



PHOTO | USAID EDUCATION IN EMERGENCY PROJECT/ SAVE THE CHILDREN

REMEDIAL EDUCATION AT SCALE

LITERATURE REVIEW

JULY 2023

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We hope this review will be helpful to USAID staff and international partners, in particular, as we continue to search for ways to make education programming more accessible and effective for all learners, especially after major disruptions.

ACRONYMS AND ABBREVIATIONS

ASER	Annual Status of Education Report
ATP	annual teaching plans
BE2	Building Evidence in Education
DRC	Democratic Republic of the Congo
EDC	Education Development Center
EGRA	Early Grade Reading Assessment
HIC	high-income country
IP	implementing partner
LIC	low-income country
LMIC	low- and middle-income country
MATTERS	Reading MATTERS framework
NGO	nongovernmental organization
QITABI 2	Quality Instruction Towards Access and Basic Education Improvement
Rtl/MTSS	Response to Intervention/Multi-tiered Systems of Support
SEL	social and emotional learning
SMS	Short Message Service
SWDs	students with disabilities
TaRL	Teaching at the Right Level
TEGM	The General Directorate of Primary Education
TNRP	Turkish National Remedial Program
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children’s Emergency Fund
USAID	U.S. Agency for International Development
WASH	water, sanitation, and hygiene

EXECUTIVE SUMMARY

The COVID-19 pandemic caused unprecedented disruption to schooling for the majority of learners around the world. Evidence suggests that distance learning strategies were largely ineffective in maintaining children’s learning and magnified inequities in access to schooling. In many countries most students continue to need some remedial support across subjects. COVID-19 closures often compounded school challenges arising from natural disasters and/or conflict. Disruptions further exacerbated disparities, with the marginalized and those already struggling with school being affected the most.^{1, 2, 3, 4} According to the 2022 Learning Poverty Report, due to the pandemic, learning poverty indicatorsⁱ have risen to 76.7 percent in lower middle income countries (LMICs) and 91.7 percent in low income countries (LICs).⁵ Responding to COVID-19-related learning loss requires more systems-level and scaled responses. As of July 2022, 80 percent of countries participating in the fourth round of a United Nations Educational, Scientific and Cultural Organization (UNESCO), World Bank, United Nations Children’s Fund (UNICEF), and Organization for Economic Cooperation and Development (OECD) survey reported implementing national programs to provide additional support to students after COVID-19-related closures, including remedial support, during the 2021–2022 school year at the primary, lower, and upper secondary levels.⁶

This report shares findings from a review of relevant literature and consultations to better inform ministries of education, USAID Missions, and partners of current initiatives and opportunities to further enhance remediation efforts. The review focuses on formal schooling, largely at the primary level, and programming at scale. Due to the timing of this study relative to the recent disruptions, the activities described in this report are examples of practice not evidence of success about a practice unless otherwise noted in the report. The report begins with a look at how children return to school through access measures and then focuses the main body of the report on eight key components that align with the USAID Reading MATTERS framework.

ACCESS

Maximizing student return to the classroom is an essential component of learning recovery after disruption. Promising efforts to bolster access to learning after school re-openings use four community engagement techniques: back-to-school campaigns, data-driven actions using educational management information systems (EMIS) to identify students in greatest need of support, targeting the most vulnerable populations before expanding remedial programming nationwide, and expanding WASH infrastructure and programming.

REMIEDIATION AND LEARNING RECOVERY PRACTICES

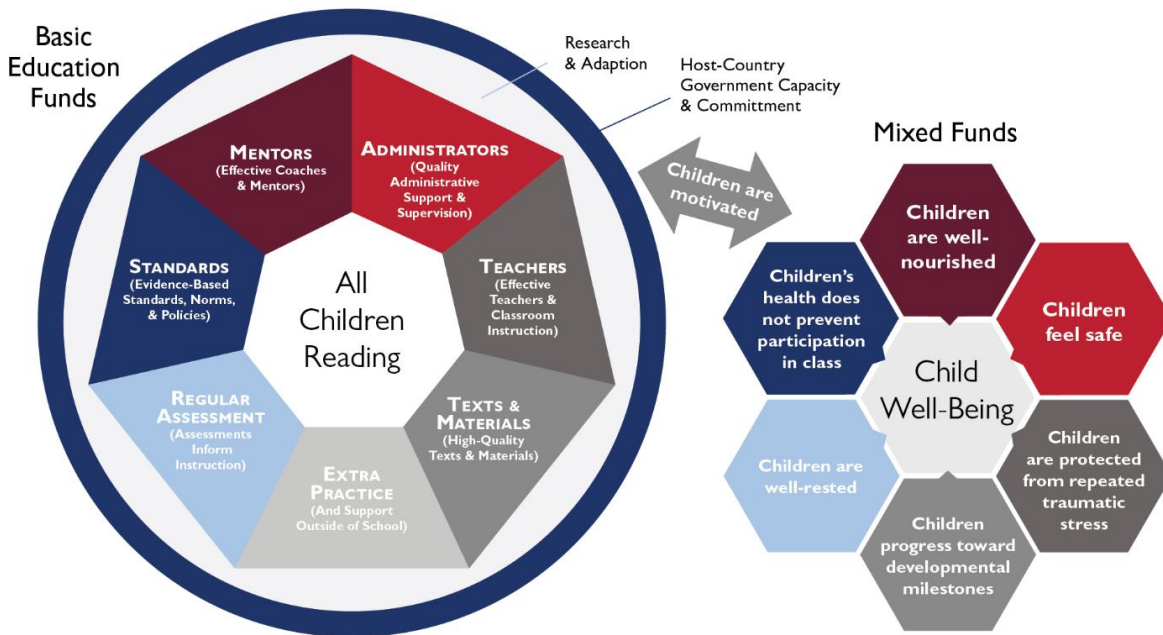
Remedial education programming aims to help learners catch up on missed learning through a variety of means that include specific content, active learning pedagogies, and additional instructional time.^{7, ii} This review focuses on learners who are in school, generally on-age for their grade, and who need remedial support due to interruptions in schooling. The USAID Reading MATTERS framework guides this

ⁱ The World Bank developed the learning poverty rate as an indicator in 2019. It measures the proportion of children who cannot read a simple text with comprehension by age 10. (World Bank, UNESCO, UNICEF, FCDO, USAID & BMGF, [The State of Global Learning Poverty: 2022 Update](#), June 23, 2022.)

ⁱⁱ This definition differs slightly from the Accelerated Education Working Group (AEWG) definition that identifies remedial programming as “additional targeted support, concurrent with regular classes, for students who require short-term content or skill support to succeed in regular formal programming.” (AEWG, [“Guide to the Accelerated Education Principles”](#) [Geneva: AEWG, 2017].)

examination of remedial efforts. While originally focused on reading, its application here expands to cover all relevant and critical subject areas as education systems respond to stakeholder needs after prolonged school closures. The framework identifies seven components that evidence identifies as critical to teaching and learning (Mentors, Administrators, Teachers, Texts, Extra Practice, Regular Assessments, and Standards) and an eighth connected component focused on Child Well-Being.

Exhibit 1: USAID Reading MATTERS All Children Reading Framework⁸



Promising examples of remedial education efforts at scale align with elements of quality education and may inspire and inform recovery efforts that seek to “build back better.” Applying the MATTERS framework highlights eight areas of education practice specific to learning. Insights apply to learning recovery efforts in general, including for COVID-19 and future crises/disasters. While guidance may be bountiful, reported examples of implementation are limited. Key top-level findings are as follows:

Evidence-based STANDARDS, norms, and policies: There is limited documented evidence that coherent regulations, policies, curricula, and indicators (“standards”) have been adapted to meet educational needs specific to at-scale remediation after disruption. Existing evidence is relegated to curricular adaptation and policies. Based on a 2022 UNICEF survey, 70 percent of the 48 LMICs reporting implementing remediation programs to mitigate learning loss condensed their curriculum either regionally or nationally to support learning recovery.⁹ Given the evidence of remedial education programming occurring around the world and the guidance offered to update curricula and design system-wide approaches to address learning loss, regulations, policies, and curricula will need to adjust. Such new “standards” may emerge to align with national and regional remediation efforts. Documentation of these “standards” will be helpful to understand what policy mechanisms effectively support learning recovery.

Effective TEACHERS and classroom instruction: Effective professional development and support are critical for teachers, especially during recovery efforts. Teachers also need attention to their social-emotional health. Hybrid (in-person and online) training and peer-support groups, particularly those using virtual resources such as WhatsApp and Facebook, are promising approaches and the latter seem

to be widespread and generally appreciated. Examples indicate multiple models for providing remedial instruction, including shorter- and longer-term strategies. Targeted instruction—grouping students by ability rather than age or grade—is an effective evidence-based approach and has widespread application; it can take place within the regular academic calendar or in short bursts during summer or vacation times. Governments in Cambodia, Ghana, Gujarat (India), and Jordan are also applying self-guided learning approaches that build upon innovative tools that arose during school closures. Attention to effectiveness will shed further light on these tools and approaches.

Effective coaches and MENTORS: While evidence of the effectiveness of coaching and mentoring strategies during ongoing COVID-19 recovery efforts may be premature, examples from previous crises such as the Ebola outbreak in Sierra Leone indicate positive outcomes. Coaches and mentors can play pivotal roles in providing teachers and administrators with critical on-the-job training and support as well as monitoring student progress.

Quality ADMINISTRATIVE support and supervision: School and district education officials play a critical role in supporting staff, ensuring effective communication, and supporting and mobilizing the local community. Though the literature on remedial education does not prominently feature administrators, the evidence that does exist suggests their contributions are critical. Targeted professional training and coaching and provision of mental health care and support, can enhance administrators' effectiveness.

High-quality TEXTS and materials: Education systems around the world rely on texts to complement and extend in-school instruction time. Texts may be guided or self-guided and come in forms such as workbooks and lesson notes. Multi-modal offerings (both print and digital formats) increase access. Education systems in Lebanon, Malawi, and Jordan connect teaching and learning by producing and distributing guidance materials to help teachers effectively support students' use of these texts for learning recovery.

Regular ASSESSMENTS inform instruction: Gaps in data about learning loss in LMICs are well documented, as is the importance of using a variety of assessments at the national, school, and classroom levels to inform remedial education strategies and daily teaching practices. Some global and country-specific efforts have responded to the data gap by collecting and using assessment data to support learning recovery, including regional diagnostic assessments in Mexico and national formative assessments in Chile. However, documentation of efforts is limited. As LMICs continue to address learning loss, their strategies should incorporate national diagnostic assessments as a tool to design learning recovery programs, and follow guidance to incorporate school and classroom formative assessments to support real-time adjustments in content focus and teaching strategies.

EXTRA PRACTICE and support outside of school: Caregiver involvement improves children's learning outcomes, and clear communication between schools and caregivers is essential to fostering engagement. Messaging strategies for caregivers that emphasize the benefit, cost, and quality of education that children are receiving are cost-effective and evidence-based.

Child Well-being: Examples of implementation of mental health and social-emotional well-being programming at scale feature prominently in the learning recovery literature and may reflect an increase in attention to mental health and psychosocial support efforts within education systems. Cases highlight varying approaches by ministries of education to assess needs and offer or provide access to support. Integration of social-emotional learning within the curriculum is also critical for promoting student achievement and prosocial behaviors and attitudes.

AREAS FOR FUTURE RESEARCH AND EVALUATION

Multiple practice areas require additional research and evaluation to increase the evidence base for effective remediation and learning recovery practices. Gaps in the literature include remedial education efforts for students with disabilities, texts and materials specific to learning recovery, effective strategies to support the well-being of learning communities during remediation, effective professional development and support strategies for teachers and administrators, effective curricular adjustment approaches, and examples of updated education standards to address learning recovery.

INTRODUCTION

The COVID-19 pandemic caused unprecedented disruption to schooling for the majority of learners around the world. April 2020 statistics identified that 1.6 billion learners from pre-primary through tertiary education were affected by school closures in at least 194 countries.¹⁰ On average, schools closed for 141 days, with great variation by region. Most Sub-Saharan African countries experienced shorter periods of disruption, while children in South Asia and Latin America and the Caribbean averaged 273 and 225 days of school closure, respectively.¹¹ While many governments and partners initiated distance learning strategies, evidence suggests that they were largely ineffective in maintaining children’s learning and that there were great disparities in access to distance learning resources.¹² Countries continue to face a situation where the majority of students need some remedial support across subjects. In many locations, COVID-19 closures added to existing school challenges from other crises and disruptions such as natural disasters and/or conflict. Disruptions further exacerbated disparities, with the marginalized and those already struggling with school being affected the most. While contexts vary, students living in poverty, students with disabilities, students in rural areas, girls, younger children, and children without Internet access have suffered the greatest learning losses.^{13, 14, 15, 16} The 2022 Learning Poverty Report paints a stark picture of the level of learning loss and the urgent need for governments and donors to address the situation. The report identifies that due to the pandemic, learning poverty indicatorsⁱⁱⁱ have risen to an estimated 76.7 percent in lower middle income countries (LMICs) and 91.7 percent in low income countries (LICs).¹⁷

This level of learning loss requires remedial education solutions that differ from what countries and school systems normally employ. Though the situation is bleak, the situation presents an opportunity to “build back better”^{iv} in reimagining and strengthening education systems to better address the needs of all learners.^{18, 19, 20, 21} Responding to COVID-19 learning loss requires more systems-level and scaled responses. As of July 2022, 80 percent of countries participating in the fourth round of a United Nations Educational, Scientific and Cultural Organization (UNESCO), World Bank, United Nations Children’s Fund (UNICEF), and Organization for Economic Cooperation and Development (OECD) survey reported implementing national programs to provide additional support to students after COVID-19 closures, including remedial support, during the 2021–2022 school year at the primary, lower, and upper secondary levels. Lower- and middle-income countries (LMICs) were more likely to implement these measures than high-income countries (HICs).²² This report shares findings from a review of literature relevant to learning recovery to better inform ministries of education, USAID Missions, and partners of current initiatives and opportunities to further enhance remediation efforts. The review focuses on formal schooling, largely at the primary level, with an emphasis on programming at scale—programming at the system level that involves government leadership and applies to a large area of schools. Due to the timing of this study relative to the recent disruptions, the activities described in this report are examples of practice not evidence of success about a practice unless otherwise noted in the report. For the Country Highlights, unless noted, evaluation data were not available to the team at the time of writing.

ⁱⁱⁱ The World Bank developed the learning poverty rate as an indicator in 2019 to measure the proportion of children who cannot read a simple text with comprehension by age 10. (*The State of Global Learning Poverty: 2022 Update.*)ⁱⁱⁱ

^{iv} This concept borrows from education in emergency contexts. (See Basnet, Bal Krishna. “[Earthquake and Its Impacts on Education: Aftermath Nepal Quake 2015.](#)” *European Educational Researcher* 3, no. 3 [2020]: 101–118. DOI: 10.31757/euer.332.)

METHODOLOGY

The review team used a multipronged approach that included: (1) review of known published resources and subsequent identification of potentially relevant resources through publication references; (2) searches of academic databases such as Academic Search Complete, JSTOR, Google Scholar, and relevant individual journals; (3) Internet searches for grey literature from websites of key organizations and repositories, including the USAID Development Experience Clearinghouse and EducationLinks repositories (see Annex A for a complete list); and (4) consultations. Screening criteria for document review initially prioritized materials specific to mitigating the effects of the COVID-19 pandemic with publication dates beginning in 2020 and the review concluding in February 2023. Over time, the search expanded to include earlier documents referencing natural disasters, recognizing that school closures for other emergencies might offer lessons to education systems rebounding after COVID-19-related closures. While the review focused on lower-income countries, the research team also sourced relevant literature from middle-income and high-income countries, particularly related to natural disasters (e.g., New Zealand’s Christchurch earthquakes, the United States’ Hurricane Katrina)

The review’s focus on formal schooling and primary education helped to delimit search terms. The more successful searches used terms that included “remedial education,” “learning recovery,” “learning loss recovery,” and “learning loss reversal.” To some extent, the team also used the term “accelerated learning,” while scrutinizing retained resources to ensure their relevance to formal schooling rather than non-formal or alternative education and out-of-school children and youth. (See Annex C for a complete list of search terms.)

The research team applied broad criteria for the types of materials considered in the review. While documents included evaluation reports, evidence briefs, credible quantitative studies with a comparison group (gold standard), and qualitative studies, the team also investigated program documents such as technical notes, practice guides, organizational websites, and blog posts. In total, this report benefited from the review of 94 documents. Of these, nearly two-thirds (62) were specific to COVID-19 and 15 related to conflict, natural disaster, or multiple crises. Two of three documents (62) focused on LMICs, while the remaining documents focused on HICs (10) or included all contexts (21). (See Annex B for more details.)

Between August 2022 and January 2023, the research team conducted 13 consultations with individuals working in remedial education. Consultations included discussions with five USAID Missions (Georgia, Ghana, Honduras, Malawi, and Yemen), three current USAID implementing partners (IPs) in remedial programming, four other remedial programming implementers, and two academics/consultants.^v Document review results, USAID Performance Plan and Report (PPR) data, and USAID Center for Education recommendations informed the selection of individuals for consultations.

REMIEDIATION AND LEARNING RECOVERY PRACTICES

Remedial education reaches children who are falling behind in their learning. It provides additional targeted support, concurrent with regular classes, for students who require short-term content or skill

^v There was one joint consultation with both USAID and the relevant IP.

support to succeed in regular formal programming.²³ Programming may employ a variety of means, including specific content, active learning pedagogies, and additional instructional time.^{24, vi} Remedial activities take many forms and can range from revisiting missed lessons in a focused manner for all students during regular lesson periods to extra sessions outside of the typical school day (i.e., weekend classes, intensive learning camps, summer school), and pull-out sessions for specific individuals. This review focuses largely on the first format because the school closures affected nearly all learners. The focus is also specific to in-school learners who are generally on-age for their grade and need remedial support due to interruptions in schooling. Please see Exhibit 2 for USAID definitions of related concepts.

