotional issues.



**REMOTE EDUCATION  
GUIDELINES HAVE HELPED  
TO CLARIFY THE ENHANCED  
ROLE OF TEACHERS**

#### **4. Leverage institutional capacities while ensuring sustained monitoring and evaluation**

**Prior experience with distance learning programs has allowed education systems to rapidly implement their existing solutions as a response to COVID-19.** Some of the countries that were part of this study pivoted toward remote learning because their governments had been building technical and digital capacity for several years. For example, Sierra Leone leveraged an existing radio learning program and [launched it on April 6, 2020, within less than one week](#) after schools were closed in the country. Similarly, Uruguay's Ceibal at-home program was [launched immediately after school closures](#) were announced because it could draw on the pre-existing systematic deployment of Plan Ceibal's digital resources. Malawi leveraged an existing Interactive Radio Instruction program, which was adapted to the COVID-19 context, and the [lessons were then more child-centered and clearly structured](#) (Gondwe, 2020). Policy makers from the countries analyzed in this study showed interest in leveraging the experience gained prior to and during the pandemic to ensure learning continuity as schools started to reopen under a blended approach. This work entailed being aware of the context, strengthening the content repository and infrastructure, understanding the costs, and securing funding for setup and maintenance.

While leveraging institutional capacities gained prior to and during the pandemic was critical to ensure learning continuity, equally important were to **continually monitoring and evaluating education processes and outcomes to understand if the whole remote education strategy is effective to reach all students, sustain learning engagement, and increase learning outcomes.** Most of the selected countries for this study focused on the supply side by designing and implementing remote learning programs and monitoring processes, while fewer focused on monitoring the demand side, such as the usage of delivery systems for education, the engagement of students while studying remotely, and student learning. Since April 2020, Peru's Ministry of Education started [regularly supervising the adoption of the national remote learning program](#), students' satisfaction with remote learning, and the proportion of teachers providing constant feedback to students, among other key indicators. In a smaller set of countries, schools and teachers started conducting formative and summative assessments. For example, in Estonia, as of June 2020, 71 percent of students [used online formative assessments](#) and 64 percent received feedback from teachers. As countries innovated in their monitoring and assessment solutions, it was again critical to consolidate institutional capacities to process and use the data gathered for guiding decision-making and make adjustments.



**CONTINUALLY MONITORING AND EVALUATING EDUCATION PROCESSES AND OUTCOMES TO UNDERSTAND IF THE WHOLE REMOTE EDUCATION STRATEGY IS EFFECTIVE TO REACH ALL STUDENTS**

## 5. Consolidate national strategies to remediate learning losses

Several countries planned to or **implemented extra support programs to remediate learning losses as schools started reopening**. Some governments took an “ex post” approach toward remedial learning by postponing these programs until after schools reopened and students were assessed to identify the magnitude of the learning loss problem. For example, Rwanda’s government designed a national diagnostic assessment for primary and lower secondary schools to identify students with low scores for remedial learning. After assessments took place, a *remedial learning* program targeted students with a poorer rate of academic progress and [those at risk of repetition or dropout](#). In contrast, other countries followed an “ex ante” approach in which first students were supported to catchup and avoid dropping out by introducing remedial learning or accelerated learning programs, under the assumption that a large group of students were affected by school closures. For example, Mozambique’s government adjusted the school calendar to first focus on [catch-up strategies for students who were falling behind](#), especially for grades 7, 10, and 12, as students in these grades had to sit for examinations.

The specific **strategies used in the selected countries to support students in catching up varied considerably**. This study identifies four main packages to remediate learning losses. First, a group

of countries linked its *curriculum adjustment* efforts with the remedial programs implemented. That is, adjustments to the curriculum were not only considered for remote learning during school closures, but also for remedial learning as schools start reopening through the prioritization of core subjects and selection of foundational competencies and contents. Second, governments *adjusted the schedules* to remediate learning losses by extending class time at the end of the day or during weekends and extending the calendar year by introducing summer classes. Third, the *learning format* followed to remediate learning losses varied by country. While some education systems reopened schools fully to conduct such programs in classrooms with reduced class sizes, others implemented remedial programs through a blended learning approach. Fourth, countries implemented *targeted catch-up programs* to support students. While some countries implemented remedial programs that targeted students with a poorer rate of academic progress and were generally designed to give them the individual attention needed, others implemented accelerated learning programs designed to be completed quickly through short, intensive, and rigorous phases of learning.

Therefore, the COVID-19 pandemic presents *unique opportunities to innovate the traditional school model*. Countries should seize these [opportunities to build more inclusive, efficient, and resilient education systems](#), but avoid replicating the failures of pre-COVID-19 education systems. This crisis revealed

that governments can rethink how to simplify the curriculum, adjust high-stakes examinations, and invest in building effective data gathering systems to monitor processes and learning outcomes.



**STRATEGIES USED IN THE SELECTED COUNTRIES TO SUPPORT STUDENTS IN CATCHING UP VARIED CONSIDERABLY**

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2.

## WHAT CAN WE LEARN FROM EDUCATION EMERGENCY RESPONSES IN LMICs?

## 2. What can we learn from education emergency responses in LMICs?

**School closures and the economic downturn severely affected education systems. While schools were closed, learning gains that students previously achieved were partially lost.** Children from disadvantaged backgrounds suffered these shocks even more, and were at a higher risk of dropping out of school ([World Bank 2020a](#)). However, several LMICs reacted quickly to mitigate these shocks to their respective education systems. The first section of this report analyzes governments' education responses to the COVID-19 pandemic from April until May 2020.<sup>3</sup> As of this date, most countries were focused on coping with the emergency by designing and implementing remote learning programs aimed at reaching all students and teachers, but less on monitoring progress and designing programs for remedial learning (see further information in table 1).

**Table 1: Education Emergency Responses in Five Main Themes**

Delivery systems	Curriculum adjustments	Teacher support	Monitoring and evaluation	Remedial programs
<i>Most countries implemented multimodal learning solutions aimed at reaching all students, but the type of systems used varied across regions</i>	<i>It was not a priority to adjust the curriculum at the beginning of the pandemic, but remote education programs were aligned to the curriculum</i>	<i>Governments and third-sector organizations implemented support systems and training programs for teachers to help them adapt to this new normal</i>	<i>Few countries demonstrated plans to conduct diagnostic evaluations or monitor progress</i>	<i>By assessing learning loss, systems should develop remedial programs to prevent an exacerbation of the achievement gap</i>
<b>Zambia</b> <i>Strengthened its radio learning program and distributed solar radios, leveraging the program “Learning at Taonga Market”</i>	<i>Note: At the time this section of the study was conducted, no data on curriculum adjustments were gathered</i>	<b>Costa Rica</b> <i>Created a digital toolbox to support teachers with pedagogical resources, such as a guide for autonomous work</i>	<b>Nagaland (India)</b> <i>Developed an online evaluation portal accessible through any device, even in 2G internet connections</i>	<b>Brazil</b> <i>“Acelera” remedial program (pre-COVID-19) identified students who were lagging and supported them to gain the basic skills to pass</i>

Source: Own elaboration with data from secondary sources obtained from the following links [Zambia](#), [Costa Rica](#), [India](#) and [Brazil](#).

<sup>3</sup> This disclaimer informs readers that the opinions expressed in the text belong to the author, and not necessarily to the World Bank. The information contained in this first section of the study was collected between April and May, 2020, and given the space and time constraints, it does not guarantee completeness of country responses to COVID-19.

### **Box 1: Conceptual Approach**

This study starts with the section “**What can we learn from education emergency responses in low- and middle-income countries?**” that is based on a general review of secondary sources. Over 40 research studies, policy documents, articles, and datasets were reviewed to provide a general overview of the emergency education responses of over 120 governments from April until May 2020. Although this first section does not provide an in-depth understanding of the context of each of the countries analyzed, it was conducted early on to provide a broad overview of how countries in different regions (Africa and the Middle East, Asia and Eastern Europe, and Latin America and the Caribbean) responded to the emergency.

The second section “**Is remote learning perceived as effective? An in-depth analysis across five countries**” provides a comprehensive understanding of education responses to COVID-19 through the voices and perceptions of key education experts in each of the selected countries. A diverse set of countries that were implementing innovative approaches to respond to the COVID-19 pandemic, from the three regions listed in the first section (Africa and the Middle East, Asia and Eastern Europe, and Latin America and the Caribbean), were purposively invited to participate in this first study. Brazil, Kenya, Nigeria, Peru, and Sierra Leone agreed to be part of this section of the study. For this report, over 60 semi-structured interviews were conducted between May and July 2020 with key informants, such as the Ministry of Education policy makers, teacher union officers, and leaders of nongovernmental organizations (NGOs), among other experts. As a complement, over 70 documents and online resources of the five selected countries were reviewed for this section of the report.

For the third section, “**What works with remote and remedial strategies? An analysis across 13 countries**,” the data collection process followed a multi-method approach that includes semi-structured surveys and interviews with at least three profiles of education experts: an EdTech policy maker, the head of a local education unit or an NGO, and a researcher or academic in the field of education. In total, over 70 surveys and interviews were conducted for this third section of the report between September and November 2020. The country selection criteria had an extensive focus on low-income and lower-middle-income countries from the three regions listed in the first section (Africa and the Middle East, Asia and Eastern Europe, and Latin America and the Caribbean). Additionally, as the focus of the study was also to learn from countries with vast remote learning experience, two high-income countries were included in the report. The countries prioritized (in this third section) are all part of the International Development Association (IDA), of which six were low-income countries, namely Afghanistan, Haiti, Malawi, Mozambique, Niger, and Rwanda; and five were lower-middle-income countries, namely Cambodia, Cameroon, Kenya, Nepal, and Pakistan. Also, two high-income countries, Estonia and Uruguay, were included in the report because both governments have been building technical capacity for remote teaching-learning for several years.

This educational research aims to provide rich descriptions of education experts in the selected countries in order to have a broader understanding of education responses to COVID-19 and the perceived effectiveness of remote and remedial programs implemented. The results of this study not only apply to the initial study context, but findings from the context in which this research are based can be “transferrable” to other contexts that are congruent with the context of the present case study.

## 2.1 Lessons to build back better

Coping and managing continuity policies are not enough. Education systems have to develop policies for improvement and acceleration of learning. Ministries, local authorities, principals, and teachers should seize the opportunity provided by COVID-19's emergency response to build stronger educational systems ([World Bank 2020a](#)).

A key priority is to **improve and scale educational initiatives that proved to be effective and integrate them into the regular education system to ensure they are maintained over time** ([World Bank 2020a](#)). Policy makers can use this time to analyze programs that were effective prior to or during COVID-19. For example, Kenya's [Tusome early grade reading activity program](#) has been operating since 2014 by providing training and coaching to teachers, literacy textbooks to each student, and structured teacher guides to help execute lessons that were aligned to students' textbooks ([Wilichowski et al. 2020](#)). The program proved to be successful to improve learning outcomes and was scaled to reach 7 million children across Kenya ([RTI International 2020](#)). Thus, the COVID-19 pandemic presented an opportunity for LMICs to learn from programs such as Tusome when education policy makers redesigned their strategies for learning recovery as schools reopened ([Wilichowski et al. 2020](#)).

At the same time, it is crucial to learn from practices that did not work to either adapt them or avoid

**replicating mistakes of the past.** For example, in Peru, the well-intentioned teacher support system designed by the Ministry of Education as part of the COVID-19 education response ended up generating burnout. When Peru started implementing "[Aprendo en Casa](#)," a multimodal remote learning strategy, teachers received [guidelines](#) that stressed the importance of observing learning sessions through the channel of their preference, communicating with students and their families, and subscribing to massive online learning courses through the national website for teacher training, among other activities ([Peru21, 2020](#)). In addition to these guidelines, Regional Directions of Education and Local Education Units designed complementary guidelines to what the Ministry of Education had already developed. For instance, in the region of Lambayeque, local education units requested teachers complete daily reports of the work they were doing with students ([Diario Correo 2020](#)). This support system generated teacher burnout and discontent. After listening to teachers' feedback, Peru's Ministry of Education published a new [resolution](#) to align guidelines by these three institutions and reduced teachers' administrative workload. Peru's government was open to receiving feedback and adapted quickly by redesigning the support system that was provided for teachers.

Care must be taken that administrative requirements of teachers, such as daily filling of reports, do not hinder their ability to be pedagogically effective. Equally important, education policy makers should **consider how the COVID-19 pandemic can be used as an**

**opportunity to improve teachers' pedagogical and digital skills before they return to schools** ([Wilichowski and Cobo 2020](#)). Teachers' ability to instruct remotely requires a combination of digital and pedagogical skills, and, as return to schools will occur gradually, teachers have to learn how to combine multiple modes of delivery, such as online, offline, and blended modes, to effectively facilitate learning in these new scenarios ([Wilichowski and Cobo 2020](#)). Furthermore, many countries have designed multimodal remote learning programs to be sustainable over time, as a complementary resource for on-site classroom-based education; thus, teachers' ability to combine digital and pedagogical skills will be useful to build back better educational systems ([Ministère de l'Éducation Nationale et de la Jeunesse, 2020](#)). School systems can learn from other countries that have developed teacher training programs and virtual support systems to follow up with teachers in the process of improving their digital pedagogical competencies (see examples in table 2).

**Table 2: Supporting Teachers in the COVID-19 Pandemic and Beyond**

Initiative	Description
<a href="#">Lebanon Teacher Training</a>	Virtual teacher coaching and training in Microsoft Teams.
<a href="#">Education Development Center</a>	Interactive toolkit for radio instruction during an emergency crisis.

Source: Own elaboration with data from secondary sources obtained from the following links [Lebanon](#) and [Education Development Center](#).

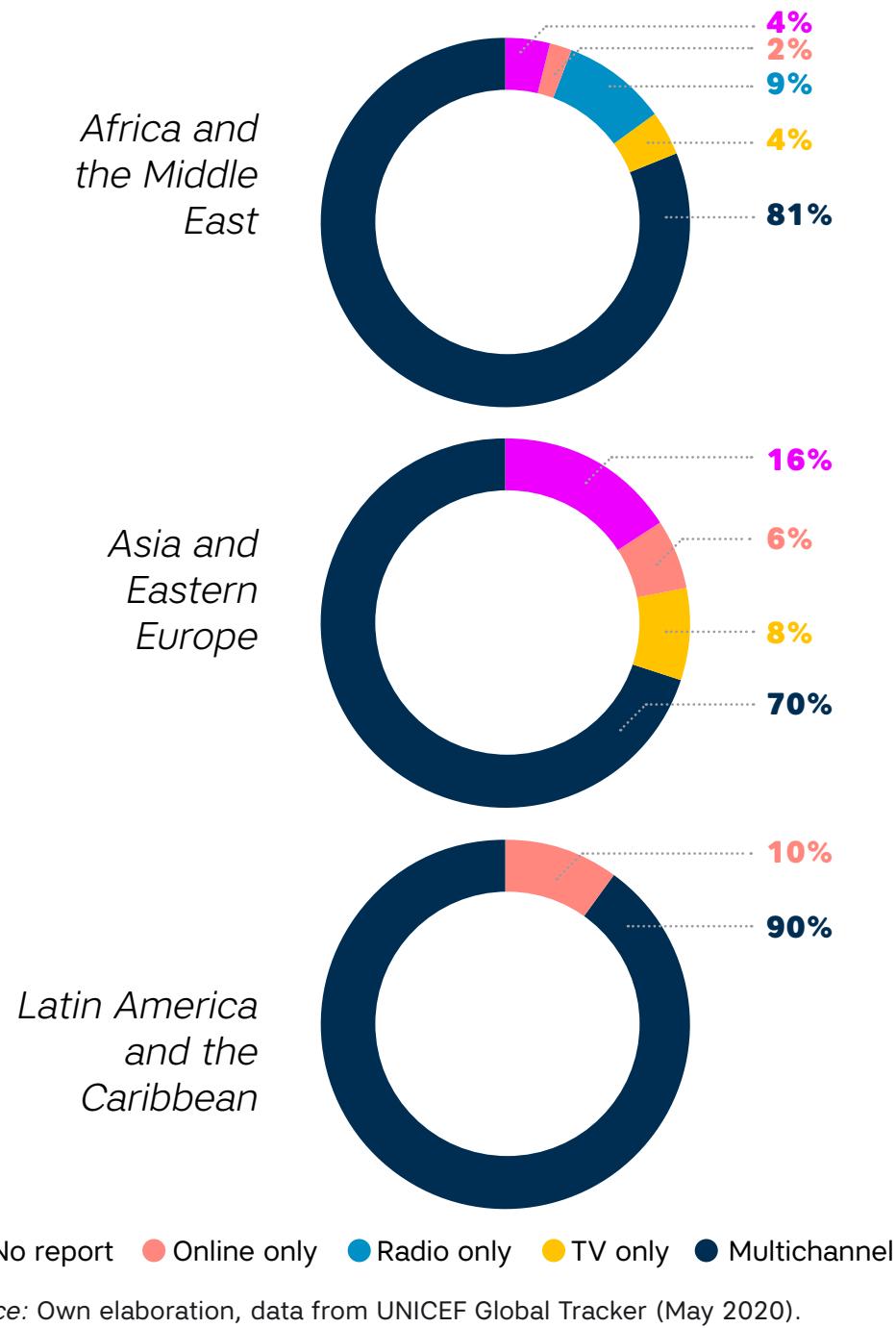
## 2.2 Initial policy takeaways: education emergency responses to COVID-19 in LMICs

Several LMICs responded quickly to the COVID-19 pandemic with remote learning strategies to mitigate learning losses. Generally, there was an alignment between the guidelines for coping policies provided by ministries of education and the implementation of such policies within countries, but the ways in which those policies were executed varied across countries. **While most countries designed and implemented multimodal learning solutions as an emergency response aimed at reaching all students, the types of systems used varied across regions.** TV, online platforms, and mobile applications were the most used channels in Asia and Eastern Europe, but radio programs were less prevalent in Central Asia and Eastern Europe in comparison to Africa and the Middle East, and Latin America and the Caribbean. More specifically, as of May 2020, while only 21 percent of countries in Central Asia and Eastern Europe implemented radio learning programs, 70 percent of countries in Latin America and the Caribbean did so.