Exhibit 2: Key related USAID definitions

Differentiated Instruction: This strategy focuses on responding constructively to what a student knows. It means **providing multiple learning pathways** so students have the most appropriate learning opportunities commensurate with their capacity to learn. At its most basic level, differentiation consists of **teachers' efforts to respond to variance among learners in the classroom**. Whenever a teacher reaches out to an individual or small group to vary his or her teaching to create the best learning experience possible, that teacher is differentiating instruction.

Catch-Up Program: A short-term transitional education program for children and youth who were actively attending school prior to an educational disruption, that provides students the opportunity to learn content missed because of the disruption and supports their reentry to the formal system. Catch-up programs help them recover the knowledge and skills they lost while they were out of school and acquire the new competencies they would have learned had the disruption not occurred. The goal of catch-up programs is to **help learners return to where they would be in the curriculum if the disruption had not occurred**, so they can resume their education.

Accelerated Education Program (AEP): Accelerated Education is a **flexible, age-appropriate program**, run in an accelerated time frame, that aims to **provide access to education for disadvantaged, over-age, out-of-school children and youth**. This may include those who missed out on education because of, or had their education interrupted by, poverty, marginalization, or conflict and crisis. The goal of AEPs is to **provide learners with equivalent, certified competencies for basic education using effective teaching and learning approaches that match their level of cognitive maturity**. Certified AEPs are a key way to allow older children and adolescents to access age-appropriate education. AEPs reduce the number of years in a learning cycle, and allow students to complete a certified, equivalent level of education in a shortened time frame.

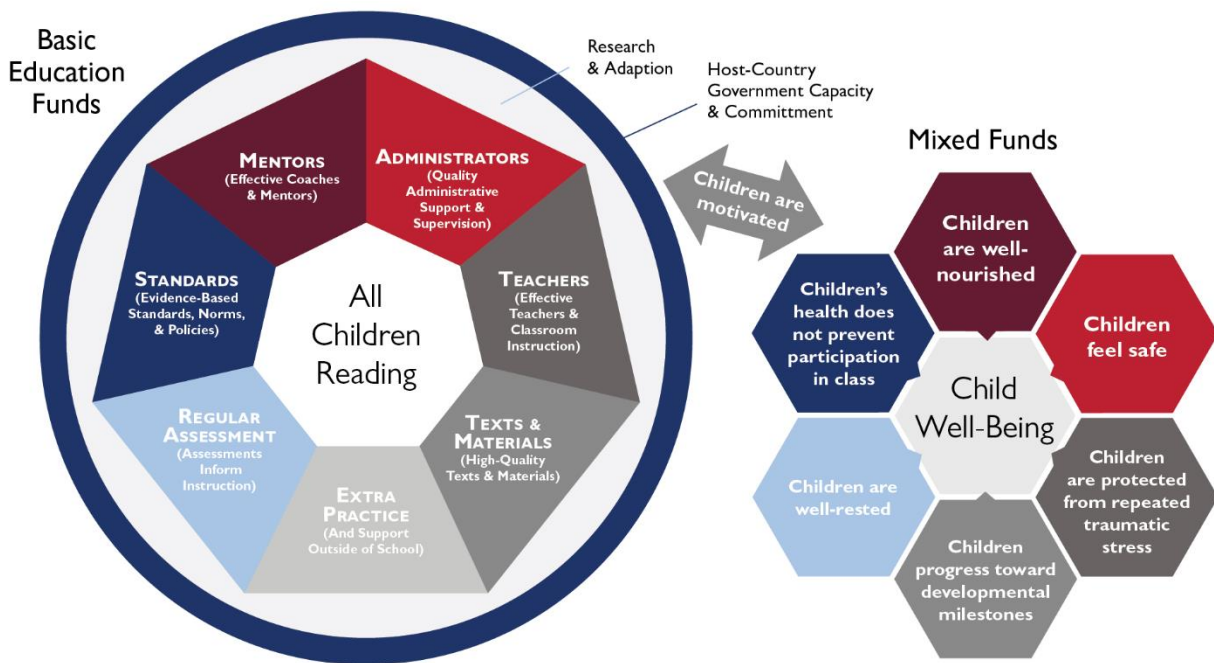
Source: USAID Center for Education (bold added for clarity)

Strategies to address learning recovery and remediation at scale, particularly in response to the COVID-19 pandemic, are multifaceted and target several factors that combine to best support students, educators, and learning outcomes. The USAID Reading MATTERS framework (or MATTERS) guides this

^{vi} This definition differs slightly from the Accelerated Education Working Group definition that identifies remedial programming as “additional targeted support, concurrent with regular classes, for students who require short-term content or skill support to succeed in regular formal programming.” ([Guide to the Accelerated Education Principles](#)).

examination of remedial efforts. The MATTERS conceptual framework identifies seven components that evidence identifies as critical to reading acquisition (Mentors, Administrators, Teachers, Texts, Extra Practice, Regular Assessments, and Standards) and an eighth connected component focused on Child Well-Being. The framework serves to organize findings and, while originally focused on reading, its application here expands to cover all relevant subject areas that are critical as education systems respond to stakeholder needs after prolonged school closures. This review also includes a section on access. Access to schooling is a broad subject and beyond the scope of this review, but it is important to acknowledge access issues related to learning recovery and identify how governments and partners are addressing access within remedial education strategies.

Exhibit 3: USAID Reading MATTERS All Children Reading Framework²⁵



This review has adjusted the order of presentation of framework elements to ensure an appropriate flow of arguments for the reader. Where possible, comments on the volume and quality of existing evidence indicate strengths and gaps in the literature. While there is a plethora of literature providing recommendations to support learning recovery following COVID-19 school closures, documentation of what is being done to support learning recovery is limited. As Exhibit 4 depicts, documentation of the impact of existing learning recovery strategies is largely absent,^{vii} perhaps because efforts are ongoing

^{vii} Consultations with experts confirmed the lack of evidence, and while data may be forthcoming from project evaluations with learning recovery components, a future study focused on related research may be warranted.

and not enough time has passed for research to be completed and published. A brief introductory section on contextual factors provides essential information for situating later arguments.

Exhibit 4: Prominence of evidence by MATTERS component

	MENTORS	ADMINIS-TRATORS	TEACHERS	TEXTS & MATERIALS	EXTRA PRACTICE	REGULAR ASSESSMENT	STANDARDS	CHILD WELL-BEING
Evidence of Practice	Limited	Limited	Strong	Medium	Limited	Medium	Medium	Medium
Evidence of Impact	Limited	Limited	Medium	Limited	Limited	Limited	Limited	Medium

ACCESS







To recover learning, all children need to be back in school. Action is needed to ensure all children return and stay in school.²⁶

Any remedial education initiative requires not only a return-to-learning strategy, but also a strategy to reach each child and keep them in school.^{27, 28} Although a return to school is foundational to effective learning recovery, less than one-third of LMICs reported that all students returned to school in 2021, and students who were already vulnerable, such as girls, rural students, and students living in poverty, are at greatest risk of not returning.^{29, 30, 31, 32, 33}

Much of the guidance reviewed on learning recovery and remediation takes a “build back better” stance. This encourages actors to approach the system-wide shock as an opportunity to strengthen systems and use innovative methods to address all learners, taking creative steps to improve access to learning alongside unique learning recovery methods. Most LMICs reported using outreach and support measures to encourage a return to school in 2021, such as increasing community engagement, launching campaigns, or modifying WASH facilities;³⁴ a little less than one-quarter of LMICs reported using programs such as cash transfers or food to incentivize a return to school for vulnerable populations after COVID-19 school closures.^{viii, 35} Exhibit 4 provides an overview of the different recommended approaches to improving access with examples of implementation. While the recommendations shown are specific to improving access to learning after COVID-19, they are derived from best practices that are not specific to COVID-19.

^{viii} While it is unclear how many of these incentive programs were extensions of programs that existed prior to COVID-19 and how many were new programs, the survey question asks whether the programs were used to incentivize a return to learning as a response to COVID-19 school closures. The survey question asks, “What outreach/support measures have been taken to encourage the return to school for vulnerable populations (ISCED 0 to ISCED 3)?” (“UNESCO-UNICEF-World Bank-OECD Survey on National Education Responses to COVID-19—Combined Questionnaire,” module 9, question 4, p. 33.)

Exhibit 5: Approaches to improving access to learning recovery, not specific to COVID-19

APPROACH TYPE	RECOMMENDATIONS	EXAMPLE OF IMPLEMENTATION	ADDITIONAL EXAMPLE OF IMPLEMENTATION
 Financial Support	Address financial barriers by eliminating school fees and hidden costs such as fees for school uniforms, and offering merit-based scholarships. ^{36, 37, 38, 39, 40, 41}	In Cambodia and Kenya, merit-based scholarships were provided to disadvantaged children and youth prior to COVID-19. Studies of these incentives found long-term positive impacts among the scholarship recipients relative to their peers. ^{42, 43, 44}	In post-Ebola Sierra Leone, school fees were waived to help those at the highest risk of withdrawing from school. ⁴⁵
 Incentives	Offer free meals, cash transfers, and/or transportation. ^{46, 47, 48, 49, 50}	In India, prior to COVID-19, adolescent girls were given bicycles to reduce their travel time to school. These incentives led to increased girls' age-appropriate enrolment in secondary school. ⁵¹	In Honduras, the USAID-funded De Lectoras a Lderes project is piloting a cash transfer approach to incentivize participation in learning summer camps and community learning centers. ⁵²
 Community Engagement	Conduct back-to-school campaigns, engage with parents, and work with community organizations to monitor access and provide programming. ^{53, 54, 55, 56}	Back-to-school campaigns in Ghana engaged with government and civil society organizations and provided messaging using different modes such as TV, radio, and community events. The efforts led to almost 100% re-enrollment after schools re-opened following COVID-19 school closures. ⁵⁷	In Indonesia and Afghanistan, prior to COVID-19, new schools were formed as village-run schools or community schools and used existing buildings, leading to increased access to and enrolment in school. ⁵⁸
 Early Warning	Collect and use disaggregated data and establish systems to identify students at risk of dropping out. ^{59, 60, 61}	In India, a World Bank project launched in 2021 will develop a system-wide education information system capable of collecting and tracking gender-disaggregated data. As of January 2022, it had developed a project plan but not yet developed or launched the system. ⁶²	The USAID-funded Gateway project in Yemen targeted children identified as being at risk of dropping out or falling behind. These students were placed in the after-school remedial learning activity to help them catch up. ⁶³
 Population-Specific	Prioritize vulnerable populations and consider them in the design of remedial programming, reduce travel time, and provide safe spaces. ^{64, 65}	In Turkey and Ethiopia, a phased approach was used to introduce learning recovery programs after COVID-19 interruptions. The first phase in both countries introduced programs to remote locations before expanding the program nationwide in the second phase. ^{66, 67}	In 2015, Sierra Leone ran a transition program to support girls who became pregnant during the Ebola epidemic to return to school and offered safe spaces for adolescent girls to protect them from the risk of pregnancy and unsafe interactions with men while giving them a way to re-enroll in school. The program was found to reduce the large dropout rate among adolescent girls. ^{68, 69}
 WASH	Improve water, sanitation, and hygiene facilities. ^{70, 71}	Through a World Bank WASH project addressing COVID-19, the Kyrgyz Republic government installed handwashing and sanitation stations in schools and trained teachers on the importance of using soap during handwashing and teaching their students about hygiene and handwashing. ⁷²	

As efforts to address learning loss continue, sustained attention to access to recovery activities among students who are most at risk of falling behind or dropping out will be important to support learning recovery and build back better.



COUNTRY HIGHLIGHT

In preparation for school reopenings following COVID-19 closures, the **Turkish** government implemented a remedial education program for primary and secondary students using a phased approach. Students in the most disadvantaged areas, who were least likely to have had access to distance education, were given access to remedial instruction before the remedial program was opened to all students in all provinces during the summer. This phased approach to a national remedial program is a unique example that could be applied alongside multiple recommended remedial education strategies. In addition to applying this approach, Turkey allowed students to participate at any location, regardless of their home residency, to account for student mobility. The remedial programs were offered free of charge and integrated into existing vocational schools and non-formal special needs facilities to increase reach.⁷³

SUMMARY—Access



Efforts to bolster access to learning after COVID-19 school reopenings use four techniques: community engagement, such as Ghana’s back-to-school campaign efforts; data-driven actions using EMIS to identify students in greatest need of support, similar to the program in India; targeting the most vulnerable populations before expanding remedial programming nationwide, as in Turkey and Ethiopia; and expanding WASH infrastructure and programming in schools, as in the Kyrgyz Republic.

EVIDENCE-BASED STANDARDS, NORMS & POLICIES

Under the MATTERS framework, “Standards” refers to a set of coherent regulations, policies, curricula, and indicators.⁷⁴ The bulk of the literature available on remediation provided recommendations for these types of “standards,” such as:

- Ensuring that catch-up programs align with existing assessments and national curricula and are embedded within the education system,^{75, 76, 77} or adjusting the national curriculum⁷⁸;
- Using a leveled approach such as *Teaching at the Right Level*;
- Enhancing systemic data quality and collecting usable data such as strong attendance and assignment completion to track progress^{79, 80};
- Reinforcing national assessment strategies to inform remedial approaches⁸¹;
- Recognizing and integrating all catch-up programs, including non-formal programs to ensure alignment with the national curriculum⁸²; and
- Updating and maintaining teacher professional development policies and implementation to foster personalized professional development on targeted instruction, tutoring, digital, and other twenty-first-century skills.⁸³

All of these recommendations emphasize collaboration with remediation program designers, IPs, and the national government, since “the expansion and sustainability of the interventions over time frequently require state intervention.”⁸⁴ While recommendations are plentiful, examples of at-scale remedial education programs to address COVID-19 learning loss are limited, indicating a key gap in the literature. It is unclear if this gap is due to a lack of documented evidence—meaning that recommendations have been implemented but research has not yet documented implementation—or if education systems are continuing to rely on pre-COVID-19 approaches. A combination of the two explanations seems likely, given that there is some documented evidence of curricular adaptation and policy responses, as this section will explore in greater detail.

CURRICULAR ADAPTATION

Previous reviews of accelerated learning programs provide insight into the strategies for adapting curricula to address student learning needs, which include collaborating closely with Ministry and government officials, prioritizing foundational skills and core content, removing repetition (as often occurs during stand-alone review periods) without negatively impacting student learning, and learners continuing at grade level while concurrently addressing missing skills.^{85, 86} Decisive and deliberate revisions of the curriculum that result in a condensed version are essential to relieving teachers of the pressure to cover both expected and missed content.⁸⁷ Many LMICs are turning to curricular adaptation to address COVID-19 learning loss by simplifying the curriculum—covering less content in the available time to prioritize essential skills. Unlike previous curricular adaptations, which attempted rather an at-scale overhaul of the full curriculum, those addressing COVID-19 loss have occurred rapidly and are more focused on streamlining content, addressing critical competencies, and modifying the time allocated to different curricular areas.⁸⁸

The idea is not to do more with less time but rather facilitate quality catch-up with a simplified curriculum of select core components to cover thoroughly in the time available.⁸⁹

This approach is widely recommended and has documented success following previous crises.^{90, 91, 92, 93, 94} For example, following school closures due to Ebola in the 2014–2015 academic year, Sierra Leone developed and implemented an accelerated curriculum to promote rapid learning recovery. Lesson plans were revised to focus only on the essential content at all grade levels. This approach led to net improvement of literacy and math performances for all students.^{95, 96}

A 2022 UNICEF survey found that 70 percent of the 48 LMICs reporting implementing remediation programs to mitigate learning loss condensed their curriculum either regionally or nationally, up from about 42 percent in 2021.^{97, 98} However, fewer than 75 percent of countries that are implementing an adjusted curriculum are using student assessment data to determine what changes to make.⁹⁹ For some countries, such as Guyana and Pakistan, curriculum simplification meant concentrating on core subjects. In Guyana, the curriculum was consolidated to focus only on social studies, language, science, and math, while in Pakistan the curriculum was condensed to focus solely on math, language, and science.¹⁰⁰ A key feature of Guyana’s approach is regular assessments aligned with the national curriculum, which allows for regular curricular adjustment based on learning recovery progress.^{101, 102} In addition to the academic assessments, Guyana incorporated diagnostic assessments designed as one-on-one, student-teacher conversations that teachers could use to develop individual student profiles and help them understand their learners better.¹⁰³ Guyana’s condensed curriculum with corresponding assessments was implemented in the 2021–2022 academic year, with plans for it to be implemented for up to four years, depending on how well students catch up as demonstrated by assessment.^{104, 105} How teachers and schools used the assessment data has not yet been publicly documented.

Exhibit 7: Curriculum trimming policy in South Africa



COUNTRY HIGHLIGHT

In **South Africa**, the Department for Basic Education repackaged the national primary and secondary curriculum as a multiyear reform policy to respond to school closures.¹⁰⁶ Related to texts and materials, the policy included updated Annual Teaching Plans (ATPs) and guides to focus on grade-level foundational skills, and established time for teachers to mitigate learning loss in response to reduced teaching time in 2020.^{107, 108} The new ATPs were designed to trim the curriculum by 25 percent in each subject to prioritize core knowledge, but the policy also addresses changing the national examination schedule to allow more time for learning recovery.^{109, 110} Formative and continuous assessment are built into the ATPs to ensure that teachers are able to adjust to student needs.¹¹¹ Despite the system-wide approach, the policy is based on the assumption that students have already learned key foundational skills prior to their return to school.¹¹² For example, Grade 4 ATPs focus on foundational skills that are typically learned in Grade 4, with the assumption that students entering Grade 4 have already learned all the foundational skills from Grades 1 to 3, despite being out of school in Grade 3.