**Governments and third-sector organizations implemented support systems and emergency training programs for teachers to help them adapt to this new normal.** Costa Rica created a [digital toolbox](#) to support teachers with pedagogical resources, such as a guide for autonomous work and

a content repository made especially for teachers. Uruguay leveraged a Learning Management System that the country had in place prior to COVID-19 to allow teachers to monitor students, as well as a content repository in which teachers could find high-quality educational content for their lesson plans. Nova Escola, a nonprofit organization in Brazil, partnered with Facebook to train more than 2 million teachers in digital and pedagogical skills through [short practical courses](#) aligned to [Brazil's National Curriculum](#) and provided certificates to teachers who complete them. The Varkey Foundation created “[Comunidad Atenea](#),” an online community of practice that allowed teachers in Latin America and the Caribbean to share educational resources. However, to ensure effectiveness, governments needed to transition from emergency teacher training initiatives to sustained professional development and remote coaching programs to equip teachers with the tools needed for remote teaching (Instituto Peninsula, 2020).

Share of countries supplying multimodal VS unimodal strategies for remote learning in



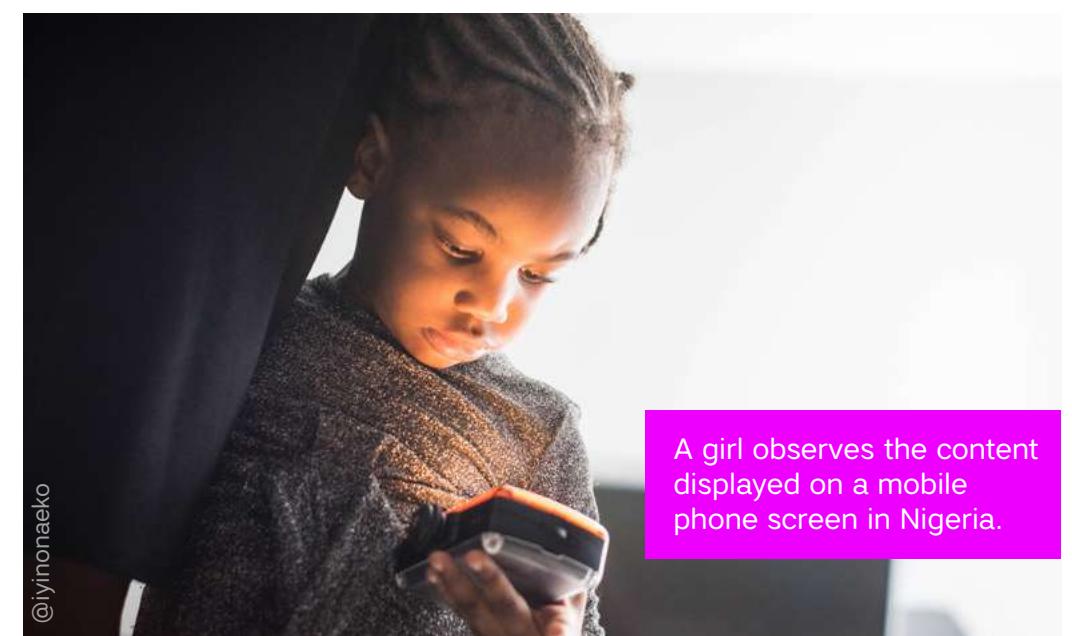
Less alignment was found between the guidance and implementation of managing continuity policies to ensure schools reopen safely. **Reopening schools was not an easy process; it required thoughtful planning to ensure schools were safe for re-enrollment, assessing learning levels, and organizing learning recovery.** Across all three regions under analysis, the majority of countries started planning how to reopen schools safely through communication campaigns and the provision of WASH kits; however, as of May 2020, less than half of the countries planned to monitor re-enrollment and outreach to children who did not return to school. Reopening needed to be complemented with clear communication campaigns that promoted re-enrollment to reduce the risk of student dropout and gave special focus to girls and students from marginalized communities. Moreover, while some countries such as [Brazil and Egypt demonstrated progress to conduct diagnostic evaluations](#) as schools reopened, as of May 2020, this report did not find similar plans across all countries under analysis. Focusing on formative assessments was critical to help teachers shape lessons to address gaps in student knowledge, as well as to help students understand where they were in relation to curriculum goals and what they needed to learn. To achieve these goals, teachers needed to adequately align formative assessments with specific learning objectives in the curriculum and units of study. Equally important, large-scale summative assessments were critical to generate

data about student learning, understand learning gains or losses during the remote learning period, and provide information for the national government decision-making process. Policy makers needed to ensure that summative assessments were designed considering students' local culture, religions, and the specific situations they faced during the pandemic (Gacilio et al. 2020).

To build back better education systems, it is key to learn from education initiatives implemented either prior or during the COVID-19 pandemic and scale those that have proven to be effective. In fact, beyond the emergency responses, **countries have strengthened remote learning practices that worked prior to COVID-19, as well as learned from those practices that did not work to avoid replicating mistakes of the past.** Governments such as [Zambia](#) and [Sierra Leone](#) responded to COVID-19 rapidly by leveraging existing remote learning solutions rather than developing new programs. Countries also needed to take the opportunity to adapt in-person learning that proved effective to this new remote learning scenario. Kenya's [Tusome Early Grade Reading Activity Program](#) was highly effective at providing training and coaching to teachers and literacy textbooks to improve student learning; such programs need to be adapted to a distance learning setting instead of being stopped. Other countries that had less experience with the implementation of remote learning programs were agile and responded to feedback in the process of planning

and executing remote education during the pandemic. For example, when [Peru's well-intentioned teacher support system](#) ended up generating burnout; the system was quickly redesigned to solve the problem.

Most of what was described in this compendium addressed the emergency plans and actions implemented by different low- and middle-income countries, as well as the channels deployed by education systems to support remote learning. However, the current challenge is to understand the effectiveness of those actions in regard to coverage, engagement, and learning outcomes. The following section of this report provides an in-depth multicountry analysis on the perceived effectiveness of distance learning programs in five selected countries: Brazil, Kenya, Nigeria, Peru, and Sierra Leone.



A girl observes the content displayed on a mobile phone screen in Nigeria.  
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### 3. IS REMOTE LEARNING PERCEIVED AS EFFECTIVE? AN IN-DEPTH ANALYSIS ACROSS FIVE COUNTRIES

### 3. Is Remote Learning Perceived as Effective? An In-depth Analysis across Five Countries<sup>4\*</sup>

As did many countries around the world, governments of Brazil, Kenya, Nigeria, Peru, and Sierra Leone reacted quickly to mitigate shocks to their education systems; this report analyzes the perceived effectiveness of these governments' education responses considering the five main themes of this study: (1) delivery systems; (2) curriculum adjustments; (3) teacher support, (4) monitoring and evaluation; and (5) remedial programs (see table 1 and 5 for further information).

**Table 3: Perceived Effectiveness of Remote Learning in Five Main Themes**

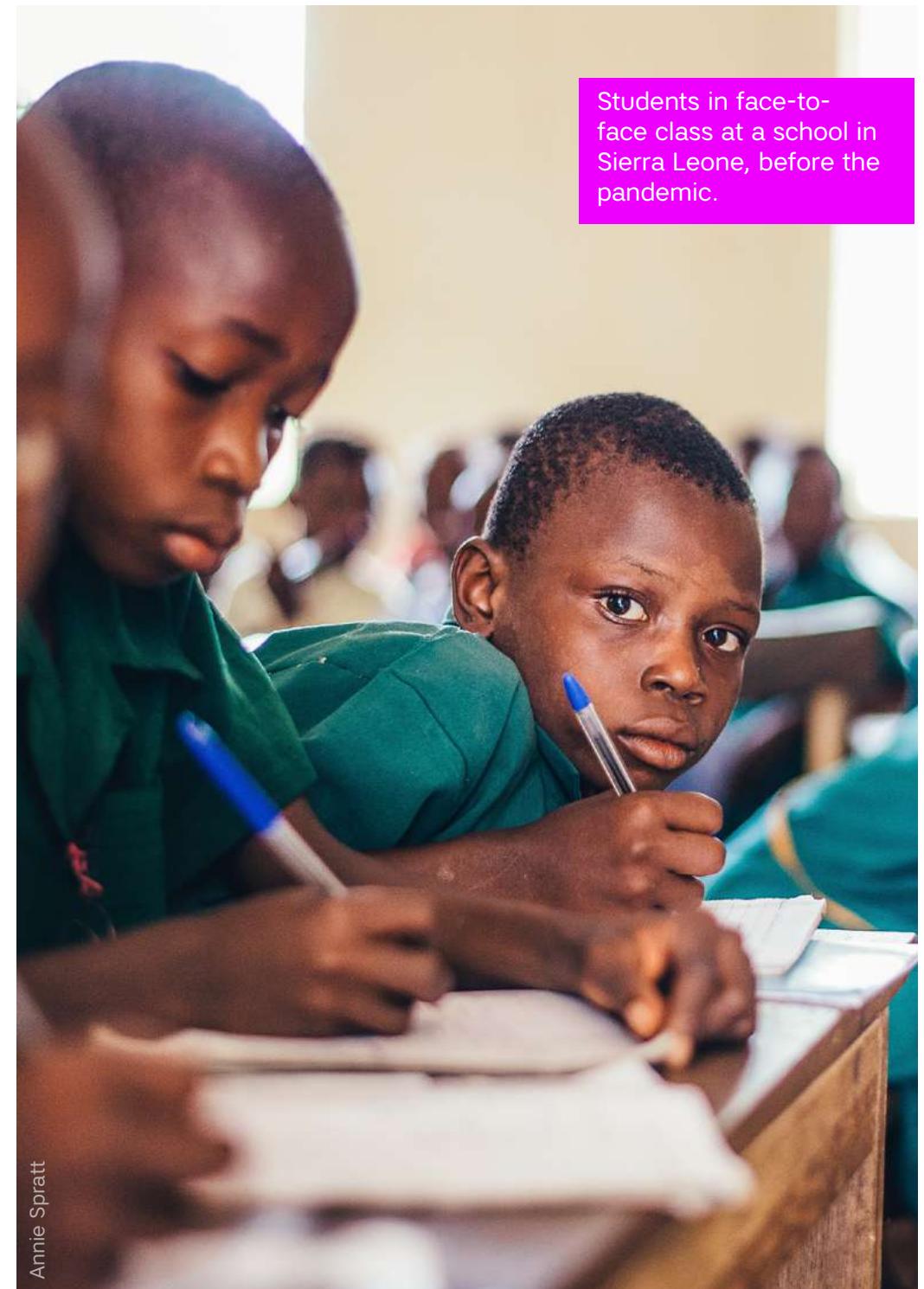
Delivery systems	Curriculum adjustments	Teacher support	Monitoring and evaluation	Remedial programs
<i>Multimodal delivery systems have been effective to increase coverage if the program is complemented with a communication strategy, teacher-student interaction, and inclusive content</i>	<i>Prioritization of curriculum and content curation has made the development process of the remote learning strategy more effective</i>	<i>Sustained professional development courses or remote coaching programs to strengthen teachers' pedagogical and digital skills</i>	<i>Most countries have monitored coverage, but need to track dimensions such as engagement, frequency of use, and learning progress</i>	<i>Note: At the time this section of the study was conducted, no data on remedial programs were gathered</i>
<b>Brazil (São Paulo)</b> Remote learning program complemented with a media campaign to keep teachers informed about learning activities, a task force that contacted families, and a mobile application for teacher-student interaction	<b>Sierra Leone</b> Prioritized subjects by systematically analyzing those in which students were not performing: English, mathematics, and science. Also, learning sessions were grouped by multigrades	<b>Nigeria (Edo)</b> Trained all 11,000 primary school teachers who were part of the Edo-BEST program to equip them with the tools to use digital technologies for teaching. An existing coaching program for teachers was adapted to be delivered remotely	<b>Peru</b> The monitoring and evaluation unit regularly supervised the adoption and effectiveness of the remote learning program with principals, teachers, and parents through phone calls once a month	<i>Note: For further information about remedial programs see tables 1 and 5.</i>

Source: Own elaboration with data from interviews with policymakers and education experts from the selected countries.

<sup>4\*</sup> This disclaimer informs readers that the opinions expressed in the text belong to the author, and not necessarily to the World Bank. The information contained in this document was collected between May and July, 2020, and given the space and time constraints, it does not guarantee completeness of the education systems of selected countries and their response to COVID-19.

**Table 4: Supporting Teachers in the COVID-19 Pandemic**

Country	Description	Guidelines	Coaching	Emergency training	Sustained training	Tools
Brazil (Minas Gerais)	States provided guidelines stressing the importance of keeping contact with students. Minas Gerais developed support tools such as a mobile app for teacher-student interaction for a limited amount of time after each class.	X		X		X
Kenya	Guidelines provided but teachers were not required to follow up with students. Training on the use of tools for virtual classrooms only reached 3,000 teachers.	X		X		
Nigeria (Edo)	A virtual helpdesk was set up to allow teachers to ask questions or request support. An existing coaching program for teachers was adapted to be delivered remotely.	X	X			X
Peru	Teachers received <a href="#">guidelines</a> that stressed the importance of observing learning sessions, communicating with students and parents, and providing feedback.	X		X		
Sierra Leone	A radio teaching program targeted teachers who needed to improve practice in digital literacy. When schools were reopened, teachers used the radio program to complement their lessons or adapt their methodology.	X		X		



Source: Own elaboration with data from interviews with policymakers and education experts from the selected countries.

### **3.1 Policy takeaways from an in-depth multicountry analysis**

Characteristics of education systems such as availability of resources, institutional development, remote education experience, and decentralization influenced the response of governments to COVID-19. Countries that leveraged those characteristics effectively executed remote learning programs. In fact, **prior experience with remote education programs allowed education systems to effectively and rapidly implement their already existing distance learning programs** to all students. Kenya, Sierra Leone, and the Edo State in Nigeria quickly pivoted toward remote learning because their governments had been building technical and digital capacity for several years. As these education systems responded rapidly but not necessarily reached the majority of the student population, *the question that emerges is how to transition from quickly pivoting to effectively scaling up a remote learning program that equitably reaches all students in the education system.*

Multichannel strategies are a strength to expand reach and target a diverse student population. **Multimodal remote learning solutions were effective to increase the number of students reached if the solutions were complemented with a clear communication strategy.** In the [state of São Paulo in Brazil](#), the multimodal remote learning program reached approximately 85 percent of the student population.