Chile, Ecuador, Vietnam, and Ghana offered a flexible approach to meet the different needs of students at the school level. In Chile, the Ministry of Education’s (MOE) guidance to schools indicated that they should dedicate at least the same amount of instruction time to two core subjects, math and literacy, as they did pre-pandemic, but the schools were given flexibility to reduce content in other subjects. The MOE provides didactic curricular adaptation guides, prioritization guides, learning objective progression guides, and assessment guides for all grades.¹¹³ It also provides optional assessments, including a diagnostic assessment, monitoring assessments, and end-of-year assessments, with manuals for teachers

to use as they see fit.¹¹⁴ Importantly, the Ministry made it clear that this is not an official curriculum adjustment but a flexible set of tools to enable content prioritization that may support learning recovery. The official curriculum remains the same, but the Ministry recommends that schools focus on math and literacy and offers materials to make this possible. Ecuador also released a prioritized curriculum for the 2022–2023 school year that allows schools to adapt the curriculum as best meets the needs of the student community, highlighting digital and socioemotional content, communications, and math.¹¹⁵

Unlike Chile and Ecuador, where the approach to curriculum consolidation was prescribed and the Ministry decided which subjects to prioritize, the flexible approach used in Vietnam and Ghana allowed schools and teachers to decide how to consolidate the curriculum and what subjects to prioritize. Vietnam’s approach was to release detailed guidance on curriculum adaptation that stated expected learning outcomes but only offered suggestions on how to consolidate the curriculum.¹¹⁶ In turn, schools and teachers were able to decide how to consolidate the curriculum to best meet their students’ remediation needs to achieve learning outcomes. The Ghana Education Service (GES) under the Ministry of Education signaled their intention to take a similarly flexible approach. Ten days prior to school reopening, GES directed all regional directors of education to use the first eight weeks of instruction to assess learners, use differentiated teaching methods, and closely observe learners’ progress.¹¹⁷ In the same memo, GES indicated that they would provide detailed resources to support learning loss,¹¹⁸ which some actors interpreted to mean that the curriculum would be adapted to prioritize learning loss based on student needs, enabling teachers to prioritize the subjects still in need of recovery for the remainder of the year.¹¹⁹ This way, consolidation was not required and teachers could decide what subjects to prioritize based on their students’ performance during the first months of school^{ix}. The flexible approaches taken by Vietnam and Ghana acknowledge that teachers are aware of their students’ needs and are the agents who ultimately implement the curriculum, thus following best practice in curricular consolidation.¹²⁰

Exhibit 8: Teaching multiple skills together in Malawi



COUNTRY HIGHLIGHT

In **Malawi**, remediation efforts following COVID-19 school closures focused on the core skills needed to move to the next grade level instead of following the complete teacher’s guide for the Chichewa curriculum. The IP and curriculum specialists at the Ministry of Education used textbooks and the recently revised Chichewa national curriculum to identify the core skills that learners in Standard 1 would need to move to Standard 2. Once the skills were isolated and mapped, they looked at students’ learning levels during school closures to identify learning gaps. The IP assisted teachers with guidance on

^{ix} The review of the literature cited multiple projects within Ghana and two were most notable: the USAID Ghana Partnership for Education: Learning activity (Learning) and the International Development Association (World Bank)-funded Ghana Accountability for Learning Outcomes Project (GALOP). Learning is a nationwide project reaching over 7,000 schools with a period of performance between 2019 and 2023 that included a full remediation program countrywide to supplement core reading interventions in both local languages and English. Elements of the program included an extension of the National Radio Reading Program with radio lessons to support remediation as a new phase called Transition to English Plus. Results of the endline impact evaluation were not available to the study team at the time of writing but correspondence with USAID indicate that results may point to programming having contributed to improved learning outcomes. The GALOP program was implemented in 10,000 schools (The World Bank. “[Ghana: Online Education for Delivering Learning Outcomes during the COVID-19 School Closure.](#)” Results Briefs, May 16, 2022.)

combining skills that could be taught together, a departure from the teacher’s guide that better supports students to learn the skills necessary to move to the next level.¹²¹

When curricula are not adapted to meet student needs and address learning loss, that loss can be intensified. If students returning to school are taught at level that is too high and does not account for learning losses, they will not be able to understand or master the content and will fall further behind. For example, following the 2005 earthquake in Pakistan,^x students’ actual learning levels were not accounted for and the curriculum was implemented as-is rather than meeting students at their level and focusing on key foundational skills. As a result, learning loss was compounded rather than remedied.^{122, 123} Although students were out of school for an average of 14 days following the earthquake, researchers estimate that learning loss may have been around two months when students returned to school (this was not directly measured at the time). Four years after the earthquake, the test scores of students affected by the earthquake showed learning loss of 1.5 to 2 years, meaning that even after 4 years of continued regular instruction, students who were affected by the earthquake were years behind their peers who were not affected by the earthquake. The reasons for this are unclear, but researchers believe it may be due to lack of curricular adaptation,¹²⁴ an overall decline in the quality of school inputs,¹²⁵ students’ mental health challenges following the shock,¹²⁶ or other external factors.¹²⁷

POLICY REFORMS

Two countries opted to officially adapt their curricula through formal policies rather than guidance: Chile and South Africa. In addition, Yemen is collaborating with the implementing partner of a USAID-funded activity to develop curricular policies related to remedial education. This section focuses on the system-wide approach and policy levers these countries employed to adjust the curriculum.

Exhibit 9: Influencing policy in Yemen and reforming policy in South Africa



COUNTRY HIGHLIGHTS

In **Yemen**, the USAID-funded Gateway activity implemented by Save the Children is actively trying to influence education policy and the education system by collaborating with the Ministry of Education. To support policy efforts in new areas for the Ministry such as remedial education and non-formal education, the Gateway activity is working with working groups and the Ministry to identify policy constraints and identifying the steps required to build political will. For example, Gateway is undertaking sensitization efforts to fight disinformation regarding stigma against internally displaced children, whom some education stakeholders fear will be a negative influence on other students.¹²⁸

In **South Africa**, the Department for Basic Education (DBE) released a multiyear curriculum repackaging policy that includes curriculum trimming (see “Curricular Adaptation” for more details about the approach), updated examination schedules and assessment requirements, and teaching and learning materials. Missing from the policy are mentions of teacher support, training, or coaching. The policy is complicated—it requires trimming the curriculum in one year and adding the removed content back into the curriculum the following year, and inserting additional content in subsequent years to ensure that all content is taught to students.¹²⁹ This means that the multiyear curriculum trimming policy

^x The 2005 earthquake reference may be dated, but the research came out in 2020 and has been routinely cited in other major pieces of guidance and research.

postpones content rather than eliminating it. The postponed content will be added to the curriculum during the second year of implementation. Over the policy’s first three years, year one will use a trimmed curriculum, year two will use an expanded curriculum, and it is unclear what year three will entail before potentially returning to a pre-COVID curriculum in year four and beyond.^{130, 131, 132} It is also unclear who decides which content will be added back into the curriculum in year two.^{133, 134, 135} As a policy mechanism, the change is temporary and there are plans to return to the regular curriculum in coming years.

Whereas the South African policy was designed at the Ministry level, the curriculum reform policy in **Chile** was designed with significant community input. The “Together, Chile Recovers and Learns” (Juntos, Chile se Recupera y Aprende) initiative launched in 2021. It included citizen consultations for all Chilean adults to provide feedback on Ministry of Education initiatives and proposals, town hall meetings with school representatives nominated by school directors, and roundtables with experts to address the consultation and town hall feedback. Participants in the town halls were members of the education community, including up to two managers, two teachers, one student and one parent per school. The reach thus far has been extensive: 14,000 adults were consulted individually, 26,000 community education actors participated in 300 town hall meetings, and 20 policy proposals were released based on these efforts.^{136, 137} Among those policy proposals was the multiyear, flexible curriculum adaptation policy detailed in “Curricular Adaptation.”¹³⁸

SUMMARY—Standards



There is limited documented evidence that “standards” have been adapted to meet new educational needs. The evidence that does exist only covers curricular adaptation and policies. In 2022, 70 percent of LMICs condensed their curriculum either regionally or nationally to support learning recovery. Some countries, such as Guyana and Pakistan, cut all but the core subjects from the curriculum. In other countries, like Chile and Ecuador, the Ministry of Education selected the subjects to prioritize, but allowed schools to decide what non-prioritized content to cut. In Ghana and Vietnam, the Ministry provided suggestions for a trimmed curriculum but allowed schools to decide which subjects to prioritize. Given the evidence of remedial education programming occurring around the world and the guidance offered to update curricula and design system-wide approaches to address learning loss, regulations, policies, and curricula will need to adjust. Such new “standards” may emerge to align with remediation efforts implemented at the national and regional levels. Documentation of these changes will be helpful to understand how countries are implementing policy reforms, what policy mechanisms are effective in supporting learning recovery, and what challenges countries face in revising “standards” to address learning loss.

EFFECTIVE TEACHERS & CLASSROOM INSTRUCTION

Effective teachers are integral to a well-functioning education system. Within the context of learning recovery and remediation after COVID-19-related school closures, teachers in many countries find themselves in an unprecedented situation: an entire generation of students is behind in their learning. Many teachers may feel pressure to make up for learning loss while needing to forge ahead with the current year’s curriculum. Teachers may also continue to face pandemic-related health risks and have

concerns for their own physical and mental health and well-being.^{139, 140} For this review, we apply the “Teachers” component of the MATTERS framework^{xi} to investigate how recovery initiatives address classroom instruction strategies, teacher professional development, and general teacher support.

INSTRUCTION

The overall structure of remedial education programming at scale takes many forms and instruction often benefits from assessment results to tailor approaches to students’ needs. In Chile, for instance, the Ministry of Education initiated *Escuelas Arriba* in 2021, a national program that guides schools through an approach designed to promote mastery of key initial concepts needed for primary schooling. The approach uses a three-part methodology: “a catch-up or ‘leveling’ phase, a phase where new content is learned, and a formative assessment; the results determine if the class continues learning new content or returns to the catch-up phase.”¹⁴¹ Student assessment one year into the program demonstrated that 70 percent of student improved their performance¹⁴². Another example is Mongolia where UNICEF worked with the Ministry of Education and Science to develop a short-term reopening strategy that devoted the first two class periods to formative assessments followed by a four-class review of the TV lessons that guided learning during school closures. Next, teachers administered two classes tailored to children’s specific needs. Teachers also implemented simple question and answer boxes to ask students questions, the answers to which would help personalize lessons. Discussions with teachers indicated that sessions helped but that more sessions were necessary as learning gaps remained.¹⁴³ In Lebanon, the USAID-funded QITABI 2 program worked hand-in-hand with the Ministry of Education and Higher Education to develop a Learning Recovery Program designed support teachers to implement a differentiated learning approach and help students catch up on prerequisite skills. The Learning Recovery Program includes a learning loss study conducted by the project, diagnostic testing tools, and training for teacher trainers and teachers to effectively provide differentiated learning based on test results. All primary public schools in Lebanon have since adopted the approach.¹⁴⁴ At the same time, extensive school closures continue in Lebanon due to ongoing crises, which limit the effectiveness of programming. (The Assessment section below provides details about the integral role of assessment in remediation programs.)

TARGETED INSTRUCTION

Overwhelmingly, both guidance and case study documents reviewed advocate temporarily grouping students according to performance level, rather than age or grade, to allow them to catch up. This practice, known as targeted instruction or Teaching at the Right Level (TaRL), is named after the Pratham programming that began in India and has been replicated across Asia, Africa, and Latin America. TaRL has consistently demonstrated strong improvements in learning outcomes.^{145, 146} Proponents argue that targeted instruction is evidence-based and holds promise for education systems that are reopening after school closures.^{147, 148, 149, xii} Targeted instruction can follow several models and can fit within the

^{xi} The “Teachers” component of the MATTERS framework addresses effective teachers and classroom instruction specific to reading and literacy instruction. The component asserts that: (1) pre- and in-service training align with each other as well as teachers’ needs/skills and provide ongoing opportunities for practice within the classroom, (2) teachers implement evidence-based, direct, and explicit reading instruction in a language students understand, and maximize time on task; and (3) teachers use universal design principles.

^{xii} Critics of targeted instruction point to negative experiences with tracking in higher-income contexts that resulted in marginalization and discrimination. Application of this approach requires careful attention to equity. (Institute for Education Policy, “[Don’t Remediate, Accelerate! Effective Catch-up Learning Strategies—Evidence from the United States.](#)” Paris: Global Education Coalition, UNESCO, 2020; Japan Platform & World Vision. [Teacher’s Handbook: Remedial Education](#) [Monrovia, CA: World Vision International, June 2021]).

regular academic calendar or during short bursts during summer or vacation camp scheduling. Monitors serve the role of coaching and overseeing instructors during implementation. Instructors require training and are often teachers, volunteers, NGO employees, university students, etc.¹⁵⁰ A quasi-experimental study from a remedial education program for poor-performing Grade 3–8 students in Pakistan found that student outcomes improved in math and English while outcomes in Urdu were less consistent. Further analysis revealed that positive effects were visible only in schools where subject-specialist teachers taught Urdu remediation classes, highlighting the importance of specialized training, especially for higher levels with more complex grade-level material.¹⁵¹

Exhibit 10 profiles four ongoing programs for which details are available. Education systems in Colombia, Nigeria (Edo State), West Bank and Gaza, and Madagascar are also implementing targeted instruction.^{152, 153}

Exhibit 10: Profile of targeted instruction programs to address learning loss related to COVID-19

COUNTRY AND PROGRAM NAME	IMPLEMENTERS	TARGET	SESSION DURATION AND FREQUENCY	NOTES
Brazil—Brasil Na Escola	Federal government	Schools with at least 70% vulnerable students	1.5 hours, 2-week intensives, 4 times per year	Pilot with a plan to expand ¹⁵⁴
Cambodia	Ministry of Education, local NGO partners: Kampuchea Action to Promote Education (KAPE), Flemish Association for Development Cooperation and Technical Assistance (VVOB)	Grades 2-6	3 days a month (Thursdays during school day), 4 hours per day, 12 hours per month	5 core competencies in Khmer and math ^{155,156}
Ghana	Ministry of Education, World Bank	10,000 basic education (kindergarten, primary, lower secondary) schools	3 days a week, 2 hours per day	English and math; 70,000 teachers trained nationally ^{xiii, 157}
Nepal	Ministry of Education, World Bank, Pratham	Pilot; 2,500 primary school children (Grades 4 and 5) in 64 schools across three local governments	2–3 hours per day, 10 weeks	Community school teachers and NGO facilitators as monitors; uses ASER as an assessment tool ¹⁵⁸

^{xiii} Ghana has a rich history of implementing targeted instruction strategies taking inspiration from Pratham. Studies exist pointing to positive results, such as [Experimental Evidence on Alternative Policies to Increase Learning at Scale](#) by Annie Duflo, Jessica Kiessel, and Adrienne Lucas, NBER Working Paper No. 27298. The specific intervention referenced in this table was designed prior to the onset of the COVID-19 pandemic. Evaluation data were not available to the research team at the time of writing.

COUNTRY AND PROGRAM NAME	IMPLEMENTERS	TARGET	SESSION DURATION AND FREQUENCY	NOTES
Zambia	Ministry of Education, TaRL, Flemish Association for Development Cooperation and Technical Assistance (VVOB), USAID, UNICEF, LEGO Foundation	Grades 1–6 (expanded from 3–5); 2,000 schools as of January 2021	1 hour per day, in addition to school day; in some cases, occurs between two shifts	Began as pilot in 2016, expansion continues. ^{159, 160} Results include student basic proficiency increasing from 34% to 52% while the proportion of children not able to read a letter reduced from 33% to 8%. ¹⁶¹

Assessment is an intrinsic component of targeted instruction and is the first step in determining the appropriate level for each learner and when learners are ready to progress to the next level.^{162, 163} Shifting student groupings requires dedicated time to reorganize classes. Regular reassessment and regrouping of students to levels is important to assuage concerns about students being assigned to and stuck in lower- or higher-performing tracks.¹⁶⁴ Technology can further enhance targeted instruction implementation. For example, a promising case in Uruguay used software to help adapt materials to children’s level and in Botswana, programming developed tailored SMS messages corresponding to a child’s level.¹⁶⁵ In Pakistan, teachers have used a smartphone application to assist them in assessing and grouping students and teaching appropriately to their level. Though results for the scaled intervention were not available at the time of writing, results from the initial pilot of 8 private schools in Pakistan showed strong gains to learning outcomes.¹⁶⁶

While there is strong evidence to support targeted instruction, in some cases this approach was deemed less than satisfactory. For example, when schools reopened in New Orleans, Louisiana, after Hurricane Katrina, they used a targeted instruction approach, placing learners in courses based on their readiness levels (determined by diagnostic tests), rather than their age. Feedback showed that high school students were bored and were making little progress. In response, high schools shifted to a “spiraling” technique. Primary schools retained targeted instruction.

Under the “spiraling” technique, high school learners were in regular grade-level courses. The “spiral” refers to how learning is spread over time and how content will revisit and build upon material previously covered, rather than a “massed” approach, which is an in-depth investigation during a short period. With spiraling, teachers would first re-teach prerequisite skills and materials that some students may have missed, followed by instruction of regular course materials. Some high schools also provided tutoring for students who needed extra help with prerequisite concepts. This “spiraling” technique was shown to greatly improve students’ persistence in school and graduation.

The use of this spiraling approach in five other diverse school systems in the United States, for both primary and secondary learners, indicates that focusing on learners’ grade-level standards while providing support for prerequisite skills can help learners maintain their motivation. It also led learners to make significant learning gains compared to peers who were using materials below their grade level. While these studies examine this approach in a high-income country context, its success suggests that it may be a worthwhile alternative to targeted instruction in other contexts.

Response to Intervention/Multi-tiered Systems of Support (Rtl) is another alternative designed for pre-K through Grade 12, but implementation can be complex and costly. Rtl also uses assessment to screen students, groups students and provides instruction by level, and monitors progress. Rtl has been successful in the United States and the Netherlands, and it addresses a greater range of student ages and more subject areas than TaRL, including behavioral issues. Rtl takes a three-tiered approach: Tier 1 is high-quality classroom instruction, screening, and group interventions; Tier 2 is targeted interventions with progress monitoring; and Tier 3 is intensive interventions and comprehensive evaluation. No data were available regarding Rtl in LMICs.