The program was complemented with (1) a proactive communication campaign on TV and social media to keep teachers and families informed about learning activities, (2) a task force that contacted families of students who were out of reach, (3) a mobile application that allowed teacher-student interaction, and (4) daily “live” conversations between the State Education Secretary and teachers. However, increasing reach was just the first step required to provide equitable access to remote learning. *The challenge that remains is how to effectively increase and monitor engagement at scale.*

Similarly, **inclusive multichannel remote learning solutions were effective to reach a diverse student population.** In Peru, TV learning sessions were supported with [sign language](#), the zero-rated Web Light platform was adapted for [students with special needs](#), and radio learning sessions delivered content in nine native languages. Seventy-five percent of caregivers with children studying in intercultural rural schools knew about the government remote learning program, and 91 percent were using it. For those students who lived in remote communities and could not be reached with the traditional multichannel strategy, *the question that arises is whether governments should keep focusing on delivering top-down educational strategies, or consider identifying and promoting bottom-up community-based programs.*

At the same time, multimodal remote learning strategies present a challenge to align content

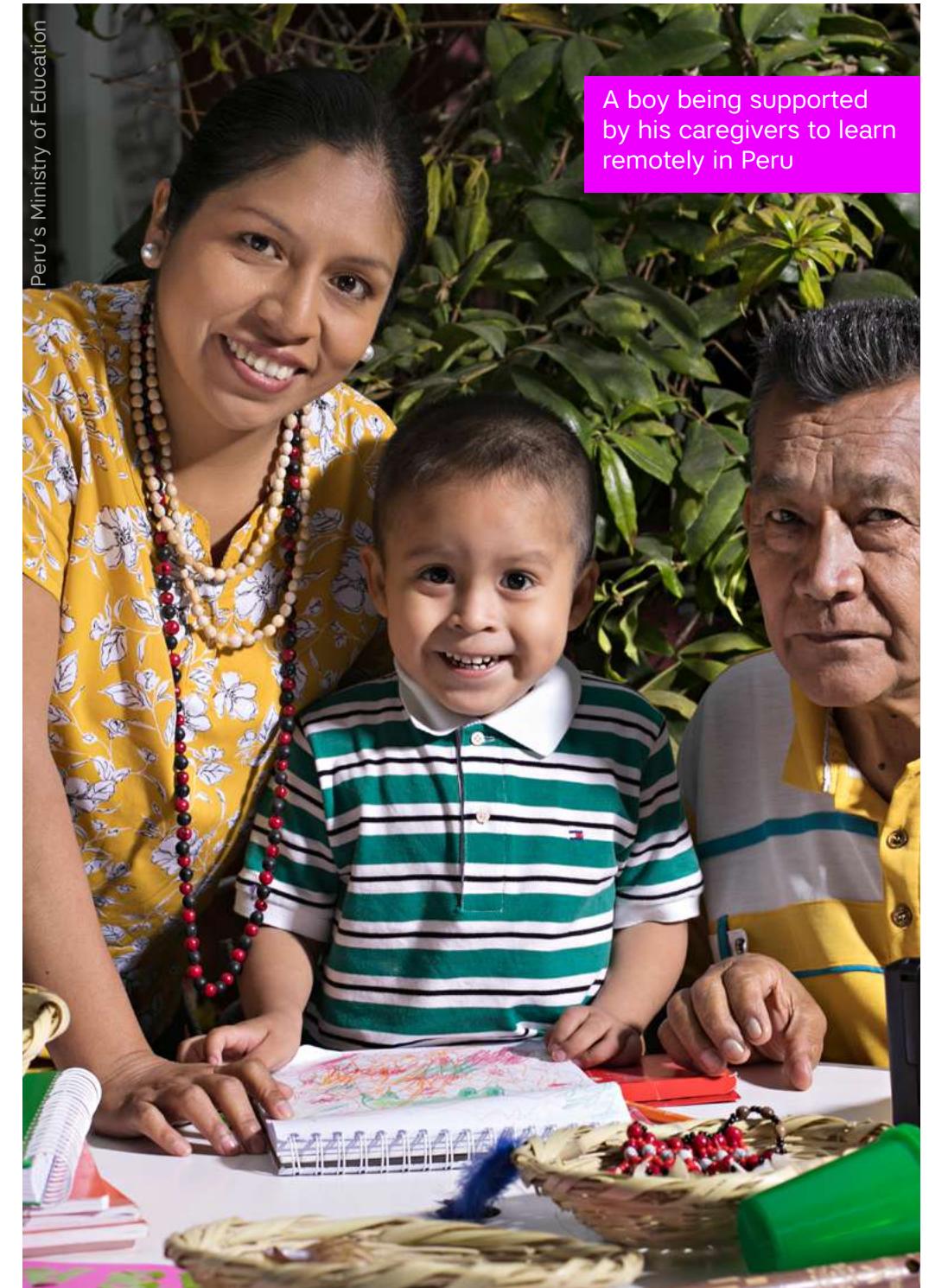
across different platforms or channels. **Coherent articulation across channels used to deliver remote learning were challenging, especially for countries that do not have prior experience with remote education at scale.** In Peru and in some states of Brazil such as Mato Grosso do Sul, it was a challenge to align content across channels as ministries lacked content repositories. Delivering content that was not configurated in the same way across channels imposed additional pressure on teachers, as they had to provide differentiated feedback to students who accessed lessons through diverse channels.

While the channels used to deliver remote learning were critical during school closures, even more important were the roles of teachers. Education is a social experience and learning occurs when teachers interact with and provide effective feedback to students, either in face-to-face or remote education environments. For this to occur, governments needed to support and provide guidance to teachers rather than assigning an excessive focus on administrative work from them.

**Sustained professional development and remote coaching programs were effective to equip teachers with the tools to use digital technologies in virtual classrooms.** The state of Edo in Nigeria [trained all teachers who were part of the Edo-BEST program](#) in the past two years to effectively use digital technologies in the classroom. An existing coaching program that provides pedagogical and technical tutoring to teachers has been adapted to be delivered remotely. Thus, prior training and coaching have been critical to pivot toward remote teaching-learning during COVID-19. However, *it is still unknown how teachers' digital and pedagogical skills have impacted students' engagement and remote learning experience.*

**Guidelines for remote education helped to clarify the new role for teachers, but an excessive administrative workload generated burnout and reduced pedagogical effectiveness.** Peru and Brazil's well-intentioned teacher support systems

ended up generating "burnout" (e.g., emotional, physical, and mental exhaustion), as teachers were asked to complete frequent administrative reports of their plans and results of students' progress. Both countries quickly redesigned the reporting system to reduce the "burnout" problem, and Peru's Ministry of Education published a [resolution](#) to reduce teacher's administrative workload. São Paulo and Minas Gerais developed [mobile applications](#). These Apps enabled teacher-student communication but only during specific time periods. This structured interaction helped to reduce teacher burnout. In sum, in order to execute effective remote learning programs, education systems needed to consider (1) leveraging prior remote learning experience or collaborate with those that had experience, (2) focus on the strengths of multichannel strategies and solve the alignment challenges across channels, and (3) support teacher interaction with students and prioritize their pedagogical role over the administrative one. Transversely, the monitoring and evaluation was the compass required to understand progress and make adjustments, as well as being ready to incorporate adjustments and improvements, and troubleshoot during the implementation.





A photograph of a woman in a white headscarf and dark clothing walking away from the camera on a dirt path. She is passing by a traditional stone building with a blue-painted wooden door. In the background, there are more stone buildings, some with satellite dishes on their roofs, under a clear sky.

## 4. **WHAT WORKS WITH REMOTE AND REMEDIAL STRATEGIES? AN ANALYSIS ACROSS 13 COUNTRIES**

## 4. What Works with Remote and Remedial Strategies? An Analysis across 13 Countries

This section of the report builds on key lessons learned during the in-depth analysis of the multicountry experiences explored in the prior section. It also aims to present global trends of remote learning implemented during school closures and the actions governments adopted to get ready for remedial learning. The countries prioritized for this report are the low-income countries of Afghanistan, Haiti, Malawi, Mozambique, Niger, and Rwanda; the lower-middle-income countries of Cambodia, Cameroon, Kenya, Nepal, and Pakistan; and two high-income countries, Estonia and Uruguay, which have been included in this report because both governments have been building technical capacity for remote teaching-learning for several years. This exploratory analysis has the following structure: (1) distance education delivery systems; (2) curriculum adjustments; (3) teacher training and support; (4) monitoring and evaluation; and (5) preparing systems for remedial learning (see examples in table 3.1).

**Table 5: What Works with Remote and Remedial Learning in Five Main Themes**

Delivery systems	Curriculum adjustments	Teacher support	Monitoring and evaluation	Remedial programs
<b>Pakistan</b> (interactivity)  TV learning program with animated characters that were incorporated in the videos as facilitators during lessons.	<b>Afghanistan</b> (core subjects)  Selected science and mathematics as core subjects to prepare students for evaluations in such subjects.	<b>Rwanda</b> (emergency training)  Remote teaching training programs in ICT for education to over 5,000 teachers; this group of teachers then supported other teachers to become more familiar with the use of ICT for education.	<b>Malawi</b> (monitoring access)  Monitoring coverage and quality of distance learning by conducting phone-based surveys and U-reports.	<b>Cameroon</b> (remedial learning to catch up)  Extended calendar and setup of a six-week remedial program; teachers devoted 25% of the time to contents not covered in the previous academic year.
<b>Cambodia</b> (alignment)  Task force-supervised content creation at all education levels to ensure alignment across broadcast, online, and paper-based delivery systems.	<b>Estonia</b> (autonomy)  Schools and teachers autonomously deciding the subjects and contents to prioritize.	<b>Uruguay</b> (sustained training)  Ceibal provided ad hoc training for teachers through its LMS; <a href="#">92% of teachers were satisfied or very satisfied with the training activities</a> provided.	<b>Estonia</b> (formative assessments)  Seventy-one percent of students have been using online formative assessments; 64% have received feedback from teachers.	<b>Mozambique</b> (remedial learning for examinations)  Six-month remedial program for grades 7, 10, and 12, because students in these grades sit for examinations.

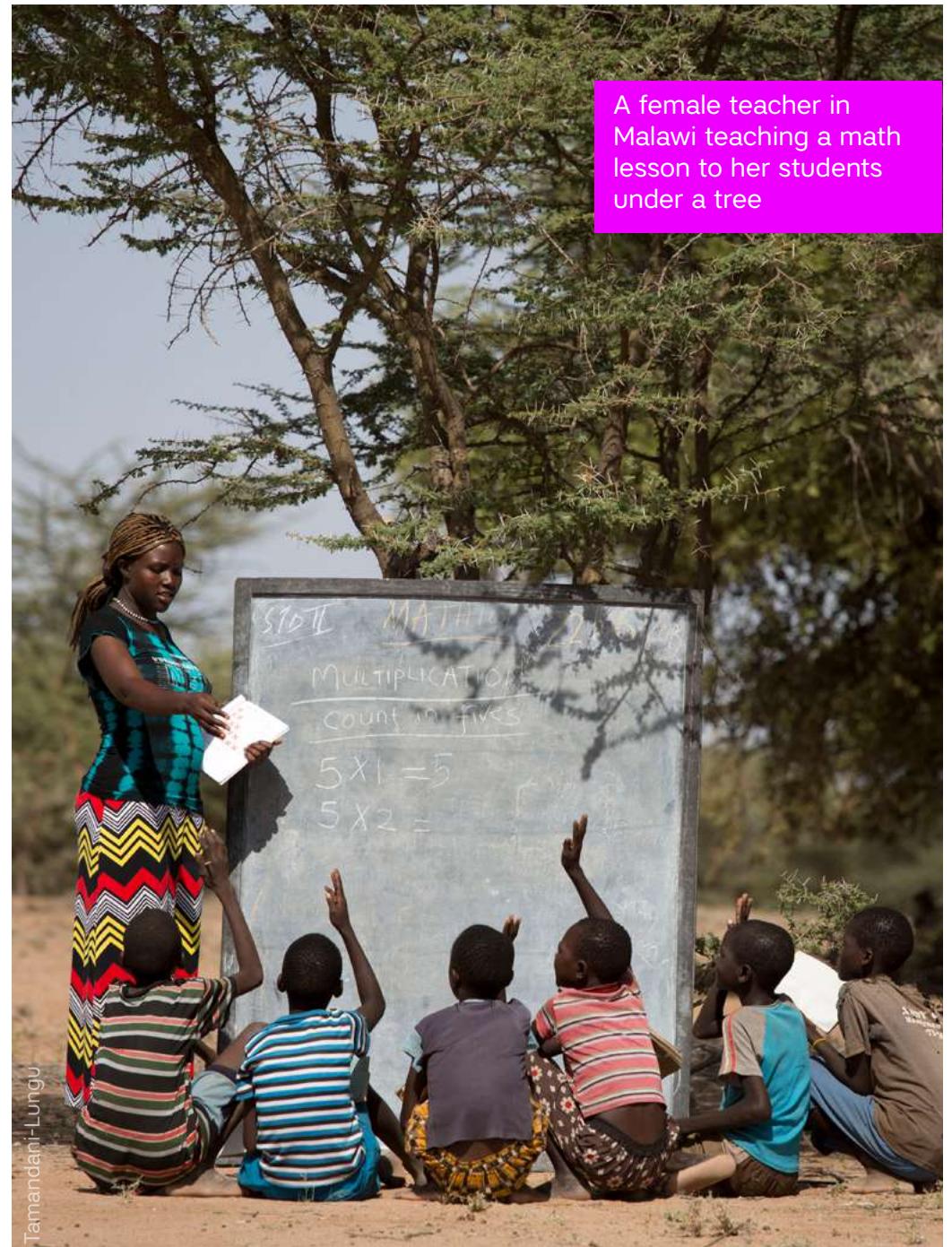
Source: Own elaboration with data from interviews with policymakers and education experts from the selected countries.

**Table 6: Assessment Plans of Selected Countries** (click in one country to go to the file)

Country	Assessment plan	Formative	Summative	Student promotion <sup>5</sup>
Afghanistan	At the end of the academic year, students will be assessed through summative examinations	X	—	—
Cambodia	Once schools reopen, grades 9 and 12 will have summative examinations	X	—	—
Cameroon	Government encouraged teachers to conduct diagnostic assessments as schools reopen	X	—	—
Haiti	National standardized tests maintained in the traditional format for grades 9 and 12	X	X	Automatic
Malawi	Diagnostic assessments once schools reopen to support teachers to provide remedial lessons	X	—	—
Mozambique	Diagnostic assessments once schools reopen and national evaluations after remedial programs	X	X	—
Pakistan	Annual exams cancelled. Planning to conduct sample-based assessments when schools reopen			Automatic
Rwanda	Nationwide test will be given to students when schools reopen	X	—	—
Estonia	Examinations were made optional	X	—	—
Uruguay	Formative voluntary online evaluations	X	—	—

Source: Own elaboration with data from interviews with policymakers and education experts from the selected countries.

Note: — = Not available.



<sup>5</sup> Student promotion: while a few countries, such as China and Germany, decided to hold traditional exams, a majority of the countries opted to postpone or cancel their examinations. In Pakistan, the government cancelled all board examinations and announced that all [students could be auto-promoted based on certain criteria](#). However, at the time this study was conducted, most of the selected countries did not provide information regarding student promotion.

## 4.1 Takeaways

Not all countries were in the same position before the pandemic. Those that had previously invested in technology and institutional capacities were in a better position to implement comprehensive and effective delivery systems, rapidly transition to online teacher training or coaching programs, set up monitoring systems to track progress, and deploy digital formative and summative evaluations at scale. A summary of the main conclusions of this study are discussed in table 7.

**Table 7: Summary of Takeaways**

Category	Further studies	Takeaways
Delivery systems	<a href="#">COVID-19 Response Toolkit</a> <i>Remote learning strategy as a key element in ensuring continued learning</i>	<ul style="list-style-type: none"><li>The perceived effectiveness of multimodal delivery systems varies according to the country's income classification.</li><li>The perceived effectiveness of the combination of delivery systems depends on contextual factors; implementation can be affected by the "remote learning paradox."</li></ul>
Curriculum adjustment	<a href="#">Education in the time of COVID-19</a> <i>Continuing education and the impact on the curriculum</i>	<ul style="list-style-type: none"><li>While countries have similar objectives for curriculum adjustments, the strategies followed for such adjustments vary widely.</li><li>Content curation following the learning objectives of the adjusted curriculum was more effective than creating new content.</li><li>Most countries have prioritized academic contents, while few have focused on competencies relevant in the current context such as socio-emotional skills.</li></ul>
Teacher support	<a href="#">Strengthening online learning when schools are closed</a> <i>The role of families and teachers in supporting students during the COVID-19 crisis</i>	<ul style="list-style-type: none"><li>A perceived need to recalibrate how teachers divide their time between effective teaching and administrative tasks, to focus on what is pedagogically effective.</li></ul>
Monitoring & evaluation	<a href="#">Presenting evaluations of the COVID-19 Emergency Window</a>	<ul style="list-style-type: none"><li>Countries focused on formative assessments as feedback mechanisms to understand learning loss vs. others focused on large-scale system-level assessments.</li><li>Countries focused on monitoring the supply of delivery systems vs. others focused on monitoring the demand (usage, engagement, and learning).</li><li>Countries focused on implementing top-down centralized monitoring systems, others developing bottom-up monitoring processes, and others outsourcing monitoring processes.</li></ul>
Remedial learning	<a href="#">COVID-19 Response Toolkit</a> <i>Helping students catch up on lost learning, with a focus on closing equity gaps</i>	<ul style="list-style-type: none"><li>Governments took an ex post approach by implementing remedial learning programs after assessing students, others followed an ex ante approach by introducing remedial learning before assessing students.</li><li>Governments have the opportunity to innovate and transform the traditional school model and how remedial learning is done.</li></ul>

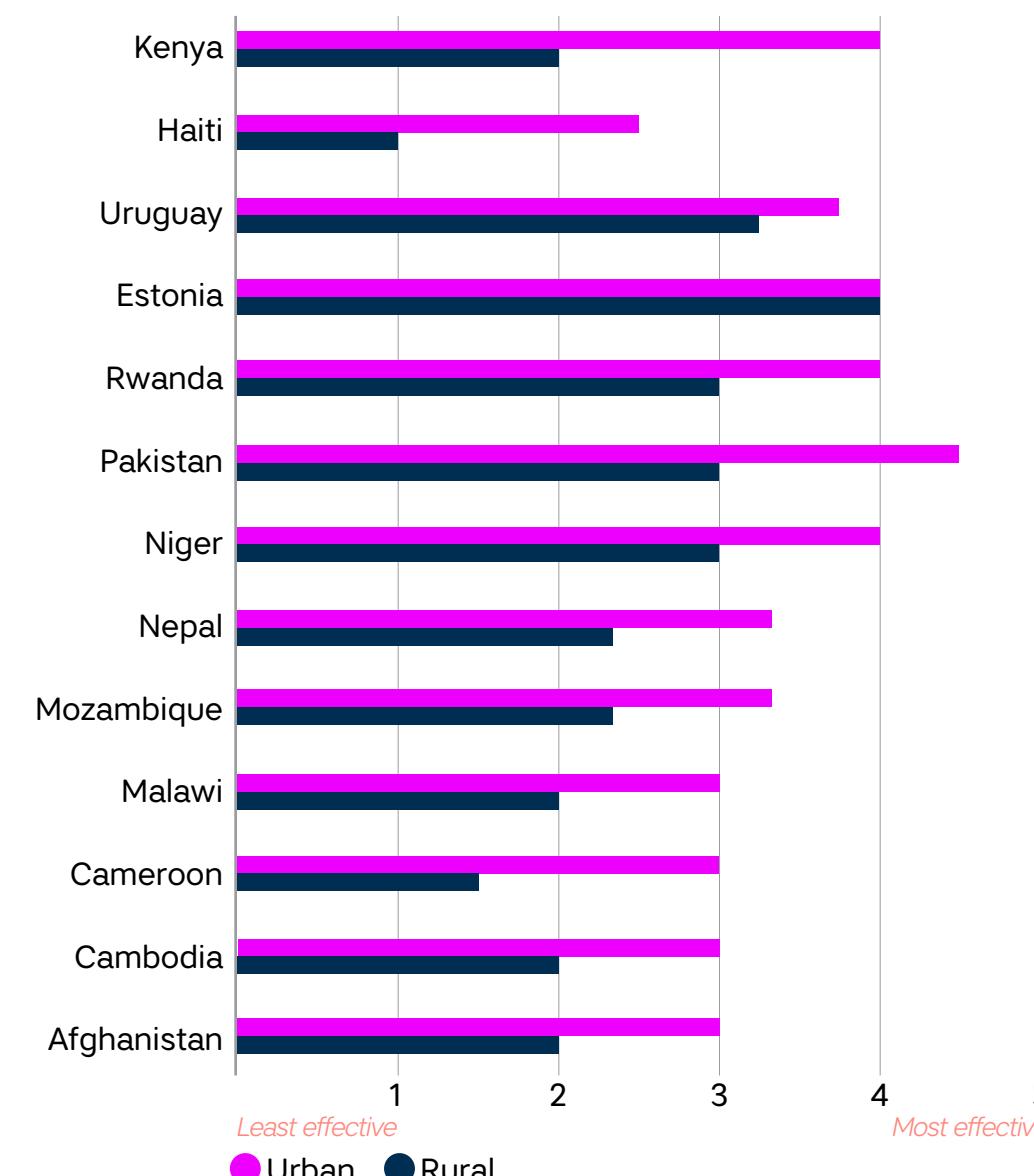
Source: Own elaboration.

In general, **multimodal delivery systems were perceived as an effective strategy to increase coverage, if education policy makers thoughtfully planned and implemented remote learning programs and considered contextual factors.**

- 1 While in upper-middle-income countries multimodality was perceived to be equally effective in both urban and rural areas, in low-income countries multimodal delivery systems were perceived to be more effective in urban than in rural areas.
- 2 The survey results and interview responses illustrated that there was no single best combination of delivery systems. The effectiveness of the multimodal combinations depended on a variety of contextual factors (access to devices needed for remote learning, internet connectivity, prior experience with the delivery system, teacher preparedness and capacity, and quality of contents that are interactive and locally relevant, among others). Even with very well-articulated EdTech solutions, the learning experience can be poor if the intervention does not address these contextual factors.

### Perceived Effectiveness of Multimodal Delivery Systems

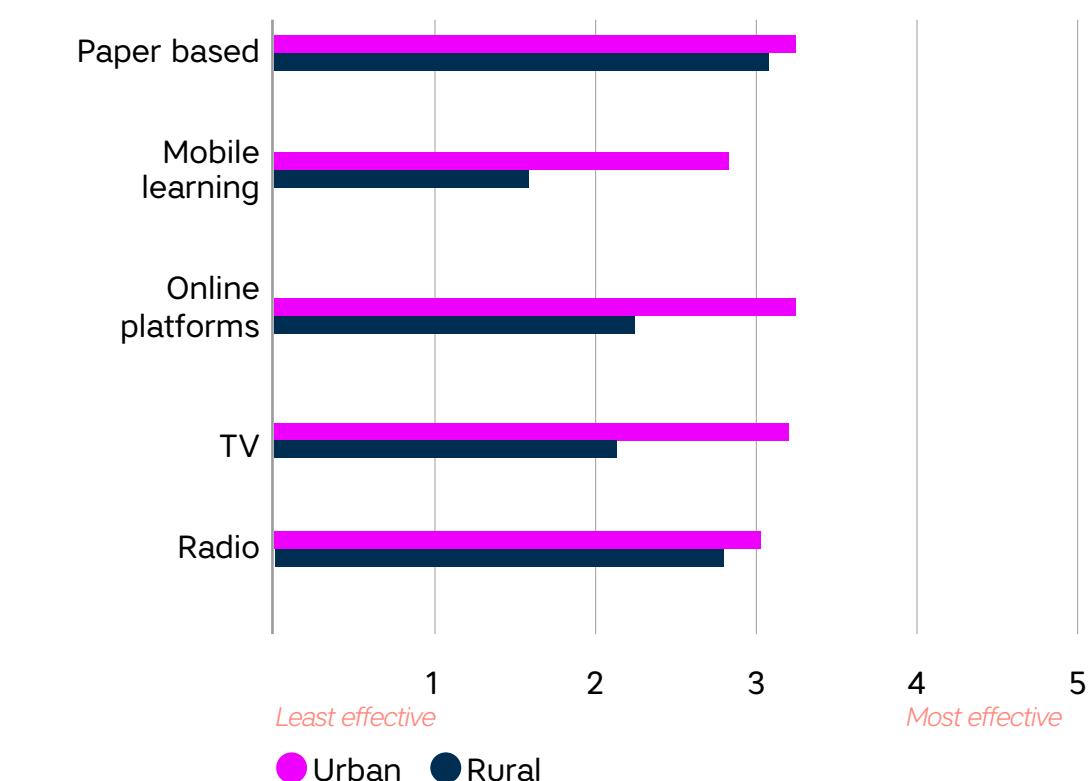
The graph illustrates the perception of education experts in regard to the effectiveness of multimodal delivery systems in urban and rural areas.



Source: Own elaboration, data from interviews with policymakers and education experts from the selected countries

### Perceived Effectiveness of Specific Delivery Systems

The graph illustrates the perception of education experts in regard to the effectiveness of unimodal delivery systems in urban and rural areas



Source: Own elaboration, data from interviews with policymakers and education experts from the selected countries

**The adjustment of the curriculum and content curation made the development process of the remote learning strategy more effective, as it allowed for cost savings and time efficiency.** Such adjustments were needed to fulfill the main learning objectives of the curriculum, but also needed to consider that replicating the face-to-face teaching-learning practices and the curriculum would not necessarily work in a remote learning environment.

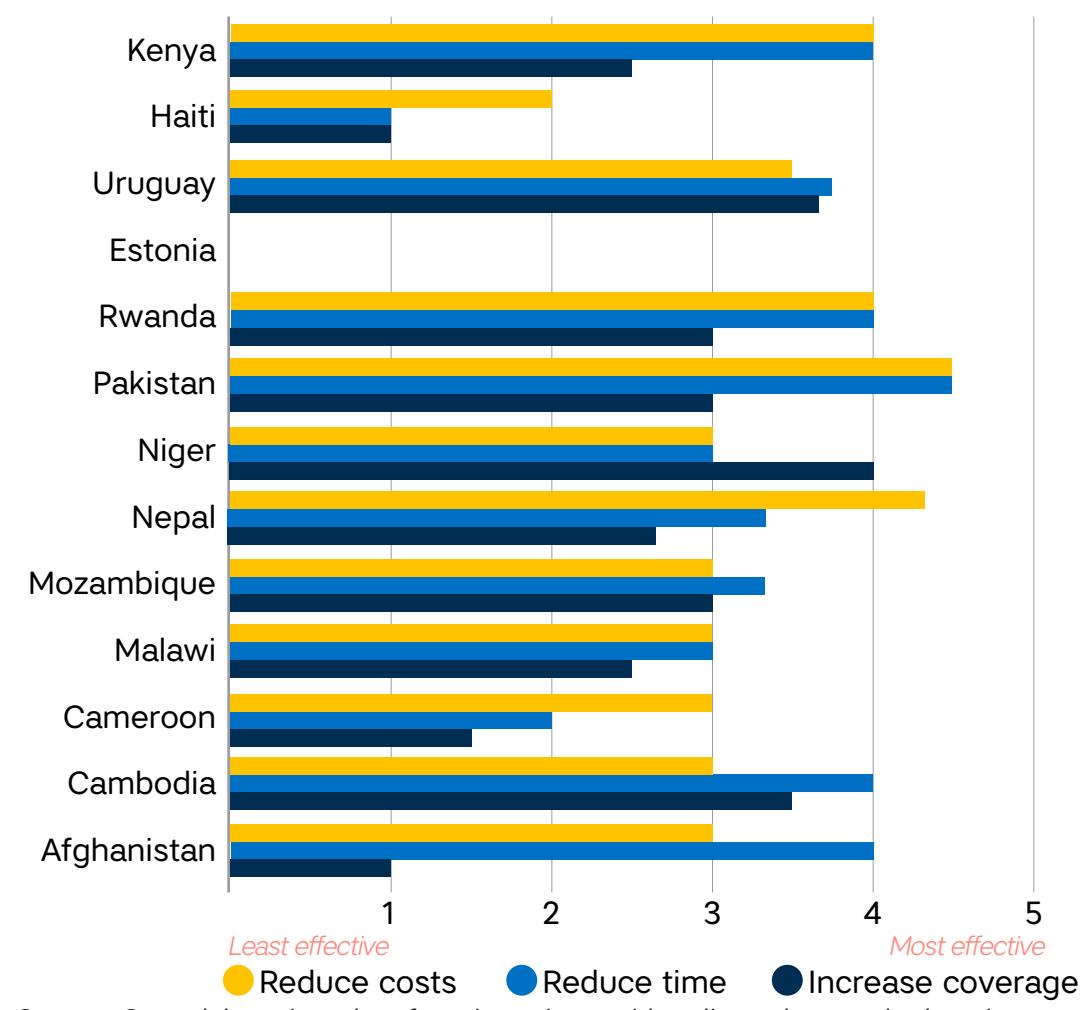
1 Most ministries of education adjusted the curriculum with a similar objective, but the strategies or paths followed to do so varied across countries. On the one hand, some countries implemented top-down strategies by (1) selecting core subjects based on those that had examinations, (2) prioritizing subjects after carefully analyzing curriculum, and (3) integrating contents and learning objectives into interdisciplinary clusters that allowed various subjects to be addressed at the same time. On the other hand, fewer countries opted for giving autonomy to schools or teachers to do bottom-up adjustments.

2 Most education leaders and experts that contributed to this study perceived that the main benefits of adjusting the scope of the curriculum were related to cost savings and time efficiency. Education leaders in countries such as Rwanda, Pakistan, Nepal, Cambodia, and Afghanistan perceived that by reducing the number of competencies, subjects, and contents, as well as by delivering lessons

through multigrade classrooms, governments could implement remote learning programs more rapidly while saving costs.

### Perceived Effectiveness of Curriculum Adjustments

The graph illustrates the perception of education experts in regard to the effect of curriculum adjustments in cost savings, reduction of implementation time, and increase coverage.



Source: Own elaboration, data from interviews with policymakers and education experts from the selected countries

3 Especially for countries that experienced remote learning at scale for the first time, lacked a vast repository of content to deliver remote learning, or had limited TV or radio airtime, content curation and curriculum adjustments were not only more effective, but necessary. Investing time in analyzing content that already existed and curating it around the curriculum's learning objectives [was more effective than creating new content](#) that took time and was cost-intensive.

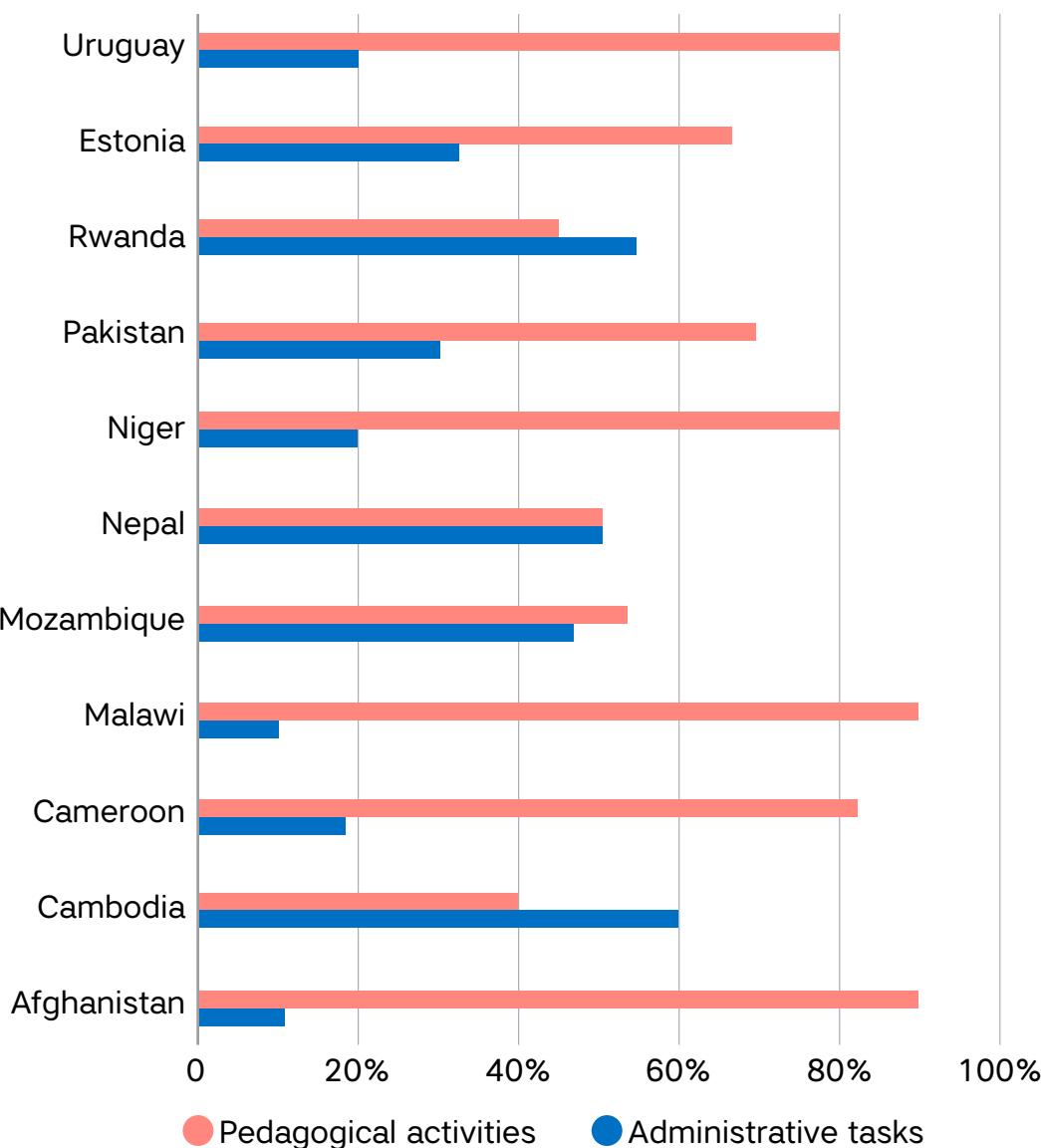
4 Adjustments should not only focus on curricular competencies that are examinable and important to fulfill short-term objectives, but also those that were relevant in the situation of the pandemic, such as self-directed learning, care for oneself and others, social-emotional skills, and competencies that were critical for mid- and long-term learning objectives. Countries that prioritized these competencies witnessed that students' well-being improved: they were [happier, healthier, and enjoyed independent learning](#)—90 percent of students in Estonia were satisfied with remote learning. In other contexts, students [gained autonomy and discovered new ways of learning](#).

## As education is a social experience, learning occurs when teachers interact with and provide effective feedback to students.