SELF-GUIDED LEARNING

Self-guided learning programs build upon the successful application of innovative tools that took shape during school closures and present opportunities to improve education systems.¹⁷¹ Students across the primary and secondary education spectrum progress at their own pace when participating in self-guided learning programs and receive limited input from teachers. Self-guided learning initiatives may rely on digital platforms and hybrid strategies, which could be particularly beneficial to students with special education needs, as is the case for programming in Ghana that distributed pre-loaded tablets for self-guided learning to 3,000 students with special learning needs nationally. The design of materials aligns well with the needs of children with hearing or visual impairments¹⁷². Such programming may also function with the distribution of paper-based take-home materials. Exhibit 11 provides additional examples from Cambodia, Jordan, and Brazil relevant to recent school disruptions.



COUNTRY HIGHLIGHTS

As schools were reopening in **Cambodia**, some took a hybrid online/face-to-face approach, and the government worked with partners to provide home learning packs to all 760,180 Grade 1 and 2 students across all public primary schools in 25 provinces. The materials focused on writing, spelling, and math. The initiative was supported by the Capacity Development Partnership Fund (CDPF) partners, including the European Union (EU), UNICEF, USAID, the Swedish Development Cooperation Agency (SIDA), and the Global Partnership for Education (GPE). Materials also included resources to support the development of minority language materials for 5,000 students and information for parents on how support their children’s education. The packs also featured hygiene items such as soap and used environmentally friendly packaging.¹⁷³

Similarly, the Ministry of Education in **Jordan** developed the UNICEF-supported Learning Bridges project as a supplement to the weekly curriculum. The project supplied home learning cross-curricular packages to children in Grades 4 through 9. Designed to be fully paper based if needed, the materials included QR codes with links to additional online resources. The materials also provided instructions for parents on how to become involved in their children’s learning using written, video, and social media formats.¹⁷⁴

Brazil’s Beyond School program is a particularly compelling example of an at-scale hybrid program for Grades 3–6 that is demonstrating promising early results in closing the inequality gap between pilot schools and regular schools. The program organizes two supplemental classes per week with teachers and small groups and uses digital self-guided learning activities.¹⁷⁵

LIMITED SUPPORT FOR STUDENTS WITH DISABILITIES

This review also investigated how remedial programming at scale can address the needs of students with disabilities (SWDs). Documented examples of remedial education for SWDs within international programming are noticeably lacking. Much programming for SWDs in international contexts focuses on sensory and mobility disabilities, but cognitive disabilities are rarely addressed and the meaning of “persons with disabilities” varies greatly between contexts. Funding constraints also limit remedial programming for SWDs. The USAID-funded De Lectores a Ldores activity in Honduras originally included a component for SWDs but funding limited the activity to converting materials into braille rather than incorporating a more inclusive component. Time may also be a barrier because building foundational skills is time-intensive— even more so for children with certain disabilities that may require more exposure and practice to commit a skill to long-term memory. In these cases, shorter, more frequent remediation sessions may be best.

Despite these limitations, programs have developed components to support some children with disabilities, including the USAID Reading for All Malawi (REFAM) activity and the Turkish National Remedial Program (TNRP) in Turkey incorporate inclusive components. In Malawi, the remedial education tool kits align with Universal Design for Learning (UDL) concepts and accompany UDL training for educators.¹⁷⁶ In Turkey, the Ministry prioritized the participation of students with special

learning needs through non-formal courses held at public centers and by supporting students at institutions with a special education curriculum.¹⁷⁷ In Jordan, the Learning Bridges program provides audio files as an accompaniment to hard copies of materials for children with visual impairments or those who have difficulty reading.^{178,179}

INCREASING INSTRUCTIONAL TIME

The resources reviewed suggest that additional instructional time may support learning recovery. There are two common options for providing additional instructional time. The first approach involves modifying the school calendar. Multiple possibilities exist for adapting school calendars, including:

- Offering **remediation during the school day**, replacing other subject areas that may not be as critical within the context of learning loss;
- **Extending the school day or week** (e.g., Saturday classes), as in Malawi, where remedial classes take place before and after classes;
- Offering **summer school options**, for example: the Philippines offers summer classes for students who had less than desirable grades the previous year; the government in Madagascar scaled up an existing summer catch-up program to reintegrate students within the system; and the TNRP operates during the summer; and
- **Shortening holidays**, for example, Mexico extended the 2021–2022 school calendar by 10 days by cutting holidays, and Kenya shortened vacation in 2020 to allow the government to introduce a two-year accelerated “crash program” that added a fourth term to the school year.^{180, 181, 182}

When extending instructional time, care is required to develop high-quality instruction, encourage attendance, and avoid burnout and stress among teachers who are already balancing multiple responsibilities.¹⁸³ Similarly, mistimed remediation programming may lead to diminishing returns: students are bored or fatigued and no longer benefitting from remediation.¹⁸⁴ More studies are necessary to better understand the benefits and trade-offs of various scheduling approaches.

A second approach entails tutoring programming. Tutoring provides students with individualized attention and can cover class material or homework assignments. Group size and frequency of sessions are among the determinant factors of results. While one-on-one tutoring may be most effective, it is often cost-prohibitive and small-group tutoring still demonstrates strong gains. Tutors may be teachers, university students or volunteers. Bangladesh, Chile, and the Dominican Republic have all initiated models where university students tutor younger students. Chile had more than 70,000 tutors who were teachers’ college students and received academic credit for tutoring. Remote tutoring using SMS and telementoring have demonstrated strong effects. Tutoring may be an effective strategy for students at all education levels, but is most efficient when targeting students with large learning gaps.^{185, 186, 187} Successful tutoring programs that rely on volunteers often require intensive training and ongoing support including structured materials and curriculum.¹⁸⁸

TEACHER PROFESSIONAL DEVELOPMENT

Teachers need training to increase their competency and resilience as they work with students to catch up on learning.^{189, 190, 191} Yet, there are few studies and no identified evaluations that investigate which professional development strategies are most effective during school closures or once school reopens after a crisis.^{192, 193} A teacher’s role becomes more complex in times of crisis. Many teachers felt new instructional pressures related to distance learning and took on additional safeguarding and student

support roles during COVID-19 lockdowns. Some teachers may also take up other official duties or experience related challenges that impact the workforce,¹⁹⁴ as was the case in Sierra Leone during the Ebola crisis when schools closed for seven months.¹⁹⁵ The critical importance of providing adequate support to teachers is therefore heightened within a recovery context.¹⁹⁶ Teachers also need time to practice using new materials, conduct assessments, interpret the data, and adjust their approach. Documents reviewed indicate a need for practical and applied teacher professional development to support learning recovery on the following topics:

- **Contextualization:** An overview of approaches and options in remedial education programming.^{197, 198}
- **Assessment:** How to use tools, including correctly recording and interpreting data. Training also needs to cover how to make curriculum adjustments and provide accelerated support.^{199, 200, 201, 202}
- **Instructional technology:** Preparing for distance learning scenarios and supplementing in-person instruction. Teachers need to be able to discern when it is appropriate to use technology to enhance instruction and when to use other methods.^{203, 204, 205}
- **Active learning and learner-centered strategies:** While applicable in all contexts, active learning strategies become more relevant when effective teaching and learning have heightened importance after school closures. Strategies include individualized learning; differentiated learning; peer support, collaborative learning, and group work; dialogue, discussion, and debates; authentic learning through real-world problem solving and science experiments; role-play and drama; learning through play; and the use of manipulatives, educational games, and electronic visual aids.^{206, 207}
- **Specific initiatives:** These may require tailored training, for example, targeted instruction²⁰⁸ or linking printed materials with online resources, as in the UNICEF-funded Jordan Learning Bridges hybrid program.²⁰⁹

A few documents shed light on efforts to provide teachers with critical support for both for the current COVID-19 catch-up scenario and previous crises that resulted in school closures. There is evidence of recruitment efforts that would replace teachers who left the workforce during a crisis and provide surge support for helping students recover lost learning. Both Sierra Leone, in response to the 2014 Ebola crisis, and Indonesia, in response to the 2004 Indian Ocean earthquake and tsunami, successfully recruited to increase teaching capacity. In Sierra Leone, the government made efforts to maintain teacher salaries during closures²¹⁰ and, once schools reopened, retired teachers supported monitoring of student progress.²¹¹ Similar COVID-19 response efforts took place in the United Kingdom, Mozambique, and Italy.²¹² Evidence from Sierra Leone post-Ebola suggests that mandatory teacher training on lesson plan delivery accompanied a net improvement in students' learning and math outcomes.²¹³ Similarly, analysis of TaRL models shows that the most effective models provide an average of ten days of training.²¹⁴ In the context of the COVID-19 recovery, information on professional development initiatives to support recovery efforts is scant and requires additional inquiry. The results of a 2021 survey of Ministry of Education officials indicate that most countries provided teacher training on technology and adapting content to remote teaching, though none of the respondents was from a LIC.²¹⁵ This finding suggests a considerable gap in support for teachers in very challenging contexts.



COUNTRY HIGHLIGHT

The USAID Quality Instruction towards Access and Basic Education Improvement (QITABI 2) activity in **Lebanon** operates at scale in 884 schools for Grades 1–6, in close partnership with the Ministry of Education and Higher Education (MEHE). In response to government needs and based on evidence of learning loss data, QITABI 2 developed a learning recovery program designed to support teachers to adopt differentiated learning approaches. The program covers reading/writing, math, and social-emotional learning. QITABI 2 has worked closely with government teacher trainers to train over 13,000 primary school teachers on the program. Training takes place in five waves and includes student assessment, teaching strategies and resources, and deep dives into the fundamentals of literacy, numeracy, and social and emotional learning. Training materials support a combination of in-person and asynchronous online training. The project has also worked closely with MEHE to develop classroom observation tools for coaches to monitor implementation, in addition to teacher self-evaluation tools and student assessments. A baseline learning recovery report guided design and implementation.²¹⁶

A UNESCO co-authored guidance document²¹⁷ and a recent literature review²¹⁸ provide examples of recovery-focused teacher training initiatives. For example, the Department of Education in the Philippines developed a training program for teachers and school directors to support hybrid learning upon reopening. In Mongolia, the Ministry of Education paired teacher guidance upon reopening with online training.²¹⁹ The UNICEF Middle East and North Africa (MENA) Bureau developed a self-paced training package to help teachers prepare for reopening. Content covered protective and safe school operations; suggestions for supporting both student and teacher well-being; and instructional topics related to establishing a supportive learning environment, managing recovery, and hybrid learning strategies. The Ministry of Education in Ecuador developed a self-paced training series and reduced weekly schedules for teachers from 40 to 35 hours, recognizing the increased burden on them.^{220, 221} Finally, the QITABI 2 program in Lebanon implemented a cascade training program (180 sessions) that included in-person and online training and regular follow-up with coaches.²²² No information is available on the effectiveness of these professional development initiatives, likely because little time has elapsed since they were implemented.

SUPPORT FOR TEACHERS

Effective teachers are quintessential service providers as they work to re-engage students upon reopening and create safe environments for student learning. However, particularly after a crisis, many teachers have also experienced trauma and may be dealing with loss or, in the case of a pandemic, be vulnerable to illness. In addition to professional development focused on their instructional roles, teachers must receive support to develop their own psychosocial skills and develop linkages to other sectors to enhance crisis response.^{223, 224} Teachers may benefit from screening mechanisms, support groups and counseling, training, and opportunities to highlight successes and connect.^{225, 226} Such teacher-focused initiatives may also benefit students—one study reported improved student performance as a result of teacher support activities.²²⁷ In the fourth round of a joint survey of Ministry of Education officials administered in 2022, just over half (58 percent) of countries reported providing psychosocial or emotional support for teachers.²²⁸ While the guidance documents reviewed offer strong arguments for supporting teachers' socio-emotional health and well-being, few sources provide detail.

One exception is a study on the 2015 Nepal earthquake that describes the creation of a five-hour professional development counseling program designed to help teachers deal with their own trauma.^{229, 230}

Peer support groups are also important resources for teachers' professional development. They may be virtual and are typically low-cost.^{231, 232, 233, 234} The crisis literature provides insights into the utility of teacher networks even before the COVID-19 pandemic. A 2018 study of teachers in the Kakuma refugee camp in Kenya demonstrated that a mobile mentoring program allowed teachers to exchange experiences, access new ideas, and reflect together on successes and challenges.²³⁵ Teachers may also use platforms like WhatsApp and Facebook to organize peer support. The literature identifies such examples from Turkey, Kenya, and South Africa.²³⁶ USAID's Tusome Pamoja project in Tanzania also used WhatsApp to provide teacher support, training its teachers in SEL during school closures.²³⁷

SUMMARY—Teachers



Teachers require attention to their socio-emotional health and well-being as well as professional development to best lead students in catching up. Examples from around the globe indicate there are multiple models for remedial instruction, including shorter- and longer-term strategies. Targeted instruction, grouping students by their assessed ability rather than age or grade, is an effective evidence-based approach with widespread application. The scheduling of targeted instruction programming can vary; it may be included in the regular academic calendar or delivered in short bursts during summer or vacation times. Successful application of self-guided learning approaches using innovative tools that emerged during school closures also show promise. Effective professional development and support are critical for teachers, especially during crisis recovery efforts. Hybrid instruction models that combine in-person and online offerings and self-paced modules may be particularly effective. Peer support is an effective strategy that may be particularly resource efficient and can take advantage of simple technologies. Further study and evidence of effective approaches is necessary.

EFFECTIVE COACHES AND MENTORS

Evidence suggests that coaching can effectively and efficiently promote enhanced teaching practices.²³⁸ Coaching also allows teachers to receive real-time, on-the-job support and can occur in person or virtually. The Reading MATTERS framework posits that effective coaches are trained and have significant knowledge that has the potential to reinforce teachers' instructional skills. Coaching is also ongoing and occurs regularly.^{xiv} There is overlap within the MATTERS framework between the component focusing on support to Teachers and this Mentoring component. Analysis of the literature on remediation and learning recovery reveals few examples of mentoring and coaching and implies a gap in the literature.

The guidance documents reviewed point to positive outcomes from mentoring and coaching programs in Chile, Kenya, Nigeria, Pakistan, and Peru, but those outcomes pre-date the current recovery situation and were crisis-related.²³⁹ Coaches may also provide support to students: during the Sierra Leone response to Ebola, coaches closely monitored student progress.²⁴⁰ A remedial education program in Malawi is one example of coaching during COVID-19 learning recovery that documents how coaches successfully help to guide catch-up, train school principals, and ensure the distribution of learning materials. The coaches are district education officials (Directors of Education, Youth and Sports, and District Education Managers).²⁴¹ The QITABI 2 Learning Recovery program in Lebanon uses government systems to provide mentoring support to teachers through the Ministry's classroom observation coaches. TaRL programming, for instance in Zambia where it is demonstrating positive outcomes (see Exhibit 10), also emphasizes mentorship by training leaders and instructors using "practice periods" to develop "leaders of practice."²⁴² While less information is available about the initiative, the Building Learning Foundations program in Rwanda also pairs monthly visits by program staff with remedial classwork that takes place during school hours and on weekends.²⁴³

SUMMARY—Mentors



While the literature indicates recognition of the importance of coaching and mentoring, detailed information on initiatives within the context of recovery-focused programming is sparse. Coaches and mentors have potential to provide key services including on-the-job training and support for teachers/administrators and monitoring of student progress. More targeted research and evaluation are needed in this area.

^{xiv} This interpretation is an expansion of the framework's original emphasis on literacy and reading to include instruction and learning in all relevant subject areas.

QUALITY ADMINISTRATIVE SUPPORT & SUPERVISION

The USAID Reading MATTERS framework underscores the importance of school leaders and district/regional-level officials in ensuring “oversight and monitoring of teacher and student attendance in schools” as well as their function in instituting disaster risk-reduction measures, establishing and adhering to reporting protocols, and responding appropriately to incidents as they arise. References to administrators are largely absent, however, from the learning recovery and remedial education literature.^{244, 245} Three studies do provide information: one on school principals after the Christchurch earthquakes in New Zealand, a second on school leadership during previous natural disasters, and a third on education leaders in Rwanda during COVID-19 closures and reopening.²⁴⁶ All other documents reviewed included little mention of administrators, though the focus on teachers was broad and support and training for teachers may also extend to administrators. A lack of specific information on providing administrative support and leadership is a critical gap in the learning recovery literature.^{247, 248}

Exhibit 14: Leadership is critical to making space for remediation in Ghana



COUNTRY HIGHLIGHT

In **Ghana**, leadership support is critical to the USAID Partnership for Education Learning activity so that teachers can carve out the time necessary for remedial programming, including administration of the Annual Status of Education Report (ASER) assessment. In this context, catch-up learning is not officially integrated within the national timetable. Where programming is doing well, the district leaders have set aside specific time for it. Leadership support is necessary to foster an ecosystem around the school that encourages such practices to take root.²⁴⁹

Analysis of available study results highlights the importance of effective leadership and support within three pivotal domains:

Staff support: Administrators provided key support to staff under challenging circumstances. Findings acknowledged that school leaders play a critical role in supporting staff well-being and taking actions to alleviate traumatic stress for teachers.^{250, 251} School leaders also demonstrated awareness of the challenges of stressed teachers working with children who may be dealing with post-traumatic stress symptoms.²⁵² Similarly, principals spoke of the importance of balancing the benefits of consistency for staff with the benefits of any anticipated changes.²⁵³ Like teachers (see the “Professional Development” section above), administrators also require professional development to be able to build and employ the skills and strategies necessary to create positive inclusive environments for all students.²⁵⁴ As schools implement remediation after a period of disruption and crisis, administrators also may benefit from mental health care and support because they may also be stressed and dealing with trauma.²⁵⁵

Effective communication: Communication is essential in crises when leaders need to keep the school community informed during rapidly changing situations and new decisions come to bear.²⁵⁶ In Rwanda, school leaders’ abilities to communicate with teachers to support their self-efficacy and foster collaboration were important during both COVID-19-related school closures and the reopening. All three studies that discuss administrators also emphasized the importance of effective communication to address learning loss recovery. In reviewing experiences of past natural disasters, one study described how disruption may also lead to positive evolutions in communication methods between schools and

members of the community, such as the novel (at the time) use of email, websites, and blogs in the aftermath of Hurricane Katrina in New Orleans, United States.²⁵⁷

Exhibit 15: Findings from a school leadership study in Rwanda



COUNTRY HIGHLIGHT

In September 2021, the **Rwanda** Education Board, in collaboration with the World Innovation Summit for Education (WISE), Qatar Foundation, and Education Trust, conducted a mixed-methods study focused on school leaders, district and sector education officers, teachers, and students. The study investigated administrators' role in addressing the inequalities exacerbated by the COVID-19 crisis during school closure and reopening. The study employed surveys (100 school leaders, 21 district and sector education officers) as well as interviews. Among other results, the findings identified that school leaders were implementing remedial programming and providing support to the school and greater community. For instance, nine of ten leaders reported using remedial exercises to reduce learning loss and 77 percent of leaders used assessment strategies to tailor support. Results also indicated that school community well-being was a priority for just under one-third of teachers. The study also concluded that three overarching skills supported strong leadership: “managing uncertainty, being open to learning and trying new approaches, leading with compassion and empathy.”²⁵⁸

Supporting and mobilizing the local community: All three studies also emphasized the importance of administrators managing and making use of their social capital resources and strengths, particularly in crisis contexts. One of the three studies, itself a review of 11 studies, confirmed the value of school leaders' local knowledge across a variety of school recovery experiences after natural disasters. Their community awareness and deep networks mean school leaders have the potential to ensure social cohesion and seek out needed resources.^{259, 260, 261} Community members also view school leaders as community leaders, and effective administrator practice requires strong relationships and leadership skills.²⁶² They can also play a role in reducing obstacles that parents may face in supporting their children's learning, especially if the family's situation shifted due to the crisis.²⁶³ In the wake of upheaval from the 2015 Christchurch earthquakes, school principals interviewed “went the ‘extra mile’ to make the school a place where the children and their families could belong.”²⁶⁴

SUMMARY—Administrative Support



Very few studies address the roles of school leaders and district/regional officials as schools recover from extended closure. The scant evidence points to leaders playing pivotal roles in offering staff support under challenging circumstances (e.g., creating positive, inclusive environments for teachers and students), being effective communicators in keeping the school community aware of developments, and supporting and mobilizing the local community through their networks and support for caregivers. Administrators require training to be effective in these roles and may also benefit from mental health care and support related to disruption and crisis.