- 1 Most governments provided guidelines to clarify the enhanced role for teachers by emphasizing the importance of the teacher-student interaction, but education leaders in some countries still perceived that there was an excessive focus on the administrative workload which [generated burnout and reduced pedagogical effectiveness](#). The COVID-19 pandemic evidenced the urgent need to recalibrate how teachers divide their time between effective teaching and administrative tasks. Efforts focused on freeing time from administrative tasks to be used for direct teaching were highly welcomed by teachers. Examples of such strategies were [remote tutoring to support students catch up](#), hiring additional teachers to support smaller class sizes, setting up mechanisms to have regular conversations with teachers to receive feedback, and adjusting administrative workloads if needed.

## Teacher Time Allocation

The graph illustrates the perception of education experts in regard to teachers time allocation between administrative and pedagogical activities



Source: Own elaboration, data from interviews with policymakers and education experts from the selected countries.

**The COVID-19 pandemic revealed the different typologies and strategies that governments had around monitoring and evaluation processes.** This study has identified three different typologies that define the approach taken by ministries of education to assess students.

- 1 While some countries focused on *formative and summative assessments* as feedback mechanisms for teachers to support students during the pandemic, others prioritized *maintaining examinations or large-scale system-level assessments* to select learners in a given grade for further schooling or to obtain data at a national level for decision-making.
- 2 Most countries focused their *monitoring efforts on the supply of delivery systems and contents deployed*, while fewer governments made efforts to understand the demand; that is, the coverage and use of the delivery systems for education, the engagement of students during remote education, and student learning.
- 3 Even though most governments implemented *top-down centralized monitoring systems* through phone or online surveys, others developed *bottom-up monitoring processes* by encouraging citizens to engage through [U-Reports](#) and finally, a smaller set of countries outsourced the monitoring processes to experts, consultants, or NGO's.

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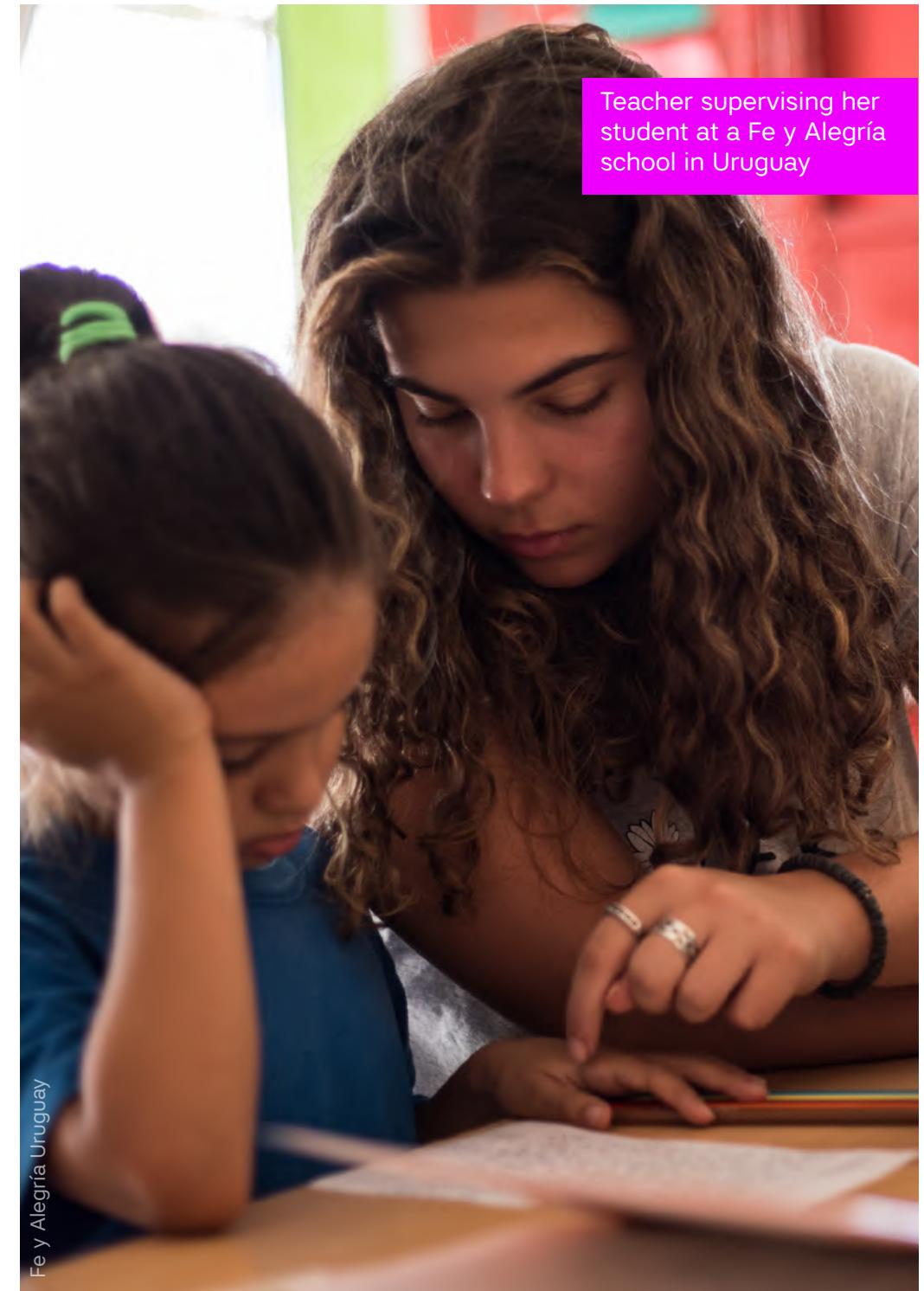
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## Most governments introduced remedial programs to support students to catch up, but the specific strategy chosen to help students varied across countries.

- 1 Some governments decided to take an ex post approach toward remedial learning by postponing these programs after schools reopened, when education would get “back to normal,” and students were assessed to identify the magnitude of the learning loss problem. Others followed an ex ante approach to help students catch up by introducing remedial learning or accelerated learning programs; that is, implementing catch-up programs without leading the actions by previous assessments, under the assumption that a large group of learners had been severely affected by school closures.
- 2 The COVID-19 pandemic presented significant opportunities to innovate and, when possible, transform the traditional school model. This crisis revealed that governments had to reassess how to monitor both processes and learning outcomes, how to conduct formative or large-scale assessments, and how teachers could support students to catch up.

In addition to this qualitative study, rigorous impact evaluation [studies were required](#) as a complementary effort to better understand the effectiveness of remote and remedial learning interventions. The questions that

required further qualitative and quantitative research are discussed in table 7 and have been grouped in six sections.



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## **5. POLICY CONCLUSIONS AND FURTHER RESEARCH**



## 5. Policy Conclusions and Further Research

The following policies have been identified as key areas for governments to build back better and more sustainable education systems. Following the five principles that the World Bank EdTech approach paper “Reimagining Human Connections” suggests, when education systems invest in EdTech, these policy recommendations provide a compilation of the results of the global analysis, as well as different consultations with experts in the countries studied:



**ASK WHY:** EdTech policies and projects need to be developed with a clear purpose, strategy, and vision of the desired educational change.

- **Curriculum adjustments need to go beyond the selection of core subjects and foundational knowledge.** The pandemic has interrupted presential education, a situation that brought major challenges, such as providing remote learning in contexts that lack the infrastructure to do so, as well as adapting contents and pedagogies. Although this study has shown a clear tendency to prioritize those subjects and contents that are urgent to cover to prepare students for assessments, teachers should also focus on competencies that are contextual and relevant in the scenario that we are currently living in, such as social-emotional skills to help students cope

with challenging situations that they might be facing at home. In addition, it will be important to understand that the prioritization of contents will require remedial actions later on to reduce the learning loss that these adjustments might cause.

- **Socio-emotional support is urgent for teachers, students, and parents.** Remote learning strategies cannot be simply limited to a supply of lessons and contents. Strategies for providing support are also needed. The COVID-19 pandemic and the extended school closures have changed the role of teachers, students, and parents, and most of them were not prepared for such change. Similarly, social isolation has affected several students, particularly those who were at a disadvantage. A comprehensive strategy is required for socio-emotional monitoring and psychosocial support to ensure well-being and avoid burnout. This strategy has to incorporate monitoring instruments to measure anxiety and identify socio-emotional needs as first steps. It will also be critical to provide guidance material and communication channels available for students, teachers, and parents. As countries transition to a more consistently blended learning model, it is necessary to prioritize strategies that provide guidance to parents and equip them with the tools required to help them support students, while keeping frequent communication with teachers.



### DESIGN AND ACT AT SCALE, FOR ALL:

The design of EdTech initiatives should be flexible and user centered, with an emphasis on equity and inclusion, in order to realize scale and sustainability for all.

- **Ensure the sustainability of multimodal delivery systems, taking into account contextual factors and avoiding the remote learning paradox.** Even though the perceived effectiveness of multimodal delivery systems varies across continents and countries, it is critical to guarantee the deployment and monitoring of the most effective combination of delivery modalities, considering the contextual factors of each country. For example, in countries with high mobile phone penetration, [this technology has high potential to improve reach, scalability, and flexibility of teacher professional development, as well as student learning](#). For some countries low-tech solutions would be more appropriate, but for others high-tech delivery channels will be more effective. In this way, education policy makers can avoid the “remote learning paradox,” a situation in which governments prioritize online learning solutions to minimize learning losses, but students who are most at risk of learning losses cannot access those solutions.

- **Remedial and accelerated learning programs need to be carefully implemented and monitored.** Even though most countries have planned to or are already implementing programs to support students to catch up, remedial programs should be carefully implemented, not only by identifying the areas in which students need more support, but also by constantly monitoring how students are progressing. The adoption of flexible delivery systems for content delivery and remote teacher-student interactions adopted during the pandemic might open new opportunities for remedial learning programs in the years to come.

- **Delivery systems following a Universal Design for Learning (UDL) will be inclusive for all students.** The UDL approach recognizes that in a classroom students are different and have diverse needs. Thus, remote and remedial learning, should be deployed following the UDL approach to effectively reach diverse student populations. Examples of inclusive delivery systems for students with special needs are TV learning sessions supported with sign language, online platforms adapted for students with special needs, or radio learning sessions that deliver content in native languages.



**EMPOWER TEACHERS:** Technology should enhance teacher engagement with students through improved access to content, data, and networks, helping teachers better support student learning.

- **Sustained professional development and constant teacher support.** Emergency crash courses to train teachers might not be enough to both improve their digital and adopt their pedagogical skills to the new context. The pandemic has evidenced the critical role that teachers play; sustained professional development through preservice teacher education and in-service teacher training can be effective to equip teachers with tools for remote and remedial teaching-learning. Sustained professional development will impact student attention and avoid a decrease in motivation and engagement that some countries have started to experience.

The proficiency (skills, knowledge, and experience) to teach remotely (synchronously or asynchronously) should not be considered as a “sunk cost” or a “nice to have” skill for teachers, but a critical one to face the current crisis as well as to offer new educational opportunities after the pandemic. Teachers’ digital and pedagogical skills are needed to critically assess and decide when and how to effectively adopt remote learning strategies and realistically define their impact to support or enhance learning.

- **Prioritize teachers' interaction with students.** Teaching quality is more important than the delivery systems used to deploy content; thus, there is an urgent need to recalibrate how teachers divide their time between

effective teaching and administrative tasks—pedagogical exchanges need to be prioritized over administrative reports. Efforts focused on freeing time from administrative tasks to be used for direct teaching and support are critical at a time when students not only need support to catch up, but also to overcome challenging socio-emotional conditions. The EdTech strategies adopted for remote and remedial learning need to acknowledge the relevance of having regular (daily, weekly when possible) teacher-student and peer interaction, either by using digital technologies, landline phone calls, or equivalent methods.

**ENGAGE THE ECOSYSTEM:** Education systems should take a whole-of-government and multi-stakeholder approach to engage a broad set of actors to support student learning.



- **Leverage institutional capacities to enable and/or continue distance learning.** As remote learning is likely to continue even when schools reopen, ministries of education should use their prior experience with EdTech programs to equitably reach all students. This work entails identifying and preparing stakeholders, having an inventory of existing infrastructure and associated costs and benefits, and accounting for funding for setup and maintenance. At the same time, governments need to invest in remedial education to recover learning losses; thus, external financing is key to

support the educational opportunities of students in low- and lower-middle-income countries, where public [education budgets have been cut](#) since the onset of the pandemic. Recognizing the COVID-19 emergency, the pandemic can be an opportunity to inspire and reimagine solutions to build back better education systems.

- **Foster cross-country and multi-stakeholder collaboration approaches.** As countries have experienced implementing remote learning programs at scale during the COVID-19 pandemic, it is critical to engage a wider ecosystem of allies within and among countries to allow governments to better respond to the circumstances and deploy remote learning channels faster without having to start from scratch. By fostering cross-country collaboration and partnerships with telecommunication operators, EdTech companies, or third-sector organizations, governments can effectively continue distance learning programs. Such collaborations may allow governments, teachers, and students to access high-quality curated learning materials through partnerships with content providers, increase learning time through partnerships with broadcasters, and access data without paying for the bandwidth through partnerships with telecommunication operators.



**BE DATA-DRIVEN:** Evidence-based decision-making within cultures of learning and experimentation, enabled by EdTech, leads to more impactful, responsible, and equitable uses of data.

- **Monitoring and evaluation are key to understanding the effectiveness of the strategy, the learning outcomes and to troubleshoot:** While this study has evidenced that the implementation of monitoring systems has been unequal across countries, it is still relevant to strengthen the governments' monitoring processes to understand students' progress, make the adjustments required, and be ready for continuous improvement when schools start to reopen. In addition to the collection of relevant data, education systems might need to consolidate their institutional capacities to process and effectively use the data gathered for supporting or guiding decision-making, as well as to [set high standards for data protection and security concerning children](#), regulate access to educational records, and protect student privacy with regards to educational information.
- **Opportunities to innovate formative assessments and large-scale examinations.** The COVID-19 pandemic has altered the assessment landscape. Countries have revised or adjusted their systems to provide remote formative

assessments, canceled or postponed large-scale examinations, and even transitioned to online assessments. As governments work to innovate the assessment solutions, they also have to ensure that these [examinations meet certain criteria, such as validity, reliability, and fairness properties of a high-quality assessment](#). This is an opportunity to rethink how to conduct formative or large-scale assessments while schools are closed and even after they reopen.



## Start!

As stated in the approach report "Reimagining Human Connections," education systems need to accept that change is inevitable. Learning-by-doing and making adjustments in the process as a result of what is learned, is required. It is imperative to avoid replicating failures of pre-COVID-19 systems, but instead build stronger education systems and accelerated learning for all students. No plan will be perfect. But the risks of inaction are greater than the risks of action. As this study shows, from low resource settings to high income ones, countries are rising to this challenge and implementing strategies to support effective learning and guarantee that a generation of students is not lost due to the pandemic. These efforts have required creativity, innovation, planning, and investments from education systems at an unprecedented level, which will make them more resilient to future shocks.

## Further Research

In addition to this qualitative study, rigorous [impact evaluation studies](#) were required as a complementary effort to better understand the effectiveness of remote and remedial learning interventions. The questions that required further qualitative and quantitative research are discussed in table 6 and have been grouped in six sections.

**Table 6: Further Research**

Category	Questions
Leveraging institutional capacities and cross-country collaboration	<ol style="list-style-type: none"><li>As remote learning is likely to continue, even when schools start to reopen, how do governments effectively scale up a remote learning program that equitably reaches all students in the education system?</li><li>How can policy makers build sustained institutional capacities in the fields of innovation and technology and create multi-stakeholder collaborative environments that enable innovation in education?</li></ol>
Inclusive multimodal delivery systems	<ol style="list-style-type: none"><li>Should governments keep focusing on delivering top-down educational strategies, or consider identifying and promoting bottom-up community-based programs? How can teachers be supported to develop such programs?</li></ol>
Sustained teacher training and support	<ol style="list-style-type: none"><li>What are the key digital and pedagogical skills that have more effectively impacted the learning experience?</li></ol>
Perceived effectiveness of curriculum adjustments	<ol style="list-style-type: none"><li>Will the prioritization of contents require remedial actions to reduce the learning loss that these adjustments might cause later on?</li></ol>
National strategies to remediate learning losses	<ol style="list-style-type: none"><li>Are ex ante remedial strategies in fact proactive, or have education systems decided to implement remedial or accelerated learning programs to prepare students for national examinations?</li></ol>

Source: Own elaboration.

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## **6. COUNTRY OVERVIEWS**

**First phase countries:**

Brazil, Kenya, Nigeria, Peru, Sierra Leone

**Second phase countries:**

Afghanistan, Haiti, Malawi, Mozambique, Niger, Rwanda, Cambodia, Cameroon, Kenya, Nepal, Pakistan, Estonia and Uruguay

\*Please note that participating countries were selected using a mix of the following criteria i) Low to Middle Income countries (LMICs), ii) diversity in remote learning strategies, iii) preferably IDA lending countries, iv) availability of key informants. Estonia and Uruguay were included because both governments have been building technical capacity for remote teaching and learning for several years and their experiences allowed us further enrich this report.





# Brazil



## **States selected for this study: Amazonas, Espírito Santo, Minas Gerais, Mato Grosso do Sul, São Paulo.**

*\* Engagement is usually measured through effective time spent learning and frequency of use of channels. Brazil has use completion of learning activities as proxy.*

*\*\* CAEd: center for public policy and evaluation of education.*

# Inputs implemented

# Channel

- **Main channels:** Varies by state.  
Combination of web, TV, mobile,  
printed.
  - **Partners:** Varies by state.  
Telecoms zero-rate mobile apps;  
broadcasters transmit TV content.
  - **Prior experience:** Amazonas  
Media Center

## Content

- **Align to curriculum:** Yes, to Brazil's and state curriculum.
  - **Curation/Creation:** Varies by state. Espirito Santo mostly curated TV content from Amazonas. Sao Paulo created Media Center.

# Teacher & Parent support

- **Guidelines:** Delivered online and through schools.
  - **Training:** With support from private and third sector. And 'crash courses' by govt.
  - **Communication:** 'Lives' with teachers. Mass and social media with parents.

# Outcomes achieved

# Reach

- **Total student population:** 74% accessing remote learning.
  - **By channel:** 37% access mainly through TV and/or online. 34% access through TV, online, and printed. 3% only through printed material.

# Engagement\*

- **Completion of learning activities:** 82% of students doing the majority of the activities and 13% doing some of them.
  - **Frequency of use:** Primary school students 1-2 hours per day. Secondary school 2-3 hours per day.

# Learning

- **Formative assessment:**  
Required. In selected states, teachers required to communicate/feedback to students.
  - **Diagnostic assessments:**  
Planned for when schools reopen in coordination with CAEEd.\*\*



# Kenya



\* Engagement is usually measured through effective time spent learning and frequency of use of channels. Kenya has made efforts to make remote learning more interactive but has not tracked engagement.

\*\* KICD: Kenya Institute for Curriculum Development.

## Inputs implemented

### Channel

- **Main channels:** Combination of TV, radio, and online ([Kenya Education Cloud](#)).
- **Partners:** Radio ([Kenya Broadcasting Corp](#)), Edu TV carried by free by signal providers.
- **Prior experience:** Radio learning program since 1963 and Edu TV since 2010.

### Content

- **Align to curriculum:** Yes. KICD\*\* is responsible for both curriculum development and content creation for remote learning.
- **Curation/Creation:** Content revised and improved from existing repository. 8 hrs. of radio and 12 hrs of TV content per day.

### Teacher & Parent support

- **Guidelines:** Delivered online and through schools, but not required to follow.
- **Training:** 'Emergency courses' on digital technologies for 3 thousand teachers.
- **Communication:** Lack strategy to communicate remote learning program.

## Outcomes achieved

### Reach

- **Total student population:** 75% accessing remote learning, but only 22% using digital/broadcast resources.
- **By channel:** Of that 22%, TV (42%), WhatsApp (27%), radio (19%), online (10%).

### Engagement\*

- **Interactive:** KICD\*\* improved interactivity across channels to increase engagement. A rapid survey shows that 73% of KICD innovations take students' feedback. However, data is not sufficient to understand engagement.

### Learning

- **Formative assessment:** Not required. Schools decide if teachers will reach out and provide feedback to students.
- **Diagnostic assessments:** Planned for when schools reopen; however, learning will start from where it stopped.

# Nigeria



States selected for this study: Edo.

\* Engagement is usually measured through effective time spent learning and frequency of use of channels. Edo-BEST has made efforts to measure frequency of use and engagement rates through a survey conducted by the Quality Assurance team, but data has not yet been analyzed.

## Inputs implemented

### Channel

- **Main channels:** Mobile-based applications.
- **Partners:** Bridge International Academies for technical support and content. MTN Communications for zero-rating app.

### Content

- **Align to curriculum:** Yes, to Nigeria's curriculum and Edo's syllabus.
- **Curation/Creation:** Content and learning activities have been strengthened and digitalized – audio lessons, self-study packs, storybooks, etc.

### Teacher & Parent support

- **Guidelines:** Delivered online.
- **Training:** All 11 thousand teachers and school leaders trained to use EdTech pre-COVID-19. Virtual coaching program.
- **Communication:** Contacted almost all parents through phone calls.

## Outcomes achieved

### Reach

- **Total student population:** 29% of primary school students accessing mobile-based learning.
- **By channel:** Challenge to understand percentage of students accessing each of Edo-BEST@Home's resources (e.g audio lessons VS self-study packs).

### Engagement\*

- **Comprehensive survey:** Tracks data related to frequency of use, engagement rates, parent support, and perceived effectiveness of teaching and learning. However, data has not yet been analyzed.

### Learning

- **Interactive quizzes:** Developed mobile automated quizzes for students to use at home every day. Students can access by sending a message to the WhatsApp group, choosing the grade, and subject.



## Peru



\* Engagement is usually measured through effective time spent learning and frequency of use of channels. Peru has used student satisfaction with remote learning as a proxy for engagement.

\*\* CBC: Competency Based Curriculum.

### Inputs implemented

#### Channel

- **Main channels:** TV, radio, and web. Printed material as a complement.
- **Partners:** Tech companies to host web; all telecoms to zero-rate mobile apps; broad-casters to transmit TV and radio content.
- **Prior experience:** Little.
- 

#### Content

- **Align to curriculum:** Yes, to CBC.\*\*
- **Curation/Creation:** Curated from partners (e.g. Plaza Sesamo Mexico and Paka Paka Argentina). Scale-up non-academic programs that proved effectiveness.
- **Diversity:** Content in 9 local languages; TV with sign language; web for special needs.

#### Teacher & Parent support

- **Guidelines:** Delivered online and SMS.
- **Training:** 'Crash courses' for 200 thousand teachers through the govt. online training platform.
- **Communication:** Schedules shared daily in newspapers, TV, radio, and social media.

### Outcomes achieved

#### Reach

- **Total student population:** 86% of students access govt. remote learning.
- **By channel:** TV (74%), radio (17%), web (19%).
- **Alternative:** Remote communities retransmitting radio content.

#### Engagement\*

- **Satisfaction:** TV (82%), radio (67%), and web (86%).
- **Frequency of use:** TV (4 days a week), radio (3 days a week), and webs (4 days a week).

#### Learning

- **Formative assessment:** Required. 85% of students received weekly support from teachers. 97% of teachers who contacted students sent homework every other day. 93% of teachers either graded or provided detailed feedback.

# Sierra Leone



\* Engagement is usually measured through effective time spent learning and frequency of use of channels. Sierra Leone has made efforts to make remote learning more interactive and engaging but has not tracked engagement or frequency of use rates. However, a study conducted during Ebola showed that the radio program helped students and teachers to maintain a link to education while schools were closed.

## Inputs implemented

### Channel

- **Main channels:** Radio learning program. Printed material (planned) as complement.
- **Partners:** Telecoms to toll-free calls to radio learning program; broadcasters to transmit radio content; third sector orgs.
- **Prior experience:** Ebola radio program.

### Content

- **Align to curriculum:** Yes.
- **Curation/Creation:** Curated from existing content repository and creating new learning sessions with support from private schools. Curriculum has been prioritized (multi-grade, subjects).

### Teacher & Parent support

- **Guidelines:** Delivered guidelines to teachers, especially for school reopening.
- **Training:** Teachers learning through the radio. Plan to pair high-performing teachers with those who need support.
- **Communication:** Mass media, social media, and loudspeakers (for illiterate).

## Outcomes achieved

### Reach

- **Districts reached:** The radio learning program currently reaches 15 out of 16 districts in the country (94%) through national radio and 12 community radio stations to reach remote communities. Data at student level not sufficient.

### Engagement\*

- **Maintain link with school:** During Ebola, radio programming helped students and teachers to maintain a link to education during the crisis.
- **Efforts to increase engagement:** Through 'live' phone line open after radio sessions.

### Learning

- **Remedial programs:** Planning to gradually reopen schools in July 2020 to provide remedial lessons for students who have to take national assessments by the end of the year.



# Afghanistan

## General Info

### Contributors to the Study

- A. Wassay, S. Sekandar, Qazizada, Sulimanzada, Amin**, Ministry of Education
- M. Noori, T. Fukao, T. Wilichowski**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	51%
Radio <sup>1</sup>	47%
Mobile <sup>1</sup>	87%
Internet <sup>2</sup>	11%

### Main Systems



### Sources

- UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
- WORLD BANK (2020). World Development Indicators
- UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- Coherence:** MoE recorded contents and broadcasted through TV and Radio channels, but not ensured alignment between those delivery systems
- Interactivity:** At the end of each lesson, assignments given to students for practice and guidelines for parents to review

### Teacher Support

- Type of support:** Government has not implemented large-scale remote teacher training programs. Few teachers selected to record lessons.
- Emotional monitoring:** Not being tracked

### Remedial Learning

- Assessing students:** At the end of academic year, students will be assessed through regular annual exams
- Type of remedial learning:** Extended academic year, reopened schools and introduced [accelerated learning programs by leveraging prior experience](#)

### Curriculum Adjustment

- Type of adjustment:** Focused on core subjects (Science and Mathematics). For social subjects (e.g. History, Geography) students are guided to pursue in a self-paced manner
- Content curation:** MoE developed new contents for prioritized courses. Contents developed by NGO's were reviewed, but were not aligned to curriculum
- Perceived benefits:** Rapid implementation and reduced development costs

### Monitoring & Evaluation

- Coverage & Engagement:** MoE not yet monitored outcomes of remote learning. An [evaluation of education response plan to COVID-19](#) started Nov 2020

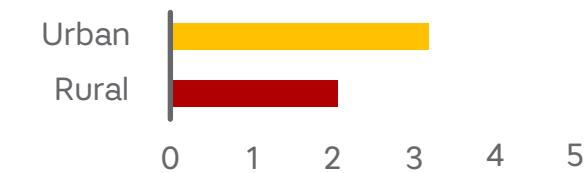
### Equity & Inclusion

- Inclusion strategies:** No strategy in place for now; remote learning lessons offered through TV and radio are available in both official languages (Dari and Pashto)

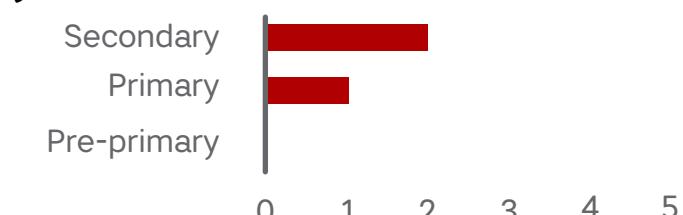
## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### By location

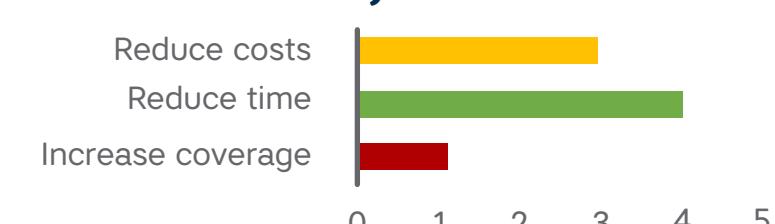


#### By Education level



### Curriculum Adjustment

#### Effectiveness by end result



### Teacher time allocation

Administrative	10%
Pedagogical	90%

● <=3    ● 3<=Effectiveness<4    ● >=4



# Cambodia

## General Info

### Contributors to the Study

- **L. Chavanna**, Ministry of Education
- **S. Soth, M. Socheath**, Royal Univ. of Phnom Penh
- **F. No, S. Beng**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	66%
Radio <sup>1</sup>	40%
Mobile <sup>1</sup>	87%
Internet <sup>2</sup>	40%

### Main Systems



### Sources

1. UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
2. WORLD BANK (2020). World Development Indicators
3. UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence:** Taskforce [led by the MoE](#) supervises content creation and alignment
- **Interactivity:** Handouts are distributed to students and teachers send feedback through Telegram app

### Teacher Support

- **Type of support:** Guidelines provided (e.g. establish online learning groups with students), and [plan developed to improve pedagogical skills](#). Handouts have guidelines for teachers to facilitate feedback
- **Emotional monitoring:** Not yet implemented, but teachers spent most time on administrative activities

### Remedial Learning

- **Assessing students:** Plan after school reopen. Focus on grade 9 and 12 (national exams)
- **Type of remedial learning:** Extra class time for specific groups of students, vulnerable students to be prioritized. Remote learning is expected to continue after school reopening

### Curriculum Adjustment

- **Type of adjustment:** Core subjects for primary (Mathematic and Khmer language), secondary (Physic, Biology, History, Khmer language and Chemistry) and focus on foundational knowledge
- **Perceived benefits:** Implement in less time

### Monitoring & Evaluation

- **Coverage & Engagement:** 65% of teachers shared videos with students. 74% of teachers facilitated small learning groups in homes or villages, 73% send worksheets and provide feedback
- **Effective combination:** [Low-tech & high-tech](#) – Online, mobile, and paper-based

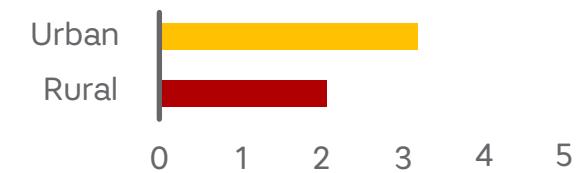
### Equity & Inclusion

- **Inclusion strategies:** Increase connectivity in remote areas and continuous [learning materials for children with disabilities](#)
- **Gaps and challenges:** Technical support needed to make sure practice sheets are suitable for students with especial needs

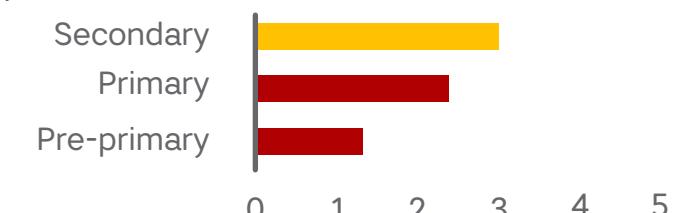
## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### By location

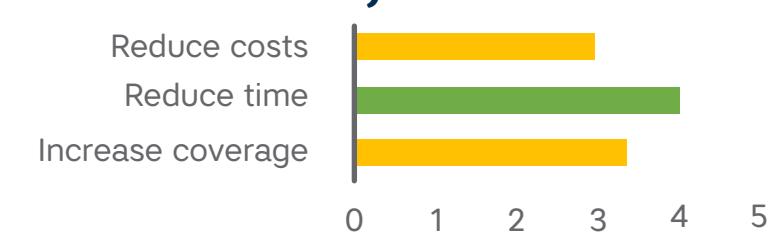


#### By Education level



### Curriculum Adjustment

#### Effectiveness by end result



### Teacher time allocation

Administrative	60%
Pedagogical	40%

● <=3 ● 3<=Effectiveness<4 ● >=4



# Cameroon

## General Info

### Contributors to the Study

- **T. Djotio, S. Bilong IV**, Polytechnic Institut. University of Yaounde II
- **E. Lisette, E. Priso, Ndayi**, Ministry of Education
- **K. Bosco**, UNESCO
- **V. Perrot**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	46%
Radio <sup>1</sup>	56%
Mobile <sup>1</sup>	67%
Internet <sup>2</sup>	23%

### Main Systems



### Sources

1. UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
2. WORLD BANK (2017). World Development Indicators
3. UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence**: Main systems used are TV, radio, printed material. UNESCO supporting the MoE to ensure alignment across channels
- **Interactive**: Facilitator receives questions from students through SMS and teachers answer through TV

### Teacher Support

- **Type of support**: With [support from GPE](#), teachers are coached. The platform Mon Ecole en Ligne developed to support teachers
- **Emotional monitoring**: University counsellors supporting teachers to handle socio-emotional response

### Remedial Learning

- **Assessing students**: Teachers encouraged to conduct diagnostic assessments
- **Type of remedial learning**: Face-to-face classes have resumed (2 shifts) to be combined with distance learning. Focus on catching up 25% of the program not studied during the 2019-2021 school year

### Curriculum Adjustment

- **Type of adjustment**: Core subjects were selected (Maths, ICT, Sciences, French and English)
- **Perceived benefits**: Cost reduction; however, implementation is still challenging

### Monitoring & Evaluation

- **Coverage & Engagement**: MoE has set up a M&E team. At the current stage (1 month after start of school year), no results yet recorded on M&E

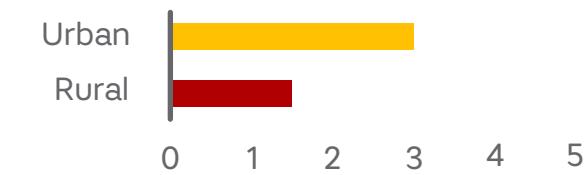
### Equity & Inclusion

- **Inclusion strategies**: No tangible national action concerning students with specific needs. Pilot project to deliver content through solar tablets with support from [UNICEF 'Connect My School' Program](#), as well as textbooks for those without electricity
- **Gaps and challenges**: Most students in rural areas lack access to electricity, devices and connectivity