HIGH-QUALITY TEXTS & MATERIALS

In the MATTERS framework, “texts” refers to students’ access to high-quality reading materials that are level- and language-appropriate, teachers’ access to structured teaching guides that align with the texts and the curriculum, and the availability of accessible reading materials for students with disabilities.²⁶⁵ For this review, the framework definition of texts was extended to include teaching and learning materials designed to support learning recovery in reading and other content areas. There is plenty of documentation about the types of texts distributed during COVID-19 school closures to provide students with access to learning materials while out of school—a mitigation strategy rather than a recovery strategy. For example, in Mozambique, early in the pandemic the government planned to distribute 21.7 million textbooks to students, free of charge, with the intent of enabling students to access the curricular content.²⁶⁶

However, documentation is limited on how texts are being developed or used to support remedial education following the COVID-19 shock. Four key examples in Lebanon, Malawi, Turkey, and Jordan share an approach to text use for remediation, specifically using texts to support ongoing remedial lessons. Given the limited number of examples, it is certainly a leap to suggest an emerging pattern among LMICs.

Exhibit 16: Texts and materials to support remedial education efforts

	LEBANON ²⁶⁷	MALAWI ²⁶⁸	TURKEY ²⁶⁹	JORDAN ²⁷⁰
RESPONSE OR PROGRAM	QITABI 2 (World Learning)	Guidelines for Re-Opening Schools (Ministry of Education)	Turkish National Remedial Program (General Directorate of Primary Education)	Learning Bridges (UNICEF)
TEXT AND MATERIALS PROVIDED TO STUDENTS	Supportive literacy and numeracy resources	Workbooks, lesson notes, exercises	Workbooks, textbooks, worksheets, activities, pamphlets, audio files, electronic materials	Activities, supplementary lesson materials
TEACHING AND LEARNING MATERIALS PROVIDED TO TEACHERS	Portfolios of resources, including PowerPoint lessons, lesson plans, and instructional resources	Unspecified	Unspecified	Guidance documents, teaching support resources
PURPOSE OF MATERIALS	To ensure the materials and pedagogical approach are aligned to the national curriculum	To support in-school remedial lessons (before/after school hours); to support at-home, self-guided learning	To support short- and long-term learning recovery	To deliver weekly remedial learning activities; to support blended learning and innovative teaching practices
TEXT AND MATERIAL MEDIUM	Digital, print	Print	Digital, print	Digital, print
GOVERNMENT INVOLVEMENT	Ministry of Education and the Center for Educational Research and Development collaborate with World Learning to align curriculum with learning recovery program, texts, and materials	Ministry of Education developed materials; District educational officials distribute materials	General Directorate of Primary Education assessed students and developed materials based on results to align materials with remedial programming content	Ministry updated the budget and the Education during Emergency Plan to include texts related to remedial activities; Ministry identifies core learning objectives

In Malawi, texts were part of a multipronged approach to remedial lessons. The Ministry of Education’s response to COVID-19 included a plan to develop teaching and learning materials that would support in-school remedial lessons to be scheduled before and after class. The response also included a plan to develop workbooks with lesson notes and exercises to support at-home, self-guided learning as an alternative to in-school lessons. District education officials were responsible for distributing the materials, and students who were unable to attend the in-school remedial lessons were given workbooks to support at-home, self-guided learning. The impact of these plans is unclear, and implementation as of 2021 was uneven.²⁷¹

In Turkey, the design of the national remedial plan addressing COVID-19 learning loss included developing text materials to support short- and long-term recovery. The General Directorate of Primary Education (TEGM) conducted studies during the pandemic to understand which skills remedial programs would need to focus on. Based on the results, TEGM developed 17 primary-level workbooks and 16 secondary-level textbooks for science, history, mathematics, social studies, life sciences, and Turkish language, aligning the production of text materials with the content of the remedial program. The Directorate also developed worksheets, text activities, pamphlets, and audio files for multiple

subjects for primary and secondary students, as well as electronic materials for social-emotional development. A unique element of the government’s approach is the ongoing work to adapt resources that were initially developed for pandemic distance learning programming delivered via television. These resources are being printed and distributed to ensure that students continue to have access to them, although the television lessons are no longer being aired and schools have reopened.²⁷²

Exhibit 17: Linking teaching and learning materials to assessments and additional catch-up programming in Ghana



COUNTRY HIGHLIGHT

In **Ghana**, *Teacher Resource Packets* and student worksheets were developed to support the assessment and extra-practice components of remediation activities under the USAID Partnership for Education Learning activity. The teacher packets include remedial learning activities associated for each ASER level; by connecting the packets to the assessment, the activity ensured that teachers have necessary materials to provide data-based targeted instruction. Teachers and students were also given access to the radio programs developed during COVID-19 to support students with “catch-up” practice. Worksheets for reading skill practice now accompany the radio programs.²⁷³ While evaluation data were not available at the time of writing, consultations with USAID indicate that forthcoming results may be promising.

The national blended learning program in Jordan, Learning Bridges, used the concept of “bridging” to connect printed materials with online resources as a mechanism to deliver weekly remedial learning activities that addressed the core curriculum.²⁷⁴ Students and teachers received weekly materials addressing a variety of content, thus meeting the guidance from the expanded framework. Impact studies suggest that the reach was high: 61 percent of students in Grades 4–9 and 30,000 teachers. The Ministry of Education considers the approach to be a success because it addresses multiple curricular areas. As a result, the Ministry added the program to the official Education during Emergency Plan and included a budget to implement the program at scale.²⁷⁵

The QITABI 2 project in Lebanon provides teaching and learning materials in Arabic and other official languages of instruction (English and French), and math, to students and teachers. They include hard and digital copies of supportive literacy and numeracy resources for Grades 1–6 and teacher PowerPoint lessons that align with both the project’s pedagogical approach and the national curriculum. This ensures that the text materials are relevant and usable, although teachers noted that the digital materials were hard to print and less accessible.²⁷⁶

SUMMARY—Texts and Materials



All of these examples demonstrate governments' intention to use texts to complement in-school instruction time and extend instructional time through guided and self-guided learning materials. The types of texts designed by or for each country were multimodal, in terms of both the types of texts and materials provided and the mode of text delivery, which has the potential to increase student access. However, in the Lebanese QITABI 2 project, teachers had issues printing materials that were provided digitally, highlighting a challenge to a multimodal approach that extends beyond access to digital platforms. Additionally, the Lebanon and Jordan examples are clear about providing texts to both teachers and students to ensure that teaching and learning are connected. Along with impact studies, future research is warranted to determine the quality of the texts developed and used in these learning recovery plans, and to better understand how texts are used to support remedial education.

REGULAR ASSESSMENTS INFORM INSTRUCTION

While assessment is an important component of many remedial activities, it also serves as a crucial tool for preparing and developing remedial approaches.²⁷⁷ Large-scale assessments such as national or standardized assessments are vital to understanding the extent of learning loss system-wide, while formative assessments are key to designing national and school-level learning recovery approaches that meet students' real needs.²⁷⁸ Additionally, at the classroom level, teachers use formal and informal formative assessments throughout the academic year for real-time adaptation as needed to support student learning. While national or school-level standardized formative assessments inform learning recovery approaches, teachers use the classroom-level formal and informal formative assessments to inform instruction and often generate data that remain at the classroom level.²⁷⁹

The lack of data at the system, school, and student levels is well documented. By some measures, there are no data, given that “no learning data is yet available from internationally comparable learning assessments carried out since the start of the pandemic.”²⁸⁰ In 2020, only about one-third of countries reported taking steps to measure learning loss using standardized assessments, only 58 percent of countries reported using formative assessments in classrooms, two-thirds of LMICs delayed national examinations at the primary level, and three-quarters of LMICs delayed national examinations at the secondary level.²⁸¹ By 2022, learning loss data had not drastically improved, with only one-sixth of countries having published them in March, LMICs relying upon data simulations if any data are published at all,²⁸² and less than half of countries having conducted studies to measure learning loss following school closures by September.²⁸³ Without these data, there is little evidence to inform decisions about the curriculum, time frame, or support most needed in a remedial education approach.

In response to the lack of published data, large donors such as UNESCO, UNICEF, and the World Bank have launched global efforts to improve student data in LMICs, such as the Learning Data Compact and the COVID-19: Monitoring the Impacts on Learning Outcomes (MILO) project,²⁸⁴ while some countries have implemented national efforts to collect student data through national assessments to address COVID-19 learning loss data gaps and inform learning recovery strategies.

As is common in education, assessments related to learning recovery run the gamut of scope, structure, administration, and use. On one end, highly structured, standardized assessments administered to the entire student population are used to assess learning loss and inform national plans. At the national level, data from these assessments can demonstrate the current scope of learning loss and help identify the resources needed to make such a learning recovery. At another point on the spectrum are national assessments that sit somewhere between national learning loss assessments and school-level formative assessments. Data from these assessments can be used formatively to monitor progress and make adjustments as needed at the national level. At the school and classroom levels, they can help teachers understand their students' specific learning gaps and adjust their instruction to address those gaps. A third type of assessment, school- and classroom-level formative assessments, generates data that can inform school learning recovery plans, daily lesson plans and teaching practices, and course corrections at a more localized level. At this level, the previously cited lack of data is murkier because the data gaps refer broadly to large-scale learning loss assessments and standardized assessment results rather than school- or classroom-level formal or informal formative assessments. These data are not widely published nor often shared with the Ministry because the purpose is school and teacher use rather than informing national strategies or reporting on national progress, yet national strategies and policies can provide information on how schools and teachers are expected to collect and use this type of data. Experts agree that these internal data are vital.²⁸⁵ Large-scale assessment data are typically external, which makes them less actionable and harder for educators to understand. The TaRL approach relies on internal assessments that are straightforward and easy to understand. This type of assessment provides educators with data they can use to make decisions, yet these data are not available in many countries.²⁸⁶

Exhibit 18: Continuous and actionable assessment in Honduras






COUNTRY HIGHLIGHT

As part of the USAID-funded *De Lectores a L?deres* activity in **Honduras**, implementing partner EDC linked rapid assessments to the remediation materials. It used an instrument called the *Prueba Mia*, or *Simple Assessment*, a Spanish reading proficiency assessment developed in Mexico. This simple assessment can be administered by parents or teachers in 10 minutes through KoBo Toolbox, a free online survey platform that can be used offline. By linking the assessment to the *Gane Guides*, or the Spanish Educational Leveling Guides, teachers can identify which remedial materials would be most appropriate for students. Students are assessed monthly to determine their progress and help teachers decide when the student no longer needs remediation. While teachers may perceive assessment as additional work, the participating teachers were interested in the focused and streamlined assessment. The approach was successful because teachers could see how the assessment data were connected to the materials, and they could use the data to guide their remediation approach.²⁸⁷

Countries have used each type of assessment to inform their approach to learning recovery, as detailed in Exhibit 16.

Exhibit 19: Types of assessment and their use in COVID-19-related learning recovery

ASSESSMENT TYPE	LEVEL OF IMPLEMENTATION	PURPOSE	EXAMPLES
 <p>Highly structured, formal, standardized assessment</p>	System-wide implementation	Assess learning loss and inform national plans	<p>In Guanajuato, Mexico, math, literacy, and social-emotional competencies were measured through a state assessment administered just before school closures in March 2020 and again in November 2021. Assessment results identified the content areas in need of support and demographic group differences in COVID-19 learning loss. These results inform remedial programming.²⁸⁸</p> <p>In September 2020, a paper-and-pencil national assessment was implemented in Grades 4, 8, and 12 in Kenya. The assessment was overseen by school heads and scored by teachers. In July 2021, after schools fully reopened, the process was repeated with all other grades. The assessment results did not measure learning loss but data were used to develop mitigation plans based on current learning status.²⁸⁹</p>
 <p>Large scale formative assessment, formal or informal</p>	Nationally designed or required, school- or classroom-level implementation	<p>At the national level: monitor learning recovery progress, adjust the national remediation plans</p> <p>At the school and classroom level: monitor school progress, help teachers understand student-specific learning gaps to adjust instruction</p>	<p>The Chilean Ministry of Education designed a formative assessment (<i>Diagnóstico Integral de los Aprendizajes</i>). The assessment was voluntary and generated learning loss data the Ministry used to design the <i>Plan Chile Recupera y Aprende (Chile Recover and Learn Plan)</i>. It also served as a formative assessment for teachers and schools to inform instructional course correction.^{290, 291}</p> <p>In Turkey, a combination of informal and formal monitoring studies informed the development and implementation of the national COVID-19 remediation plan. The first phase of remediation following school reopening relied solely upon informal assessments to limit student anxiety, which required historical student data from central exams held before COVID-19 and teacher feedback generated during the first weeks of instruction. In the second phase, the General Directorate of Measurement, Assessment, and Examination Services (ODSHGM) implemented a standardized assessment at the start and end of the phase to monitor program progress using student data.²⁹²</p>
 <p>Small scale formative assessment, formal or informal</p>	School- or classroom-level design and implementation	Generate student-level data, inform school learning recovery plans, inform daily lesson plans and teaching practices, inform localized course corrections to remediation	<p>In Lebanon, the QITABI 2 project uses a diagnostic assessment at the classroom level. Through the project, teachers receive a Resource Guide with reading assessment tools, guidelines for assessing foundational skills, reading comprehension, and reading fluency. These tools can be used as a diagnostic assessment, categorizing students on a standardized scale and then using the data to group students in the class by level. The assessment is designed to support teacher planning for differentiated instruction and to provide students with targeted support.²⁹³</p> <p>Classroom-level formative assessments are built into the learning recovery priorities as part of the South African curriculum policy reform. The adjusted ATPs require that teachers use formative and continuous assessment to inform their pedagogical approach.²⁹⁴</p>



COUNTRY HIGHLIGHTS

Existing tools such as the ASER test can be tailored to the educational context and administered by parents or teachers to determine students' levels in reading and math before commencing remediation. Once the teachers have data on the students' levels, they can group students according to their ASER level, as is done in the **Ghana** Learning Activity, the Yemen Gateway Activity, and Pratham in India.²⁹⁵ In Ghana, there is also a remediation guide that provides activities aligned with ASER learning levels. Teachers use the ASER data combined with this guide to select from a variety of remediation activities within a learning level for a group of students assessed at that learning level.^{296, 297} The ASER test can also be used as a tool to assess student progress. It is designed to be user-friendly and provide actionable data on a regular basis.^{298, 299}

Another existing tool is the Early Grade Reading Assessment (EGRA). In **Yemen**, the USAID Mission and implementing partner Save the Children are considering switching from ASER to EGRA to align with the Ministry of Education's preferences for an assessment that also provides comprehensive data that are comparable across other USAID Missions.³⁰⁰

SUMMARY—Assessment



Gaps in learning loss data remain a challenge, though there are several approaches to implementing large-scale assessments to collect and use data to inform national remediation efforts. Different LMICs have begun to implement various approaches since schools reopened. However, there are limited examples of school- and student-level diagnostic data collection and formative assessment being used or built into the learning recovery plans, which is another area of assessment to address in future programming. As learning recovery plans continue to develop and be implemented, addressing data gaps at the national, regional, and classroom levels will help ensure that the plans are addressing the correct learning needs.