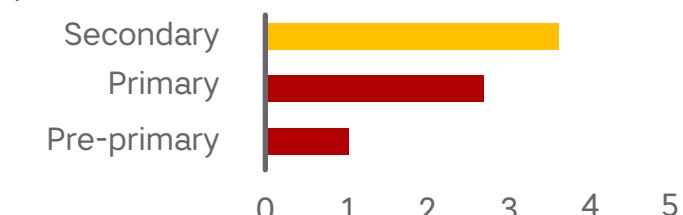
## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### By location

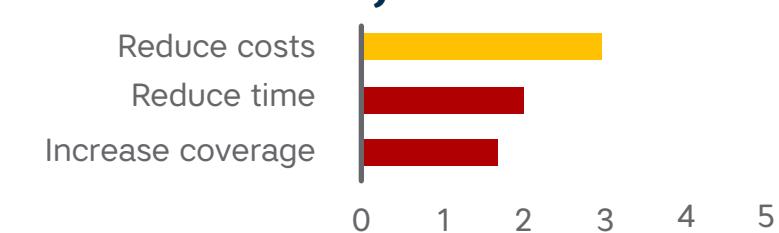


#### By Education level



### Curriculum Adjustment

#### Effectiveness by end result



### Teacher time allocation

Administrative	15%
Pedagogical	85%

● <=3 ● 3<=Effectiveness<4 ● >=4



# Haiti

## General Info

### Contributors to the Study

- **Joseph, J. Pierre**, Ministry of Education
- **R. Saint Pierre**, IHFOSED
- **M. Augustin**, PEQH
- **Y. Jantzem**, C. Muriel, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	31%
Radio <sup>1</sup>	48%
Mobile <sup>1</sup>	76%
Internet <sup>2</sup>	33%

### Main Systems



### Sources

1. UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
2. WORLD BANK (2017). World Development Indicators
3. UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence:** No shift towards distance education, exceptions: [platform PRACTIC](#) for two grades that sit for exams (9<sup>th</sup> and 12<sup>th</sup>)
- **Interactivity:** Private schools using Zoom. Students travel to their classmates' home in case they do not have access at home

### Teacher Support

- **Type of support:** [Training for 7,000 teachers](#) to support remote learning, under GPE funding. As 85% of schools are private and many parents no longer paid tuition fees, many teachers were not paid during school closures

### Remedial Learning

- **Assessing students:** National standardized tests maintained in the traditional format for grades 9<sup>th</sup> and 12<sup>th</sup>. No repetition, transition to upper class will be automatic
- **Type of remedial learning:** Catch-up program (55 days) for those students who sit for exams

### Curriculum Adjustment

- **Type of adjustment:** Adjusted curriculum developed by the MoE with support from teachers. Core subjects and foundational knowledge were selected

### Monitoring & Evaluation

- **Coverage & Engagement:** Monitoring systems not yet implemented, but plan to strengthen capacity of the MoE at all levels is under implementation following the [COVID-19 action plan](#)

### Equity & Inclusion

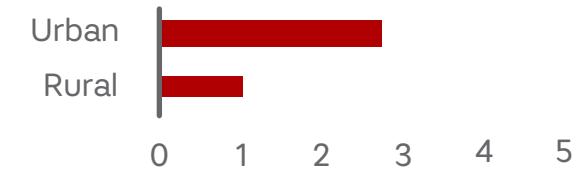
- **Inclusion efforts:** Through [GPE support](#), government planned to provide kits for children and teachers in 350 schools. 1,000 students with special needs to receive psychosocial support and tailored distance learning

- **Gaps and challenges:** Students could not charge their smartphone to access content. 15% of students dropped out due to high Internet costs

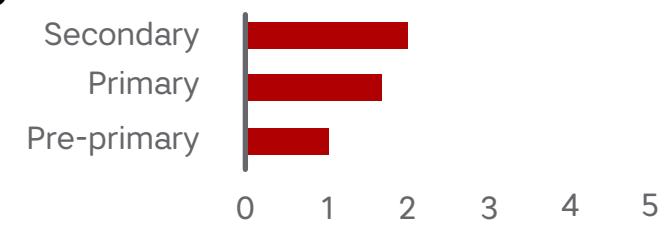
## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

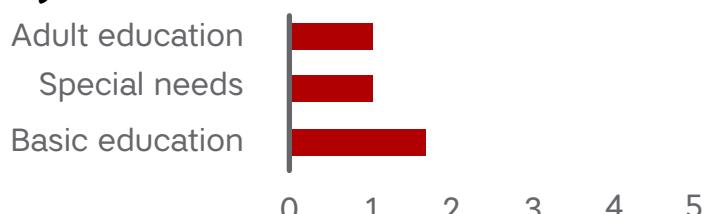
#### • By location



#### • By Education level

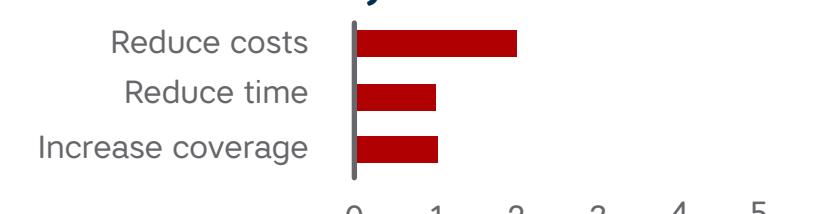


#### • By need



### Curriculum Adjustment

#### • Effectiveness by end result



● <=3

● 3<=Effectiveness<4

● >=4



# Kenya

## General Info

### Contributors to the Study

- **J. Cotter**, EdTech Hub
- **L. Mucheru, C. Ong'ondo**, Kenya Institute for Curriculum Development (KICD)
- **R. Charo**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	37%
Radio <sup>1</sup>	71%
Mobile <sup>1</sup>	90%
Internet <sup>2</sup>	17%

### Main Systems



### Sources

1. UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
2. WORLD BANK (2017). World Development Indicators
3. UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence:** Combination of [Edu TV](#), [radio](#), and [online \(Kenya Education Cloud\)](#). KICD responsible for curriculum development and content creation allows for coherence
- **Interactivity:** Recorded lessons feature hosts and students that provide feedback to questions. SMS program planned

### Teacher Support

- **Type of support:** 'Emergency courses' on digital technologies for 3,000 teachers

### Remedial Learning

- **Assessing students:** Kenya National Examination Council (KNEC) completed an assessment with students who returned to schools; results yet to be published. Learning will start from where it stopped
- **Type of remedial learning:** Condensed schedule with longer days and fewer breaks for students to catch up by 2022

### Curriculum Adjustment

- **Type of adjustment:** Curriculum not adjusted, but guidelines given to only use KICD-approved materials. Some learning materials being curated from [Tusome, an early grade reading program](#)
- **Perceived benefits:** Rapid implementation and reduced development costs

### Monitoring & Evaluation

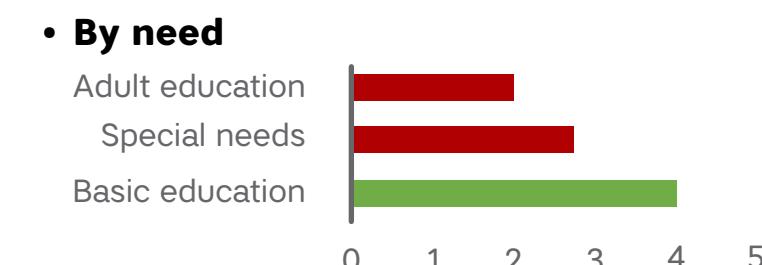
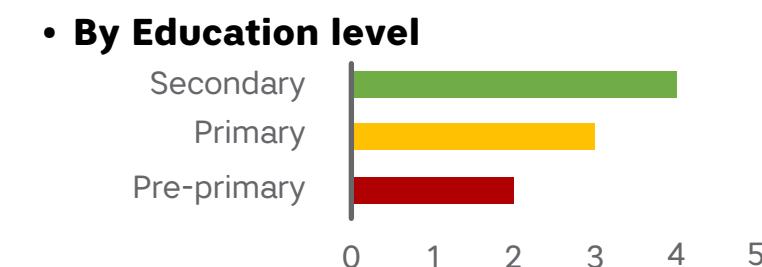
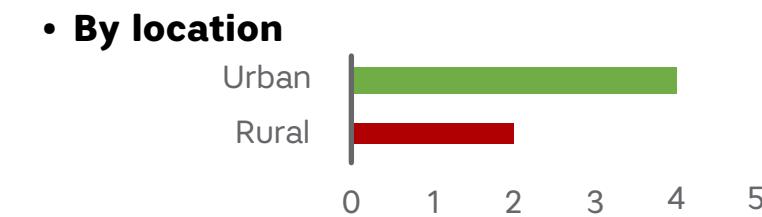
- **Coverage & Engagement:** 75% accessing remote learning, but only [22% using digital/broadcast resources](#). Engagement has been low according to [KICD's rapid survey](#)
- Effective combination: Low-tech and high-tech. TV, radio and online

### Equity & Inclusion

- **Inclusion efforts:** TV lessons with sign language
- **Gaps and challenges:** Kenya Education Cloud materials are useful but few students have accessed due to lack of connectivity, devices and digital literacy skills

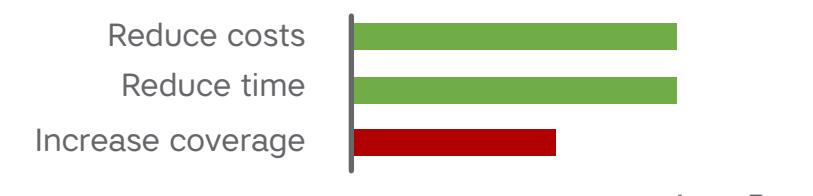
## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students



### Curriculum Adjustment

#### Effectiveness by end result



● <=3 ● 3<=Effectiveness<4 ● >=4



# Malawi

## General Info

### Contributors to the Study

- **X. Yu, M. Sikaulu, H. Mutsinzi**, UNICEF
- **E. Simango, G. Mafuta, R. Samati**, Ministry of Education
- **S. Asim**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	11%
Radio <sup>1</sup>	33%
Mobile <sup>1</sup>	51%
Internet <sup>2</sup>	17%

### Main Systems



### Sources

1. UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
2. WORLD BANK (2017). World Development Indicators
3. UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence:** Contents aligned with curriculum. Each education level has a specific delivery system (radio for ECD and primary, online for secondary)
- **Interactivity:** Student-centered radio lessons with questions and learning exercises

### Teacher Support

- **Type of support:** Online training courses being developed from scratch, but conceptualization has taken time. Recruited volunteer teachers and introduced double shifts to alleviate class congestion
- **Emotional monitoring:** Not tracked

### Remedial Learning

- **Assessing students:** Planning to conduct diagnostic assessments once schools reopen to support teachers to provide remedial lessons
- **Type of remedial learning:** Planning to adjust calendars to focus on core subjects, and conduct [accelerated learning programs](#)

### Curriculum Adjustment

- **Type of adjustment:** Core subjects selected (Literacy, Numeracy, Science at primary level; English, Chichewa, Maths, Biology, Physic, Agriculture, Chemistry at secondary)
- **Perceived benefits:** Rapid implementation, cost savings

### Monitoring & Evaluation

- **Coverage & Engagement:** [according to U-Reports](#), 36% of school going age children accessing distance learning. 86% of those who cannot access to remote learning, lack electricity, connectivity or devices
- **Effective combination:** Unimodal system by education level

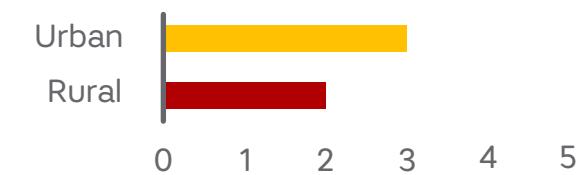
### Equity & Inclusion

- **Inclusion efforts:** Self-study materials developed to reach students who lack devices and electricity in remote areas. Procurement of solar radios and tablets to be distributed. Printed material in braille for students with visual disabilities

## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### • By location

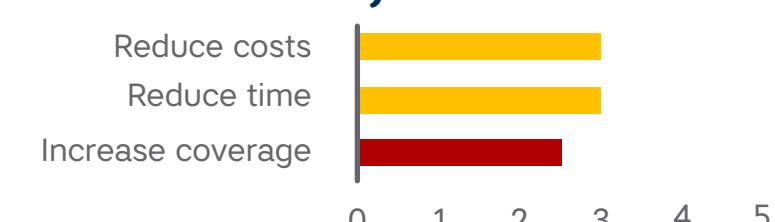


#### • By Education level



### Curriculum Adjustment

#### • Effectiveness by end result



### Teacher time allocation

Administrative	10%
Pedagogical	90%

● <=3    ● 3<=Effectiveness<4    ● >=4



# Mozambique

## General Info

### Contributors to the Study

- S. Tovela, A. Utui, J. Jeque, J. Dinis,** Ministry of Education
- P. Potter, A. Wilson, T. Shibuya,** UNICEF
- K. Eisenmann,** GIZ
- M. Bassi,** World Bank

### Access to devices/connectivity

TV <sup>1</sup>	26%
Radio <sup>1</sup>	36%
Mobile <sup>1</sup>	63%
Internet <sup>2</sup>	21%

### Main Systems



### Sources

- UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
- WORLD BANK (2017). World Development Indicators
- UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- Coherence:** [TV, radio, and online learning sessions](#) aligned to the curriculum; contents across systems are similar
- Interactivity:** Pre-COVID, Tele-Escola had space for students to interact with teachers – challenge to scale up this space

### Teacher Support

- Type of support:** Teachers selected to deliver lessons through TV and radio have been trained. ICT teachers create paper-based learning materials and other teachers provide feedback and grade materials
- Emotional monitoring:** Well-being tracked

### Remedial Learning

- Assessing students:** Planning to conduct diagnostic assessments once schools reopen and evaluations after remedial programs
- Type of remedial learning:** School calendar prioritizes revision instead of new content and is [focused on students falling behind](#)

### Curriculum Adjustment

- Type of adjustment:** Core subjects and foundational knowledge have been selected. Education levels with exams were prioritized
- Perceived benefits:** Focused on mitigating learning losses

### Monitoring & Evaluation

- Coverage & Engagement:** MoE established official channel for parents' feedback. UNICEF providing support to set up real time monitoring system through a call center
- Effective combination:** Low-tech focus – community radio combined with paper-based learning materials

### Equity & Inclusion

- Inclusion efforts:** Content currently delivered in the official and local languages. [TV programs incorporate sign language](#), radios distributed to families with financial needs, take-away paper-based exercises distributed in remote areas

## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### By location

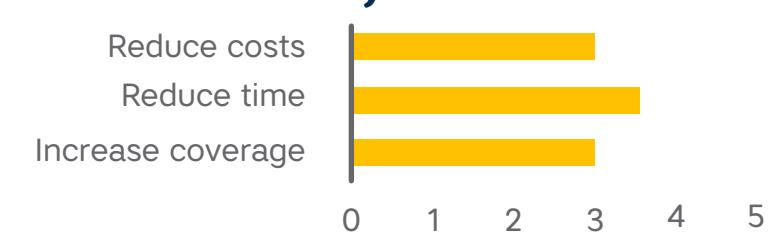


#### By Education level



### Curriculum Adjustment

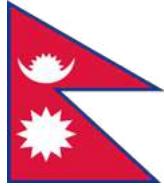
#### Effectiveness by end result



### Teacher time allocation

Administrative	47%
Pedagogical	53%

● <=3 ● 3<=Effectiveness<4 ● >=4



# Nepal

## General Info

### Contributors to the Study

- **G. Prasad, J. Dinis**, Kailari Municipality
- **M. Sharma**, Soludhudkunda Municipality
- **L. Paudyal**, Save the Children
- **G. Shyam**, Education and HR
- **K. Radhakrishnan**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	52%
Radio <sup>1</sup>	29%
Mobile <sup>1</sup>	93%
Internet <sup>2</sup>	21%

### Main Systems



### Sources

1. UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
2. WORLD BANK (2017). World Development Indicators
3. UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence:** Discussions in [education cluster meetings](#) about the development and dissemination of learning sessions to avoid duplication of efforts and ensure coherence
- **Interactivity:** [Interactive radio](#) and edtech with automated feedback, but limited reach

### Teacher Support

- **Type of support:** Third sector orgs. and local education units provided training on digital skills, but with limited reach/coverage
- **Emotional monitoring:** Teachers raised safety concerns due to COVID. Government responded by providing an insurance, but recognizes the need for emotional support

### Remedial Learning

- **Assessing students:** In Kilar Rural Municipality, planning to conduct online assessments
- **Type of remedial learning:** In Soludhudkunda Municipality, extra class time for remedial learning

### Curriculum Adjustment

- **Type of adjustment:** [Curriculum Development Center](#) selected core subjects, contents and multi-graded sessions, covering 30% of the curriculum
- **Perceived benefits:** Reduced implementation time and allowed for cost-effectiveness

### Monitoring & Evaluation

- **Coverage & Engagement:** MoE assigned staff to report on effectiveness of remote learning, but lack of concrete results. Urgent need for systematic monitoring
- **Effective combination:** Low-tech focus – radio and printed materials (rural), TV and printed (urban)

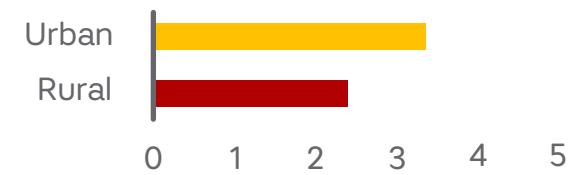
### Equity & Inclusion

- **Inclusion efforts:** [Self-learning printed material](#) from ECD to grade 8 children targeted for students who lack access to devices and connectivity for remote learning. ~165,000 materials given thus far. TV learning sessions developed on sign language

## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### • By location



#### • By education level



### Curriculum Adjustment

#### • Effectiveness by end result



### Teacher time allocation

Administrative	50%
Pedagogical	50%

● <=3 ● 3<=Effectiveness<4 ● >=4



# Niger

## General Info

### Contributors to the Study

- **B. Zara**, Ministère de l'enseignement primaire
- **Z. Ibrahim Sidi**, Université Abdoul Moumouni de Niamey
- **Z. Mohamed**, Ministère de l'enseignement secondaire
- **P. Mulet**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	12%
Radio <sup>1</sup>	52%
Mobile <sup>1</sup>	50%
Internet <sup>2</sup>	5%

### Main Systems



### Sources

1. UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
2. WORLD BANK (2017). World Development Indicators
3. UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence:** Government mainly uses TV, radio, and online as delivery systems, but contents are not necessarily aligned
- **Interactivity:** WhatsApp and Telegram used as a complement to one-way systems. [Edtech platforms](#) used in private schools

### Teacher Support

- **Type of support:** INDRAP (Institut national de documentation de recherche et d'animation pédagogiques) trains teachers and develops curriculum. Once schools reopened, remote training programs were no longer continued (lack of online platforms, connectivity, etc)

### Remedial Learning

- **Assessing students:** 2 instead of 3 exams conducted in classroom following the traditional method
- **Type of remedial learning:** Schools closed less than 3 months. For remediation: support provided for students who need it, [leveraging prior experience](#)

### Curriculum Adjustment

- **Type of adjustment:** Partial adjustments because schools were closed for a short period. Core subjects suggested by the MoE (Mathematics, Reading, French and Morals)

### Monitoring & Evaluation

- **Coverage & Engagement:** The monitoring strategy was well planned but faced challenges to implement. Tests were carried out but results were not judged with the same rigor. Most students were able to move up to the next grade with the commitment of an additional support. Teachers have been called upon to follow-up with these students

### Equity & Inclusion

- **Inclusion efforts:** Local language component is well targeted through community radios to reach a large audience. Usage of sign language and braille for learners with visual disabilities. [Distribution of printed materials for marginalized students](#)

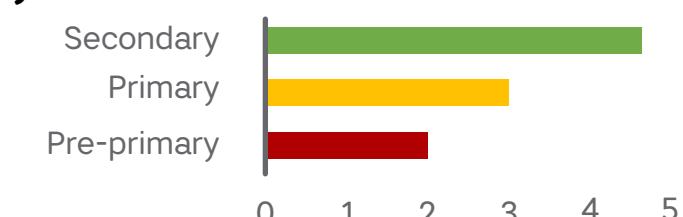
## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### • By location

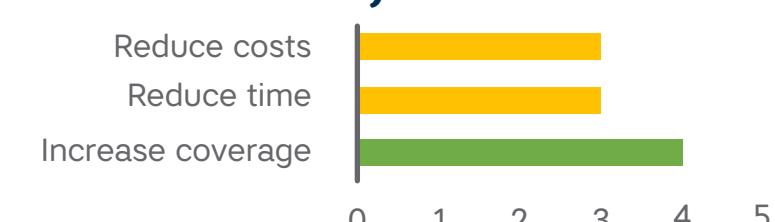


#### • By education level



### Curriculum Adjustment

#### • Effectiveness by end result



### Teacher time allocation

Administrative	20%
Pedagogical	80%

● <=3 ● 3<=Effectiveness<4 ● >=4



# Pakistan

## General Info

### Contributors to the Study

- A. Mufti**, PMIU Punjab
- B. Raza, S. Saeed**, Idara-e-Taleem-o-Aagahi
- K. Martijn Geven, A. Hasan**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	63%
Radio <sup>1</sup>	3%
Mobile <sup>1</sup>	94%
Internet <sup>2</sup>	17%

### Main Systems



### Sources

- UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
- WORLD BANK (2017). World Development Indicators
- UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- Coherence:** Curriculum department develops and verifies that content is coherent across delivery systems (TV, Online, Mobile)
- Interactivity:** Developed animated characters that were incorporated in the videos as facilitators during lessons

### Teacher Support

- Type of support:** Teachers not yet involved because TaleemGhar follows a one-way model. Going forward, teachers will conduct formative assessments. The government provided online and onsite training to teachers of COVID-19 (Health Safety)

### Remedial Learning

- Assessing students:** Annual exams cancelled, and students promoted based on guidelines. Planning to conduct sample-based assessments when schools reopen.
- Type of remedial learning:** Accelerated Learning Programs are being planned

### Curriculum Adjustment

- Type of adjustment:** Condensed curriculum covers 60%, focus is on core subjects (Maths, Science, and Languages)
- Perceived benefits:** Content curation allowed to implement rapidly – immediate airing of content on TV

### Monitoring & Evaluation

- Coverage & Engagement:** Data not yet collected by the government. Going forward, monitoring has been planned
- Effective combination:** Low-tech & high-tech – TV Channel, Android Application, Website, Youtube Channel

### Equity & Inclusion

- Inclusion efforts:** Videos are designed to be visually descriptive. The visuals are used to better explain the concepts. Lessons are not yet adapted to local languages
- Challenges:** Most students lack access to devices and connectivity

## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

- By location

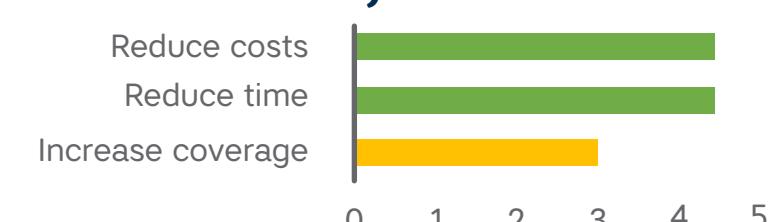


- By education level



### Curriculum Adjustment

- Effectiveness by end result



### Teacher time allocation

Administrative	30%
Pedagogical	70%

● <=3    ○ 3<=Effectiveness<4    ● >=4



# Rwanda

## General Info

### Contributors to the Study

- I. Ndayambaje, A. Sebaganwa, J. Murungi**, Rwanda Education Board
- M. Tusiime**, University of Rwanda
- H. Kidwai**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	11%
Radio <sup>1</sup>	42%
Mobile <sup>1</sup>	63%
Internet <sup>2</sup>	22%

### Main Systems



### Sources

- UNICEF (2020). DHS, MICS and MIS data on the assets for remote learning among households
- WORLD BANK (2017). World Development Indicators
- UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- Coherence:** National Radio does the overall production, editing and airing of content that is shared across all other systems
- Interactivity:** USSD press 3 numbers and started interacting (students send SMS and team of 14 teachers replying + answer bank)

### Teacher Support

- Type of support:** MoE implemented remote training programs for 5,400 teachers in ICT in education. Telephones, Laptops and other devices were given to some teachers to teach remotely. Almost 7,000 new teachers were recruited during COVID-19 period

### Remedial Learning

- Assessing students:** National wide test will be given to students and those with zero scores will be identified for remedial learning
- Type of remedial learning:** [Catch up program package and guidelines](#) were provided. Focus on students with risk of drop out and/or poor performance

### Curriculum Adjustment

- Type of adjustment:** Core subjects have been selected based on those that students will be evaluated
- Perceived benefits:** Content curation allowed to implement rapidly – immediate airing of content on TV

### Monitoring & Evaluation

- Coverage & Engagement:** [Rwanda Education Board](#) hired consultants to assess the effectiveness of remote learning. Development partners supporting through quick phone surveys to parents. Every 2 weeks, access and penetration are monitored. [80% of children are spending time on distance education](#)
- Effective combination:** Low-tech & high-tech – Radio and mobile phone

### Equity & Inclusion

- Inclusion efforts:** Incorporated sign language expert in live shooting sessions. Braille prepared lessons to be increased and sent to students with visual disabilities. Radio is accessible to more marginalized groups or disadvantaged children

## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### By location

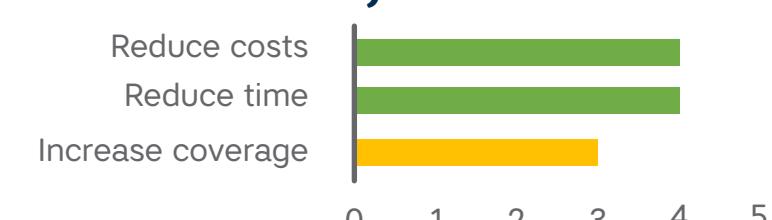


#### By education level



### Curriculum Adjustment

#### Effectiveness by end result



### Teacher time allocation

Administrative	55%
Pedagogical	45%

● <=3 ● 3<=Effectiveness<4 ● >=4



# Estonia

## General Info

### Contributors to the Study

- I. Ndayambaje, A. Sebaganwa, J. Murungi**, Rwanda Education Board
- M. Tusiime**, University of Rwanda
- H. Kidwai**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	93%
Mobile broadband <sup>2</sup>	158%
Internet <sup>3</sup>	91%

### Main Systems



### Sources

- DATAXIS (2020). Estonia – Market Reports
- OECD (2020). Broadband statistics update
- WORLD BANK (2018). T360 Data
- UNESCO (2020). Global monitoring of school closures

## Education Response: Remote and Remedial Learning

### Delivery Systems

- Coherence:** Schools have autonomy to choose and/or align contents. MoE developing AI-driven personalized learning platform to track student progress to the curriculum
- Interactivity:** all digital, automated feedback

### Teacher Support

- Type of support:** Training programs existed before COVID and executed by partner org [HITSA \(Information Technology Foundation\)](#). Online communities have been effective to share tutorials, best practices, and resources
- Emotional monitoring:** teacher time allocation changed and well-being was affected

### Remedial Learning

- Assessing students:** MoE does not interfere with assessment practices in schools. Offer flexible options for school graduation (e.g. [examinations were made optional](#))
- Type of remedial learning:** focused on core subjects, but up to schools to implement

### Curriculum Adjustment

- Type of adjustment:** Schools are responsible for designing and adjusting their own curriculum. No guideline was given by the MoE for curriculum adjustment or to follow the [National Curriculum](#). Up to teachers and schools to adjust as needed

### Monitoring & Evaluation

- Coverage & Engagement:** 71% of students in age 10-18 use online tests for learning. [64% of students get teachers' feedback](#) and consider it one of 3 most important supporting activities. [90% of students satisfied with remote learning](#)
- Effective combination:** Fully online

### Equity & Inclusion

- Inclusion efforts:** Advised all teachers who asked for help in arranging distance learning for students with special needs
- Gaps and challenges:** Lack of digital interactive learning material, especially for non-native language speakers

## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

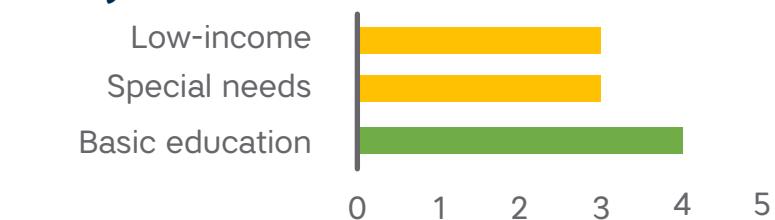
- By location



- By education level



- By need



### Teacher time allocation

Administrative	33%
Pedagogical	67%



# Uruguay

## General Info

### Contributors to the Study

- **M. Sotelo**, ANEP
- **C. Hughes**, CEIBAL
- **D. Vaillant**, Universidad ORT
- **S. Perez**, CEIP
- **P. Kuzma**, CES
- **H. Rovner**, World Bank

### Access to devices/connectivity

TV <sup>1</sup>	97%
Radio <sup>1</sup>	91%
Mobile <sup>2</sup>	92%
Internet <sup>3</sup>	85%

### Main Systems



### Sources

1. OPEN SOCIETY (2013). Media report
2. GSMA (2016). The mobile economy
3. URUGUAY XXI (2019). A technological revolution

## Education Response: Remote and Remedial Learning

### Delivery Systems

- **Coherence:** Personalized content for teachers, students and families through the [CREA LMS](#)
- **Interactivity:** Virtual learning sessions are synchronic to ensure interactivity

### Teacher Support

- **Type of support:** Teachers received [guidelines](#) and support through in-service digital/pedagogical coaching and the CREA LMS. Identified that teachers had different level of digital competences and it has been challenging to train beginner teachers in a short time

### Remedial Learning

- **Assessing students:** Formative voluntary online evaluations (over 50% of students registered). Online evaluation system developed before COVID-19
- **Type of remedial learning:** Tutoring support for most vulnerable students planned for the summer (Feb 2021)

### Curriculum Adjustment

- **Type of adjustment:** Core subjects were selected. Provided guidelines of specific competences and foundational knowledge to prioritize in each course. Ceibal already had a [content repository](#) with curated contents

### Monitoring & Evaluation

- **Type of adjustment:** Core subjects were selected. Provided guidelines of specific competences and foundational knowledge to prioritize in each course. Ceibal already had a content repository with curated contents

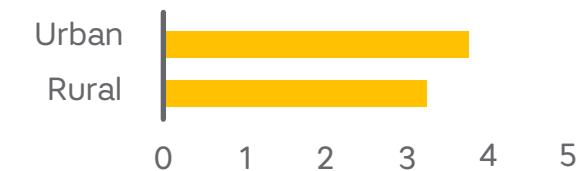
### Equity & Inclusion

- **Type of adjustment:** Core subjects were selected. Provided guidelines of specific competences and foundational knowledge to prioritize in each course. Ceibal already had a content repository with curated contents

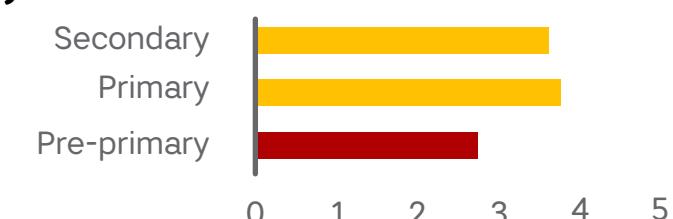
## Perceived Effectiveness

### Policy effectiveness of delivery systems to reach students

#### • By location

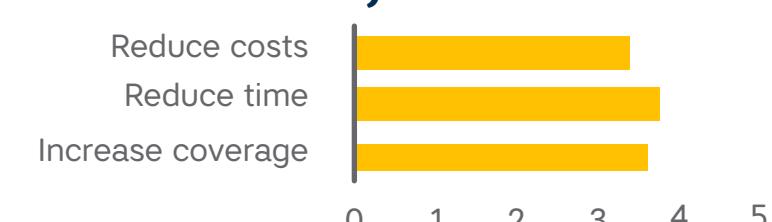


#### • By education level



### Curriculum Adjustment

#### • Effectiveness by end result



### Teacher time allocation

Administrative	20%
Pedagogical	80%

● <=3    ● 3<=Effectiveness<4    ● >=4

## Additional Resources



### Blogs about the study: Deep dive with some of the lessons learned.

#### >**Remote learning during COVID-19 pandemic:**

Learn how countries have faced the challenge of implementing multichannel education delivery strategies  
<https://blogs.worldbank.org/education/remote-learning-during-covid-19-pandemic-how-countries-have-faced-challenge-implementing>

#### >**The changing role of teachers and technologies amidst the COVID 19 pandemic.**

The authors analyze how adaptable and resilient educational systems, policy makers, teachers, students and families can be during the pandemic. <https://blogs.worldbank.org/education/changing-role-teachers-and-technologies-amidst-covid-19-pandemic-key-findings-cross>

>**What is Hybrid Learning?** After the global school lockdown due to the COVID-19 pandemic, countries have been exploring a variety of hybrid learning modalities as they re-open schools. <https://blogs.worldbank.org/education/what-hybrid-learning-how-can-countries-get-it-right>

>**Reimagining Human Connections:** Technology and Innovation in Education at the World Bank ([EdTech strategy document](#)): The use of EdTech should be guided by a clear purpose; reaching all learners; empowering teachers; engaging the ecosystem; and using data rigorously to learn how EdTech can maximize student learning.

<https://www.worldbank.org/en/topic/edutech/publication/reimagining-human-connections-technology-and-innovation-in-education-at-world-bank>

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