EXTRA PRACTICE AND SUPPORT OUTSIDE OF SCHOOL

Engaging the education community is a keystone of learning recovery. Engaging parents, youth leaders, and community leaders and members is a prerequisite to address concerns, promote buy-in for innovations, and ensure a safe, widely accepted learning transformation.³⁰¹

While limited in volume, guidance and evidence that address caregiver involvement articulate a distinct message that caregiver involvement improves children’s learning outcomes and that clear communication between schools and caregivers is essential to fostering engagement. The MATTERS framework emphasizes the importance of caregivers and the community supporting children’s learning outside of school, children’s and families’ access to learning materials within the home, and the availability of resources to guide caregivers in their support of children’s learning. Documents reviewed point to evidence of children’s reading performance improving when caregivers can read books with children at home³⁰² and emerging evidence from LICs on how early childhood stimulation and play with caregivers can have lasting positive effects on individuals.³⁰³

Exhibit 21: Clear messaging with caregivers helps mitigate schooling disruption^{304,305}

Clear messaging to caregivers is a cost-effective, evidence-based strategy. Messages at the time of reopening should articulate that it is safe for children to return to school, and emphasize the benefits, costs, and quality of education that children are receiving. Communication can take many forms, including text messages or videos, parents’ meetings, or school report cards. The World Bank, FCDO, and Building Evidence in Education (BE2) cite positive results of caregiver-targeted messaging from Chile, Peru, Madagascar, Dominican Republic, Pakistan, Mexico, and Argentina, though all these data were collected before the pandemic. Additional data on the effectiveness of such messaging campaigns within the context of COVID-19-related learning recovery and remediation would test the relevance of this approach and provide further evidence of implementation.

For example, given the frequency of cyclones and floods in Bangladesh, the Education in Emergencies project initiated a messaging campaign that identified education as a basic need and clarified the roles that school staff and community members could play in the context of an emergency. When floods occurred in 2010, little schooling time was lost because community members prioritized education and came forward to support school reopening, even in alternative locations until schools could be rejoined.

During crises, in particular, families need advice and guidance from educators to best support children.³⁰⁶ In the context of COVID-19-related school closures, many caregivers experienced increased levels of contact with their children’s education, due in part to distance learning initiatives taking place within the home. This enhanced exposure for some households is an unexpected positive consequence of the pandemic that presents an opportunity to harness the momentum of increased community engagement to “build back better.” At the same time, many caregivers face immense obstacles to sustained involvement in their children’s schooling, some of which were heightened due to the COVID-19 pandemic. For example, some caretakers may experience greater stress during crises and related school closures and may have been unable to support their child’s distance learning or felt burdened by

it. Exhibit 20 provides an overview of promising caregiver communication strategies specific to reopening.

SUMMARY—Extra Practice



Caregiver communications campaigns on reopening that feature the benefit, cost, and quality of education can be cost-effective. More examples and information are needed on other interventions at scale that promote caregiver support of children’s learning after schooling disruptions, especially those that focus on learning and foundational skills.

CHILD WELL-BEING

Six components combine to support child well-being according to MATTERS. The framework stresses that children are healthy, well-nourished, safe, protected from repeated traumatic stress, progressing toward cognitive and communication developmental milestones, and well-rested.³⁰⁷ USAID emphasizes that attention and improvements to child well-being components should accompany efforts to address the other seven components of strong education delivery systems.

In the aftermath of a crisis, the importance of child well-being becomes heightened and remediation efforts need to account for the stressors that children and their families have experienced. In the context of remediation after COVID-19 school closures, much attention was paid to health protocols. A March 2022 UNICEF, UNESCO, and World Bank survey found that nearly half (45 percent) of responding countries undertook significant additional water, sanitation, and hygiene measures³⁰⁸ (e.g., mask-wearing, handwashing) that were critical to ensuring children’s safety once they were back in school.^{xv} Implementation, however, reflects wealth disparities: only 10 percent of LICs reported having sufficient sanitation materials like masks, compared to 96 percent of HICs.³⁰⁹ As noted earlier, some countries implemented nutrition and feeding programs to support students and promote access, though self-reporting indicates that improvements in provision have not been significant.³¹⁰

Regarding remediation programming to address learning loss, efforts to promote students’ social-emotional well-being and associated learning merit investigation. Reinforcing these skills relates to two components of USAID’s MATTERS approach to child well-being: progressing toward cognitive and communications development milestones and being protected from repeated traumatic stress. Examples of implementation of mental health and social-emotional well-being programming at scale feature prominently within the learning recovery documents reviewed. This may indicate a general increase in attention to mental health and psychosocial support efforts within international education. For example, the UNESCO Assistant Director-General for Education referred to the integration of SEL into teaching and learning as a “luxury good before the crisis” that has now become necessary to mitigate learning loss.³¹¹ The joint Mission: Recovering Education in 2021 launched by UNESCO, UNICEF, and the World Bank, sets a universal target that “all schools incorporate social-emotional learning into their teaching.”³¹² A comparison of 2021 and 2022 survey results shows that over half (57 percent) of

^{xv} While water and sanitation efforts frequently feature in the literature this aspect is not explicitly mentioned in the USAID MATTERS framework.

ministries of education are making progress and have initiated at least small-scale increases in mental health support measures.³¹³

A recent review of literature on previous disasters and crises that aimed to identify insights applicable to COVID-19-related learning recovery recommends that school leaders have resources at their disposal to support the mental health of school community members.³¹⁴ In addition, a 2021 rapid evidence assessment focused on well-being came to a similar conclusion, recommending that schools support a “positive school climate, in-school counseling, and mental health services, online therapeutic courses and use of creative writing, activities with the focus on expressing and sharing experiences and feelings and other preventative measures such as disaster education.”³¹⁵

Addressing the mental health needs of school stakeholders is inherently complex and may require cross-sectoral collaboration,³¹⁶ but there are promising examples of mental health support at scale. Cases highlight varying approaches by ministries of education to assess and offer support. For instance, the Dominican Republic Ministry of Education, with support from USAID and UNICEF, initiated a two-week psychological recovery program that was initiated when schools reopened.³¹⁷ In the Democratic Republic of the Congo (DRC), 15,000 teachers from 2,500 schools across the country were trained to provide psychosocial support to students.³¹⁸ In Singapore, a peer-support program in all schools equips students to identify signs of distress among friends. In the West Bank and Gaza, the government established a thematic group that focuses on assessing and providing psychosocial support to teachers, school staff, and students.³¹⁹ Finally, the TNRP tasked school counselors with developing plans to provide mental health support to students and maintained psychosocial helpline services that had begun during school closures.³²⁰

Integrating SEL within the curriculum can promote student achievement and prosocial behaviors and attitudes among students.^{321, 322} Examples of SEL integration during learning recovery from Indonesia, Peru, and South Africa also indicate that even limited SEL instruction may provide modest gains in learning. Programming focused on developing a growth mindset, emphasizing that challenges lead to further development of intelligence and talents. Configurations ranged from one 90-minute session in Peru to two 40-minute sessions in Indonesia, and five 30-minute sessions in South Africa. All resulted in improved student performance, including in math. Results from Peru and South Africa were sustained³²³ The literature also points to SEL programming at scale in Brazil and Colombia,³²⁴ though there was no discussion of results. A more targeted and exhaustive study of SEL programming would help to understand and contextualize these examples.

SUMMARY—Child Well-Being



Very few LICs were able to invest in new initiatives to prioritize student health related to water, sanitation, and hygiene once schools reopened. Mental health and social-emotional well-being programming at scale featured prominently in the documents reviewed and there is an indication of a growing consensus for their importance. Examples of government-established programming take many forms, including a two-week psychological recovery program, teacher training and thematic groups focused on psychosocial support, and peer-support groups. Evidence from multiple countries points to the integration of SEL within the curriculum as positive for student achievement and promoting prosocial behaviors and attitudes among students. Even a modest dose seems to promote learning gains.

CONCLUSION

Promising examples of remedial education efforts at scale align with generally understood elements of quality education and may serve to inspire and inform recovery efforts that seek to “build back better.” The application of the MATTERS framework as a conceptual tool has allowed a deep investigation into eight areas of education practice specific to learning. Insights apply to learning recovery efforts in general, including for COVID-19 and future crises/disasters. While guidance may be bountiful, reported examples of implementation are limited—severely so for some topical areas. In line with the summaries above, the key top-level findings for each of the components are as follows:

Evidence-based STANDARDS, norms, and policies: There is limited documented evidence that “standards”—defined in the MATTERS framework as coherent regulations, policies, curricula, and indicators—have been adapted to meet educational needs specific to at-scale remediation after disruption. The evidence that does exist only covers curricular adaptation and policies. Seventy (70) percent of LMICs condensed their curriculum either regionally or nationally in 2022 to support learning recovery. In Guyana and Pakistan, all but the core subjects were cut from the curriculum. In Chile and Ecuador, the Ministry of Education selected the subjects to prioritize but allowed schools to make the final decision about what non-prioritized content to cut. In Vietnam, the Ministry provided suggestions for a trimmed curriculum but allowed schools to decide which subjects to prioritize while in Ghana the Ministry encouraged prioritizing curriculum during the first eight weeks of school to address learning loss in a brief yet targeted way. Given the evidence of remedial education programming occurring around the world and the guidance offered to update curricula and design system-wide approaches to address learning loss, regulations, policies, and curricula will need to adjust. Such new “standards” may emerge to align with national and regional remediation efforts. Documentation of these “standards” will be helpful to understand what policy mechanisms effectively support learning recovery.

Effective TEACHERS and classroom instruction: Effective professional development and support are critical for teachers, especially during recovery efforts after a crisis. Teachers require attention to their socio-emotional health and well-being as well as professional development to best lead students in catching up. A hybrid approach to professional development, combining in-person and online offerings and some self-paced modules, merits further investigation, and peer-support groups, particularly those that use virtual resources are widespread and generally appreciated. Examples from around the globe indicate multiple models for providing remedial instruction, including shorter- and longer-term strategies. Targeted instruction, grouping students by ability rather than age or grade, is an effective evidence-based approach and with widespread application. The scheduling of targeted instruction programming can vary; it may be included in the regular academic calendar or delivered in short bursts during summer or vacation times. Governments in Cambodia, Ghana, Gujarat (India), and Jordan, are also applying self-guided learning approaches that build upon the successful application of innovative tools that took shape during school closures. Attention to effectiveness will shed further light on these important tools and approaches.

Effective coaches and MENTORS: While evidence of the effectiveness of coaching and mentoring strategies during ongoing COVID-19 recovery efforts may be premature, examples from previous crises such as the Ebola outbreak in Sierra Leone, indicate positive outcomes. Coaches and mentors can play pivotal roles in providing teachers and administrators with critical on-the-job training and support as well as monitoring student progress.

Quality ADMINISTRATIVE support and supervision: School and district education officials play a critical role in supporting staff, ensuring effective communication, and supporting and mobilizing the local community. Though the literature on remedial education does not prominently feature administrators, the evidence that does exist suggests their contributions are crucial. Administrators' effectiveness can be enhanced through targeted professional training and coaching as well as the provision of mental health care and support.

High-quality TEXTS and materials: Education systems around the world rely on texts to complement and extend in-school instruction time. Texts may be guided or self-guided and come in many forms, including workbooks and lesson notes. Multimodal offerings in both print and digital formats increase access and offer greater options. Education systems in Lebanon, Malawi, and Jordan use texts to connect teaching and learning by producing and distributing teaching materials so teachers can effectively support students' use of texts for learning recovery.

Regular ASSESSMENTS inform instruction: Gaps in data about learning loss in LMICs are well documented, as is the importance of using a variety of assessments at the national, school, and classroom levels to inform remedial education strategies and daily teaching practices. In response to the data challenges, some global and country-specific efforts collect and use assessment data to support learning recovery, including regional diagnostic assessments in Mexico and national formative assessments in Chile. However, documentation of efforts to collect and use classroom-level data is limited. As LMICs continue to address learning loss, their strategies should incorporate national diagnostic assessments as a tool to design learning recovery programs and follow guidance to incorporate school and classroom formative assessments to support real-time adjustments in content focus and teaching strategies.

EXTRA PRACTICE and support outside of school: Caregiver involvement improves children's learning outcomes and clear communication between schools and caregivers is essential to fostering engagement. Messaging strategies for caregivers that emphasize the benefit, cost, and quality of education that children are receiving are cost-effective and evidence-based.

Child Well-being: Examples of implementation of mental health and social-emotional well-being programming at scale feature prominently in the learning recovery literature and may reflect a general increase in attention to mental health and psychosocial support efforts within education systems. Cases highlight varying approaches by ministries of education to assess and offer support and often include plans for assessing needs and providing access to support. Integration of social-emotional learning within the curriculum is also critical for promoting student achievement and prosocial behaviors and attitudes.

Reflections on the application of the MATTERS framework reveal that access and curricular adaptation do not fit neatly within the framework. But understanding ongoing challenges and mitigation efforts related to both is essential for contextualizing the larger ecosystem in which recovery takes place.

AREAS FOR FUTURE RESEARCH AND EVALUATION

While the dearth of information relevant to COVID-19-related recovery may be explained by lag time in publishing, in some cases information is not available in the general crisis recovery literature that pre-dates the pandemic. Multiple areas of practice require additional research and evaluation to increase the evidence base of effective remediation and learning recovery practices. Gaps include:

- Remedial education efforts for students with disabilities, especially students with sensory and cognitive disabilities;
- Effectiveness of curricular adaptation approaches to address learning loss, particularly comparing more-prescriptive with less-structured approaches;
- Texts and materials that are being developed or used to support learning recovery after school reopening to complement the substantial documentation of texts and materials used for distance learning during school closures;
- Information about effective strategies to support the well-being of learning communities during remediation, with emphasis on students, teachers, and administrators;
- Effective professional development strategies during learning recovery, including peer support, coaching/mentoring, and administrator-specific initiatives as well as timing structures to promote teacher practice and adaptation of new techniques; and
- Examples of updated education standards to address learning recovery.

COUNTRY INDEX

ACCESS

Country or Region	Project/Response	Page
Afghanistan	Partnership for Advancing Community Education in Afghanistan (USAID/CARE, IRC, CRS, Aga Khan Foundation)	6
Cambodia	Cambodia Education Support Project Scholarship Program (Ministry of Education, Youth and Sport)	6
Ethiopia	COVID-19 school reopening plan (Ministry of Education)	6
Ghana	COVID-19 Back to School for Safe Learning Campaign (Ghana Education Service)	6
Honduras	De Lectores a L í deres (USAID/EDC)	6
India	Chief Minister's Bicycle Program (Government of Bihar)	6
India	Nagaland: Enhancing Classroom Teaching and Resources (World Bank/Nagaland Department of School Education)	6
Indonesia	School Committee Decree (Government of Indonesia)	6
Kenya	Girls Scholarship Program (ICS Africa)	6
Kyrgyz Republic	Sustainable Rural Water Supply and Sanitation Development Project (World Bank)	6
Sierra Leone	Ebola response (Government of Sierra Leone)	6
Turkey	Turkish National Remedial Program (General Directorate of Primary Education)	7
Yemen	Gateway Activity (USAID/Save the Children)	6

MENTORS AND COACHES

Country or Region	Project/Response	Page
Chile	Un Buen Comienzo (Government of Chile)	22
Kenya	Tusome Early Grade Reading Activity (USAID/RTI International)	22
Lebanon	QITABI 2 (USAID/World Learning)	22
Malawi	COVID-19 (Government of Malawi)	22
Nigeria	Northern Education Initiative Plus (USAID/Education Development Center)	22
Pakistan	Teach (Government of Punjab, Pakistan)	22
Peru	Acompañamiento Pedagógico Multigrado (Government of Peru)	22
Sierra Leone	Ebola response (Government of Sierra Leone)	22
Zambia	Teaching at the Right Level	22

ADMINISTRATORS

Country or Region	Project/Response	Page
Ghana	Partnership for Education Learning activity (USAID/FHI360)	23
New Zealand	Christchurch earthquake	24
Rwanda	Rwanda Learning Partnership (REB, Education Commission, Education Development Trust, and WISE)	24
United States of America	Hurricane Katrina	24

TEACHERS

Country or Region	Project/Response	Page
Botswana	SMS Instructional Support for Parents (Youth Impact)	15
Brazil	Brasil Na Escola (Government of Brazil)	14, 17
Cambodia	Capacity Development Partnership Fund (Government of Cambodia, EU, SIDA, USAID, UNICEF)	14, 17
Chile	Escuelas Arriba (Government of Chile)	13
Ghana	COVID-19 Response (Government of Ghana and World Bank)	14, 16
Honduras	De Lectores a Lidores (USAID/EDC)	17
Indonesia	2004 Indian Ocean Tsunami (Government of Indonesia and UNICEF)	19
Jordan	Learning Bridges (Government of Jordan and UNICEF)	17, 18, 19
Kenya	Tusome (USAID/RTI International)	18, 21
Lebanon	QITABI-2 (USAID/World Learning)	13, 20
Malawi	Reading for All Malawi (USAID and Juarez & Associates)	17, 18
Mongolia	COVID-19 response (Government of Mongolia and UNICEF)	13, 20
Nepal	COVID-19 response (Government of Nepal, World Bank, and Pratham)	14, 21
Pakistan	Remedial Targeted Instruction (RISE Programme)	14, 15
Philippines	COVID-19 response (Government of the Philippines)	18
Sierra Leone	Ebola response (Government of Sierra Leone)	19
Turkey	Turkish National Remedial Program (Government of Turkey)	17, 21
United States of America	Hurricane Katrina	16
Uruguay	Plataforma Adaptativa de Matemática (Plan Ceibal)	15
Zambia	COVID-19 response (Government of Zambia, TaRL, VVOB, USAID, UNICEF, and LEGO)	15

TEXTS & MATERIALS

Country or Region	Project/Response	Page
Ghana	Partnership for Education Learning Activity (USAID)	26
Jordan	Learning Bridges (UNICEF)	25, 25
Lebanon	QITABI 2 (USAID/World Learning)	25, 26
Malawi	COVID -19 Guidelines for Re-Opening Schools (Ministry of Education)	25, 26
Mozambique	COVID-19 remediation plan (Prime Minister)	25
Turkey	Turkish National Remedial Program (General Directorate of Primary Education)	25, 26

EXTRA PRACTICE

Country or Region	Project/Response	Page
Argentina	School Management and Classroom Instruction in La Rioja (World Bank)	31
Bangladesh	Education in Emergencies (Plan International Bangladesh and Save the Children UK)	31
Chile	Informed School Choice RCT (Columbia University and J-PAL)	31
Dominican Republic	Perceived Returns to Education and Demand for Schooling Study (UCLA)	31
Madagascar	Perceived Returns to Education and Role Model RCT (MIT and J-PAL)	31
Mexico	Percepciones (World Bank)	31
Pakistan	Impact of Providing School and Child Test Scores on Educational Markets (Pomona College, World Bank, and Harvard University)	31
Peru	Role of information on the returns of postprimary education on school dropout (IPA)	31

REGULAR ASSESSMENT

Country or Region	Project/Response	Page
Chile	COVID-19 Chile Recover and Learn Plan (Ministry of Education)	29
Ghana	Learning Activity (USAID/FHI360)	30
Honduras	De Lectores a Lderes (USAID/EDC)	28
India	Pratham	30
Kenya	COVID-19 re-opening national assessment (National Examinations Council)	29
Lebanon	QITABI 2 (USAID/World Learning)	29
Mexico (Guanajuato)	RIMA (State of Guanajuato)	29
South Africa	COVID-19 learning recovery plan (Department for Basic Education)	29

Turkey	Turkish National Remedial Program (General Directorate of Measurement, Assessment, and Examination Services)	29
Yemen	Gateway Activity (USAID/Save the Children)	30

STANDARDS

Country or Region	Project/Response	Page
Chile	COVID-19 Together, Chile Recovers and Learns (Ministry of Education)	9, 12
Ecuador	COVID-19 prioritized curriculum (Ministry of Education)	10
Ghana	COVID-19 curriculum adaptation (Ministry of Education) and Ghana Accountability for Learning Outcomes Project/GALOP (International Development Association/World Bank)	10
Guyana	COVID-19 condensed curriculum (Ministry of Education)	9
Malawi	National Reading Program (USAID/MOEST, MIE, RTI International, STS International)	10
Pakistan	COVID-19 condensed curriculum (Ministry of Education)	9
Pakistan	2005 earthquake response (Government of Pakistan)	11
Sierra Leone	Ebola response (Government of Sierra Leone)	9
South Africa	COVID-19 curriculum recovery (Department for Basic Education)	9, 11
Vietnam	COVID-19 curriculum adaptation (Ministry of Education and Training)	10
Yemen	Gateway Activity (USAID/Save the Children)	11

CHILD WELL-BEING

Country or Region	Project/Response	Page
Brazil	Recovering Learning Losses from COVID-19 Pandemic (Government of Brazil)	33
Colombia	Program for Improving Learning Outcomes and Socioemotional Learning (Government of Colombia)	33
D.R. Congo	D.R. Congo COVID-19 Education Response Plan (Government of DR Congo and UNICEF)	33
Dominican Republic	El Retorno a la Alegría (Government of Dominican Republic and UNICEF)	33
Gaza and West Bank	COVID-19 Response (Ministry of Education)	33
Indonesia	Growth Mindset (Government of Indonesia and World Bank)	33
Peru	Growth Mindset (Government of Peru and World Bank)	33
Singapore	Peer Support Programme (Government of Singapore)	33
South Africa	Growth Mindset (Government of South Africa and World Bank)	33
Turkey	Turkish National Remedial Program (General Directorate of Measurement, Assessment, and Examination Services)	33

ANNEXES

ANNEX A: LITERATURE SEARCH LOCATIONS

Below is a list of locations searched in the literature review.

DATABASES

- Academic Search Complete
- ERIC
- JSTOR
- Sage Journals

JOURNALS

- Forum for International Research in Education
- Innovations in Education and Teaching International
- International Journal of Early Years Education
- International Journal of Educational Development
- International Review of Education
- Journal of Educational Change
- Journal of Research in International Education
- Journal of Studies in International Education
- Prospects
- Research in Comparative and International Education
- Studies in Comparative International Development

ORGANIZATION WEBSITES

- Aga Khan
- Bill & Melinda Gates Foundation
- Centro de Investigaciones y Estudios Superiores en Antropología Social
- Chemonics
- Creative Associates
- Education Development Center
- FCDO
- FHI 360
- FLN Hub
- IIDEAC - Instituto de Investigación para el Desarrollo de la Educación, A. C.

- International Rescue Committee
- Lego Foundation
- Mercy Corps
- Norwegian Refugee Council
- RTI International
- Save the Children
- Sesame Workshop
- UNESCO
- UNICEF
- USAID EduLinks
- World Bank

OTHER

- Google
- Google Scholar

ANNEX B: REVIEWED LITERATURE DETAILS

LITERATURE DETAILS	COUNT (N = 94)
Document Type	
Blog Post	14
Case Study	5
Evaluation Report	9
Evidence Brief/Paper	19
Government Webpage	6
Handbook or Practice Guide	1
Literature Review	5
News Article	1
Policy Document	1
Presentation	3
Press Release	1
Program Report	9
Program Webpage	4
Research Report	4
Technical Note	8
Video	4
Relevant Crisis	
Academic Concerns	5
Conflict	2
COVID-19	62
Multiple Crises	7
Natural Disaster	6
Not Crisis-Specific	12
Country Context	
Lower-income country	12
Lower middle-income country	27
Upper middle-income country	14
High-income country	10
Lower- and middle-income countries	9
Middle- and higher-income countries	1
All country contexts	21

ANNEX C: SEARCH TERMS

The list below details the various combinations of search terms used to locate references for this literature review. The use of a snowball method to identify additional resources based on works cited within documents further supplemented these results on an ongoing basis.

- accelerated learning AND reading (2020-2022, English)
- accelerated learning AND reading (2020-2022)
- accelerated learning AND reading AND education AND primary (2020-2022)
- accelerated learning AND reading (2020-2022)
- (accelerated OR remedial) AND education AND (COVID OR pandemic) NOT health (2020-2022)
- "remedial education" (2020-2022)
- "accelerated learning" AND reading AND covid AND education (2020-2022)
- remedial education (2020-2022)
- remedial education programs (2020-2022)
- remedial education programs AND primary school (2020-2022)
- learning recovery (2020-2022)
- learning recovery, education system (2020-2022)
- remedial education NOT college (2020-2022)
- remedial (2020-2022)
- accelerated learning (2020-2022)
- recovery AND reading AND pandemic (2020-2022)
- learning AND reading AND pandemic OR covid (2020-2022)
- remedial education (2020-2022)
- accelerat* learning (2020-2022)
- remedial education (2020-2022)
- accelerat* learning (2020-2022)
- remedial education (2020-2022)
- accelerated learning (2020-2022)
- remedial education (2020-2022)
- accelerat* learning (2020-2022)
- remedial education (2020-2022)
- accelerat* learning (2020-2022)
- remedial education programs AND primary school AND covid (2020-2022)
- learning recovery AND education system AND primary (2020-2022)
- remedial education AND low income countries (2021-2022)
- learning recovery AND low income countries (2021-2022)

- learning recovery AND low income countries AND post-covid (2021-2022)
- remedial education AND low income countries AND post-covid (2021-2022)
- case study covid remediation education
- learning loss recovery AND primary education
- remediate learning loss
- remediate learning loss
- learning recovery AND education system AND primary
- "learning loss" AND recovery OR reversal (2020-2022)
- "learning loss" AND recovery OR reversal AND education (2020-2022)
- remedial education AND low income countries (2020-2022)
- learning recovery AND low income countries
- learning loss AND recovery (2020-2022)
- learning recovery AND education system AND primary
- "learning loss" AND recovery OR reversal (2020-2022)
- remedial education AND low income countries
- learning recovery AND low income countries
- learning recovery AND education system AND primary (2020-2022)
- "learning loss" AND recovery OR reversal (2020-2022)
- "remedial education" AND low income countries (2020-2022)
- learning recovery AND low income countries (2020-2022)
- learning recovery AND education system AND primary (2020-2022)
- "learning loss" AND recovery OR reversal (2020-2022)
- "remedial education" AND low income countries (2020-2022)
- learning recovery AND low income countries (2020-2022)
- learning recovery AND education system AND primary (2020-2022)
- "learning loss" AND recovery OR reversal (2020-2022)
- "remedial education" AND low income countries (2020-2022)
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- learning recovery AND education system AND primary (2020-2022)
- "learning loss" AND recovery OR reversal (2020-2022)
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- "learning loss" AND recovery OR reversal (2020-2022)
- "remedial education" AND low income countries (2020-2022)
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- "learning loss" AND recovery OR reversal (2020-2022)
- "remedial education" AND low income countries (2020-2022)
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- learning recovery AND education system AND primary (2020-2022)

- "learning loss" AND recovery OR reversal (2020-2022)
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- "remedial education" AND low income countries (2020-2022)
- learning recovery AND low income countries (2020-2022)
- accelerat* learning (2020-2022)
- learning recovery AND education system AND primary (2020-2022)
- "learning loss" AND recovery OR reversal (2020-2022)
- "remedial education" AND low income countries (2020-2022)
- learning recovery AND low income countries (2020-2022)
- accelerat* learning (2020-2022)
- learning recovery AND education system AND primary (2020-2022)
- "learning loss" AND recovery OR reversal (2020-2022)
- "remedial education" AND low income countries (2020-2022)
- learning recovery AND low income countries (2020-2022)
- accelerat* learning (2020-2022)
- "learning recovery"; after 2020
- "learning loss"; after 2020
- Haiti and "remedial education"; Haiti and schools and remediation
- "learning recovery" and crisis
- "learning recovery" and crisis
- "learning recovery" and crisis and "case study"
- "learning recovery" and "natural disaster"

- "Learning recovery" and "emergency"
- "remedial education" and "natural disaster"
- "learning recovery" and crisis, 2022 and beyond
- "remedial education" and low income countr*, 2022 and beyond

ANNEX D: ENDNOTES

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- ¹ Davidson, Marcia, Wedni Ralaingita, Elizabeth Marsden, Elizabeth Long. "Remediation Literature Review." Science of Teaching for Foundational Literacy and Numeracy. (November 2022)
- ² UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery](#). 2022.
- ³ UNESCO & UNICEF. [Viet Nam: Case Study: Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia](#). October 2021.
- ⁴ Angrist, Noam, Andreas de Barros, Radhika Bhula, Shiraz Chakera, Chris Cummiskey, Joseph DeStefano, John Floretta, Michelle Kaffenberger, Benjamin Piper, and Jonathan Stern. ["Building back better to avert a learning catastrophe: Estimating learning loss from COVID-19 school shutdowns in Africa and facilitating short-term and long-term learning recovery."](#) International Journal of Educational Development 84 (2021): 102397.
- ⁵ The World Bank, UNESCO, UNICEF, FCDO, USAID & Bill & Melinda Gates Foundation. [The State of Global Learning Poverty: 2022 Update](#). June 23, 2022.
- ⁶ UNESCO, UNICEF, World Bank & OECD. ["From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures."](#) 2022.
- ⁷ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ⁸ USAID. [USAID Reading MATTERS conceptual framework](#). November 2019.
- ⁹ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁰ UNESCO. ["COVID-19 and the Educational Response."](#) n.d. Retrieved August 20, 2020.
- ¹¹ The World Bank, UNESCO, UNICEF, FCDO, USAID & Bill & Melinda Gates Foundation. [The State of Global Learning Poverty: 2022 Update](#). June 23, 2022.
- ¹² The World Bank, UNESCO, UNICEF, FCDO, USAID & Bill & Melinda Gates Foundation. [The State of Global Learning Poverty: 2022 Update](#). June 23, 2022.
- ¹³ Davidson, Marcia, Wedni Ralaingita, Elizabeth Marsden, Elizabeth Long. "Remediation Literature Review." Science of Teaching for Foundational Literacy and Numeracy. (November 2022)
- ¹⁴ UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁵ UNESCO & UNICEF. [Viet Nam: Case Study: Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia](#). October 2021.
- ¹⁶ Angrist, Noam, Andreas de Barros, Radhika Bhula, Shiraz Chakera, Chris Cummiskey, Joseph DeStefano, John Floretta, Michelle Kaffenberger, Benjamin Piper, and Jonathan Stern. ["Building back better to avert a learning catastrophe: Estimating learning loss from COVID-19 school shutdowns in Africa and facilitating short-term and long-term learning recovery."](#) International Journal of Educational Development 84 (2021): 102397.
- ¹⁷ The World Bank, UNESCO, UNICEF, FCDO, USAID & Bill & Melinda Gates Foundation. [The State of Global Learning Poverty: 2022 Update](#). June 23, 2022.
- ¹⁸ Kaffenberger, Michelle. ["Modelling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to \(More than\) Mitigate Loss."](#) International Journal of Educational Development, 81 (2021).
- ¹⁹ Page, Ella, Rosie Leonard-Kane, Elnaz Kashefpakdel, Anna Riggall and Sonia Guerriero. ["Learning loss, learning gains and wellbeing: a rapid evidence assessment."](#) Educational Development Trust (2021).
- ²⁰ Darling-Hammond, Linda and Adam K. Edgerton. [Accelerating Learning as We Build Back Better](#). Palo Alto, CA: Learning Policy Institute, April 5, 2021.
- ²¹ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ²² UNESCO, UNICEF, World Bank & OECD. ["From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures."](#) 2022.
- ²³ Definition provided by USAID Center for Education.
- ²⁴ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ²⁵ USAID. [USAID Reading MATTERS conceptual framework](#). November 2019.
- ²⁶ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²⁷ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²⁸ UNESCO, UNICEF, and World Bank. [Mission: Recovering Education in 2021](#). May 2021.

- ²⁹ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, D.C., and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO.
- ³⁰ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ³¹ Berry, Chris and Edward Davis. [Mitigating COVID-19 Impacts and Getting Education Systems Up and Running Again: Lessons from Sierra Leone](#). April 20, 2020. UKFIET: The Education and Development Forum.
- ³² Kim, Janice, et al. ["Learning Inequalities Widen Following COVID-19 School Closures in Ethiopia"](#) RISE Programme (blog), May 4, 2021. Accessed 19 July 2022.
- ³³ Bilagher, Moritz and Amit Kaushik. "The potential of Accelerated Learning Programmes (ALPs) for conflict-ridden countries and regions: Lessons learned from an experience in Iraq." *International Review of Education* 66, (2020): 93–113.
- ³⁴ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, D.C., and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO, 8.
- ³⁵ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, D.C., and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO, 8.
- ³⁶ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ³⁷ UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery](#). 2022.
- ³⁸ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ³⁹ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, D.C., and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO.
- ⁴⁰ The World Bank, FCDO and BE2. [Cost-Effective Approaches to Improve Global Learning](#). October 2020.
- ⁴¹ Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ⁴² The World Bank, FCDO and BE2. [Cost-Effective Approaches to Improve Global Learning](#). October 2020.
- ⁴³ Barrera-Osorio, Felipe, Andreas De Barros, and Deon P. Filmer. 2018. ["Long-Term Impacts of Alternative Approaches to Increase Schooling: Evidence from a Scholarship Program in Cambodia."](#) Policy Research Working Paper No. WPS 8566. Washington, D.C.: World Bank Group.
- ⁴⁴ Kremer, Michael, Edward Miguel, and Rebecca Thornton. 2009. "Incentives to Learn." *The Review of Economics and Statistics* 91 (3): 437–456. <https://www.nber.org/papers/w10971>
- ⁴⁵ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ⁴⁶ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ⁴⁷ UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery](#). 2022.
- ⁴⁸ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ⁴⁹ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, D.C., and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO.
- ⁵⁰ The World Bank, FCDO, and BE2. [Cost-Effective Approaches to Improve Global Learning](#). October 2020.
- ⁵¹ The World Bank, FCDO and BE2. [Cost-Effective Approaches to Improve Global Learning](#). October 2020.
- ⁵² Grazia Mendoza (USAID Honduras), in discussion with USAID/Honduras Mission, October 12, 2022.
- ⁵³ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ⁵⁴ UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery](#). 2022.
- ⁵⁵ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ⁵⁶ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, DC, and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO.
- ⁵⁷ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.

- ⁵⁸ The World Bank, FCDO, and BE2. [Cost-Effective Approaches To Improve Global Learning](#). October 2020.
- ⁵⁹ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ⁶⁰ UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery](#). 2022.
- ⁶¹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ⁶² ["Nagaland: Enhancing Classroom Teaching and Resources."](#) *The World Bank* online. July 18, 2022.
- ⁶³ John Collins (USAID Middle East Regional Platform), Samah Eid (USAID Yemen), Brooke Estes (USAID), Mia Shakkour (USAID Yemen), and Muwadda AlHady (USAID Yemen), in discussion with USAID/Yemen Mission, January 10, 2023.
- ⁶⁴ UNESCO & UNICEF. [Viet Nam: Case Study: Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Asia](#). October 2021.
- ⁶⁵ Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ⁶⁶ Mahmut, Ö. Z. E. R., Eren, S. U. N. A., ŞENSOY, S., CENGİZ, M., GEN? OĞLU, C., NUMANOĞLU, K. V., & GÜL, M. N. (2021). The Turkish National Remedial Program (TNRP) to Combat the Negative Effects of the Covid-19 Pandemic. *Kastamonu Eğitim Dergisi*, 29(2), 442–451. doi: 10.24106/kefdergi.901367
- ⁶⁷ Kim, Janice, et al. ["Learning Inequalities Widen Following COVID-19 School Closures in Ethiopia,"](#) RISE Programme (blog), May 4, 2021. Accessed 19 July 2022.
- ⁶⁸ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ⁶⁹ Berry, Chris and Edward Davis. [Mitigating COVID-19 Impacts and Getting Education Systems Up and Running Again: Lessons from Sierra Leone](#). April 20, 2020. UKFIET: The Education and Development Forum.
- ⁷⁰ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ⁷¹ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, D.C., and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO.
- ⁷² ["A National Hygiene Campaign and Community Engagement Activities for a Coordinated COVID-19 Response in Kyrgyz Republic."](#) *Hygiene hub*, 2021.
- ⁷³ Mahmut, Ö. Z. E. R., Eren, S. U. N. A., ŞENSOY, S., CENGİZ, M., GEN? OĞLU, C., NUMANOĞLU, K. V., & GÜL, M. N. (2021). The Turkish National Remedial Program (TNRP) to Combat the Negative Effects of the Covid-19 Pandemic. *Kastamonu Eğitim Dergisi*, 29(2), 442–451. doi: 10.24106/kefdergi.901367
- ⁷⁴ USAID. [USAID Reading MATTERS conceptual framework](#). November 2019. P.3
- ⁷⁵ Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ⁷⁶ Fitzpatrick, Rachael, Astrid Korin, and Anna Riggall. ["An international review of plans and actions for school reopening."](#) Education Development Trust (2020).
- ⁷⁷ The World Bank, FCDO and BE2. [COST-EFFECTIVE APPROACHES TO IMPROVE GLOBAL LEARNING](#). October 2020.
- ⁷⁸ Angrist, Noam, Andreas de Barros, Radhika Bhula, Shiraz Chakera, Chris Cummiskey, Joseph DeStefano, John Floretta, Michelle Kaffenberger, Benjamin Piper, and Jonathan Stern. ["Building back better to avert a learning catastrophe: Estimating learning loss from COVID-19 school shutdowns in Africa and facilitating short-term and long-term learning recovery."](#) *International Journal of Educational Development* 84 (2021): 102397.
- ⁷⁹ Fitzpatrick, Rachael, Astrid Korin, and Anna Riggall. ["An international review of plans and actions for school reopening."](#) Education Development Trust (2020).
- ⁸⁰ Page, Ella, Rosie Leonard-Kane, Elnaz Kashefpakdel, Anna Riggall and Sonia Guerriero. ["Learning loss, learning gains and wellbeing: a rapid evidence assessment."](#) Educational Development Trust (2021).
- ⁸¹ Kaffenberger, Michelle. ["Modelling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to \(More than\) Mitigate Loss."](#) *International Journal of Educational Development*, 81 (2021).
- ⁸² Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ⁸³ UNESCO. ["From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures."](#) 2022.
- ⁸⁴ Mancebo, Maria Ester, and Denise Vaillant. ["Learning Recovery Programs - Assessing the Evidence and Potential for Latin America."](#) *Dialogo Interamericano*. 2022. pg. 23.
- ⁸⁵ Sarr, Karla Giuliano, Nitika Tolani, Idalia Rodriguez Morales, Ryan Aghabozorg, and Amy Mulcahy-Dunn. ["Reigniting Learning: Strategies for Accelerating Learning Post-Crisis. A Review of Evidence."](#) Education in Crisis and Conflict Network. November 2020.

-
- ⁸⁶ UNESCO. ["From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures."](#) 2022.
- ⁸⁷ Sarr, Karla Giuliano, Nitika Tolani, Idalia Rodriguez Morales, Ryan Aghabozorg, and Amy Mulcahy-Dunn. ["Reigniting learning: Strategies for accelerating learning post-crisis."](#) Washington, D.C.: USAID (2020).
- ⁸⁸ UNESCO. "From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures. 2022. <http://hdl.handle.net/10986/38112>
- ⁸⁹ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19.](#) (Washington, D.C.: Center for Global Development, 2020), p.12.
- ⁹⁰ Fitzpatrick, Rachael, Astrid Korin, and Anna Riggall. "An international review of plans and actions for school reopening." Education Development Trust (2020).
- ⁹¹ Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ⁹² Kaffenberger, Michelle. ["Modelling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to \(More than\) Mitigate Loss."](#) International Journal of Educational Development, 81 (2021).
- ⁹³ UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery.](#) 2022.
- ⁹⁴ The World Bank, FCDO, and BE2. [Cost-Effective Approaches to Improve Global Learning.](#) October 2020.
- ⁹⁵ Berry, Chris and Edward Davis. [Mitigating COVID-19 Impacts and Getting Education Systems Up and Running Again: Lessons from Sierra Leone.](#) April 20, 2020. UKFIET: The Education and Development Forum.
- ⁹⁶ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps.](#) July 2020.
- ⁹⁷ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery.](#) 2022.
- ⁹⁸ UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery : Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic.](#) UNESCO, Paris, UNICEF, New York, World Bank, Washington, DC, and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO.
- ⁹⁹ UNESCO. "From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures. 2022. <http://hdl.handle.net/10986/38112>
- ¹⁰⁰ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better.](#) June 2022.
- ¹⁰¹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better.](#) June 2022.
- ¹⁰² Bhainie, Richard. ["Consolidated curriculum to facilitate students re-entering school system."](#) Guyana Chronicle, (August 28, 2021).
- ¹⁰³ Bhainie, Richard. ["Consolidated curriculum to facilitate students re-entering school system."](#) Guyana Chronicle, (August 28, 2021).
- ¹⁰⁴ Bhainie, Richard. ["Consolidated curriculum to facilitate students re-entering school system."](#) Guyana Chronicle, (August 28, 2021).
- ¹⁰⁵ UNESCO. ["From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures."](#) 2022.
- ¹⁰⁶ Republic of South Africa, Department of Basic Education. [Release of the Curriculum Recovery Annual Teaching Plans for 2021.](#) by H.M. Mweli. Circular S13 of 2020. Pretoria, South Africa, 2020 (accessed August 3, 2022).
- ¹⁰⁷ ["Annual Teaching Plans for 2021-2023."](#) Republic of South Africa National Department of Basic Education. 2021. accessed August 2, 2022.
- ¹⁰⁸ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better.](#) June 2022.
- ¹⁰⁹ Amin, Nyna and Pryah Mahabeer. "Curriculum tinkering in situations of crises and inequalities: The case of South Africa." Prospects 51 (2021): 489–501.
- ¹¹⁰ Angrist, Noam, Andreas de Barros, Radhika Bhula, Shiraz Chakera, Chris Cumiskey, Joseph DeStefano, John Floretta, Michelle Kaffenberger, Benjamin Piper, and Jonathan Stern. ["Building back better to avert a learning catastrophe: Estimating learning loss from COVID-19 school shutdowns in Africa and facilitating short-term and long-term learning recovery."](#) International Journal of Educational Development 84 (2021): 102397.
- ¹¹¹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better.](#) June 2022.
- ¹¹² Hatch, Thomas. ["Brahm Fleisch on South African Education during the Pandemic."](#) International Education News, June 9, 2021.
- ¹¹³ Unidad de Currículum Nacional. ["Priorización Curricular."](#) Accessed September 9, 2022.
- ¹¹⁴ Agencia de Calidad de la Educación. ["Diagnóstico Integral de Aprendizajes."](#) Accessed September 9, 2022.

- ¹¹⁵ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹¹⁶ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹¹⁷ Ghana Education Service, [Helping Learners Recover Learning Losses as Schools Reopen](#). My Ref. GES/DD-G/Q&A/20/171. Accra, Ghana, January 8, 2021.
- ¹¹⁸ Ghana Education Service, [Helping Learners Recover Learning Losses as Schools Reopen](#). My Ref. GES/DD-G/Q&A/20/171. Accra, Ghana, January 8, 2021.
- ¹¹⁹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹²⁰ Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1-11.
- ¹²¹ Odala Banda (USAID Malawi), Dorothy Matiti (USAID Malawi), Christine Veverka (USAID), Brad Strickland (USAID Africa Bureau), and Bryan Dwyer (USAID), in discussion with USAID/Malawi Mission, October 18, 2022.
- ¹²² Andrabi, Tahir, Benjamin Daniels, and Jishnu Das. 2020. "Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005." Journal of Human Resources, 0520. doi:10.3368/jhr.59.2.0520-10887R1
- ¹²³ Kaffenberger, Michelle. ["Modelling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to \(More than\) Mitigate Loss."](#) International Journal of Educational Development, 81 (2021).
- ¹²⁴ Kaffenberger, Michelle. ["Modelling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to \(More than\) Mitigate Loss."](#) International Journal of Educational Development, 81 (2021).
- ¹²⁵ Andrabi, Tahir, Benjamin Daniels, and Jishnu Das. 2020. "Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005." Journal of Human Resources, 0520. doi:10.3368/jhr.59.2.0520-10887R1
- ¹²⁶ Andrabi, Tahir, Benjamin Daniels, and Jishnu Das. 2020. "Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005." Journal of Human Resources, 0520. doi:10.3368/jhr.59.2.0520-10887R1
- ¹²⁷ Andrabi, Tahir, Benjamin Daniels, and Jishnu Das. 2020. "Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005." Journal of Human Resources, 0520. doi:10.3368/jhr.59.2.0520-10887R1
- ¹²⁸ Alaaddin Zaza (Save the Children Yemen) and Amr Daiban (Save the Children Yemen), in discussion with the implementing partner, January 26, 2023.
- ¹²⁹ Amin, Nyna and Pryah Mahabeer. "Curriculum tinkering in situations of crises and inequalities: The case of South Africa." Prospects 51 (2021):489–501.
- ¹³⁰ Amin, Nyna and Pryah Mahabeer. "Curriculum tinkering in situations of crises and inequalities: The case of South Africa." Prospects 51 (2021):489–501.
- ¹³¹ ["Annual Teaching Plans for 2021–2023."](#) Republic of South Africa National Department of Basic Education. 2021. accessed August 2, 2022.
- ¹³² Republic of South Africa, Department of Basic Education. [Release of the Curriculum Recovery Annual Teaching Plans for 2021](#). by H.M. Mveli. Circular S13 of 2020. Pretoria, South Africa, 2020. (accessed August 3, 2022).
- ¹³³ Amin, Nyna and Pryah Mahabeer. "Curriculum tinkering in situations of crises and inequalities: The case of South Africa." Prospects 51 (2021):489–501.
- ¹³⁴ ["Annual Teaching Plans for 2021–2023."](#) Republic of South Africa National Department of Basic Education. 2021. accessed August 2, 2022.
- ¹³⁵ Republic of South Africa, Department of Basic Education. [Release of the Curriculum Recovery Annual Teaching Plans for 2021](#). by H.M. Mveli. Circular S13 of 2020. Pretoria, South Africa, 2020. (accessed August 3, 2022).
- ¹³⁶ Gobierno de Chile. ["“Juntos, Chile se recupera y aprende”: Mineduc entrega 20 propuestas educativas para enfrentar efectos de la pandemia en los próximos 4 a? os."](#) December 13, 2021.
- ¹³⁷ Ministerio de Educación de Chile. ["“Juntos, Chile se recupera y aprende”: Mineduc inicia consulta nacional para elaborar hoja de ruta por los próximos 4 a? os."](#) Ministerio de Educación (Chile) online. August 3, 2021.
- ¹³⁸ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹³⁹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁴⁰ UNESCO, UNICEF and World Bank. [Mission: Recovering Education in 2021](#). May 2021.
- ¹⁴¹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.

- ¹⁴² Ministerio de Educación (Chile). [70% de los estudiantes ha mejorado su rendimiento con la nivelación de Escuelas Arriba](#). 1 December, 2021.
- ¹⁴³ UNICEF Mongolia Country Office. [COVID-19 Education Case Study: Mongolia - Remediation of Learning After School Reopening](#). 7 January 2021.
- ¹⁴⁴ World Learning Inc, "Quality Instruction towards Access and Basic Education Improvement 2. Twelfth Quarterly Report. January–March 2022," 2022.
- ¹⁴⁵ Banerji, Rukmini and Madhav Chavan. "Improving literacy and math instruction at scale in India's primary schools."
- ¹⁴⁶ Bilagher, Moritz and Amit Kaushik. "The potential of Accelerated Learning Programmes (ALPs) for conflict-ridden countries and regions
- ¹⁴⁷ UNICEF, UNESCO, and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁴⁸ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).
- ¹⁴⁹ Kaffenberger, Michelle. ["Modelling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to \(More than\) Mitigate Loss."](#) International Journal of Educational Development, 81 (2021).
- ¹⁵⁰ J-PAL. [Targeted Instruction: State of the Evidence](#). July 16, 2021.
- ¹⁵¹ Sohail, Zarak, Ijaz Hussain Bajwa. "Remediation and Student Learning: Quasi-Experimental Evidence from Pakistan." University of California, Irvine. (Unpublished). [dropbox.com/s/wcu26gl7bo67jnb/JMP_Zarak.pdf?dl=0](#)
- ¹⁵² World Bank. [Education Systems' Response to COVID-19 Brief](#). July 29, 2022.
- ¹⁵³ Angrist, Noam, Andreas de Barros, Radhika Bhula, Shiraz Chakera, Chris Cumiskey, Joseph DeStefano, John Floretta, Michelle Kaffenberger, Benjamin Piper, and Jonathan Stern. ["Building back better to avert a learning catastrophe: Estimating learning loss from COVID-19 school shutdowns in Africa and facilitating short-term and long-term learning recovery."](#) International Journal of Educational Development 84 (2021): 102397.
- ¹⁵⁴ Adapted from The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022. <https://thedocs.worldbank.org/en/doc/e52f55322528903b27f1b7e61238e416-0200022022/related/Guide-for-Learning-Recovery-and-Acceleration-06-23.pdf>
- ¹⁵⁵ Adapted from The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁵⁶ VVOB. [Remedial learning in Cambodia in times of COVID: 5 Q&As](#). October 9, 2021.
- ¹⁵⁷ Adapted from The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁵⁸ Adapted from The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁵⁹ Ashleigh Morrell, in discussion with author, September 19, 2022.
- ¹⁶⁰ Pershad, Devyani. [Teaching at the Right Level \(TaRL\): The Story of Catch Up in Zambia](#). (September 2021)
- ¹⁶¹ Adapted from The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁶² UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁶³ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁶⁴ Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1–11.
- ¹⁶⁵ The World Bank, FCDO and BE2. [COST-EFFECTIVE APPROACHES TO IMPROVE GLOBAL LEARNING](#). October 2020.
- ¹⁶⁶ Bullough, Joseph. ["3 Presentations, 9 Takeaways on the Long-Term Impact of COVID-19 on Learning and How Education Systems Can Respond."](#) RISE Programme (blog), October 22, 2021, Accessed 20 July 2022.
- ¹⁶⁷ Paul Hill, ["What Post-Katrina New Orleans Can Teach Schools About Addressing COVID Learning Losses."](#) Center on Reinventing Public Education (CRPE), April 2020.
- ¹⁶⁸ Michelle DiMenna. ["4 lessons from the aftermath of Hurricane Katrina to support pandemic recovery."](#) EAB, June 1, 2021.
- ¹⁶⁹ The New Teacher Project (TNTP), ["The opportunity myth."](#) TNTP, 2018.
- ¹⁷⁰ Davidson, Marcia, Wedni Ralaingita, Elizabeth Marsden, Elizabeth Long. ["Remediation Literature Review."](#) Science of Teaching for Foundational Literacy and Numeracy. (November 2022).
- ¹⁷¹ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.

- ¹⁷² The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁷³ World Bank. [Education Systems' Response to COVID-19 Brief](#). July 29, 2022.
- ¹⁷⁴ UNICEF Jordan. [Learning Bridges Impact Study](#). Amman Jordan: UNICEF, January 2022.
- ¹⁷⁵ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁷⁶ Odala Banda (USAID Malawi), Dorothy Matiti (USAID Malawi), Christine Veverka (USAID), Brad Strickland (USAID Africa Bureau), and Bryan Dwyer (USAID), in discussion with USAID/Malawi Mission, October 18, 2022; Bridget Drury and Mónica Sahonero (EDC), in discussion with the implementing partner, September 20, 2022; Silvia Linan-Thompson (EDC), in discussion with expert, September 9, 2022.
- ¹⁷⁷ Mahmut, Ö. Z. E. R., Eren, S. U. N. A., ŞENSOY, S., CENGİZ, M., GENÇ OĞLU, C., NUMANOĞLU, K. V., & GÜL, M. N. (2021). The Turkish National Remedial Program (TNRP) to Combat the Negative Effects of the Covid-19 Pandemic. *Kastamonu Eğitim Dergisi*, 29(2), 442-451. doi: 10.24106/kefdergi.901367
- ¹⁷⁸ UNICEF. ["Learning Bridges accelerates learning for almost half a million students."](#) (2022).
- ¹⁷⁹ UNICEF Jordan. [Learning Bridges Impact Study](#). Amman Jordan: UNICEF, January 2022.
- ¹⁸⁰ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁸¹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁸² Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1-11.
- ¹⁸³ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁸⁴ Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1-11.
- ¹⁸⁵ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁸⁶ Zhang, Qiyang and Nathan Storey. "Controversies behind COVID learning loss: historical issues, current measurements, and future strategies." *Theory Into Practice* (2022).
- ¹⁸⁷ Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1-11.
- ¹⁸⁸ Robinson, Carly D., Matthew, A. Kraft and Susanna Loeb. [Accelerating Student Learning with High-Dosage Tutoring](#). February 2021. EdResearch for Recovery Project.
- ¹⁸⁹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁹⁰ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁹¹ Page, Ella, Rosie Leonard-Kane, Elnaz Kashefpakdel, Anna Riggall and Sonia Guerriero. ["Learning loss, learning gains and wellbeing: a rapid evidence assessment."](#) Educational Development Trust (2021).
- ¹⁹² Page, Ella, Rosie Leonard-Kane, Elnaz Kashefpakdel, Anna Riggall and Sonia Guerriero. ["Learning loss, learning gains and wellbeing: a rapid evidence assessment."](#) Educational Development Trust (2021).
- ¹⁹³ Tarricone, Pina, Kemran Mestan and Ian Teo. [Building resilient education systems: A rapid review of the education in emergencies literature](#). Melbourne, Australia: Australian Council for Educational Research.
- ¹⁹⁴ Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ¹⁹⁵ Berry, Chris and Edward Davis. [Mitigating COVID-19 Impacts and Getting Education Systems Up and Running Again: Lessons from Sierra Leone](#). April 20, 2020. UKFIET: The Education and Development Forum.
- ¹⁹⁶ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ¹⁹⁷ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ¹⁹⁸ Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ¹⁹⁹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²⁰⁰ Fitzpatrick, Rachael, Astrid Korin, and Anna Riggall. ["An international review of plans and actions for school reopening."](#) Education Development Trust (2020).
- ²⁰¹ Amin, Nyna and Pryah Mahabeer. "Curriculum tinkering in situations of crises and inequalities: The case of South Africa." *Prospects* 51 (2021):489-501.
- ²⁰² Kaffenberger, Michelle. ["Modelling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to \(More than\) Mitigate Loss."](#) *International Journal of Educational Development*, 81 (2021).

-
- ²⁰³ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²⁰⁴ Boisvert, Kayla. "Catch-up Programmes: 10 Principles for Helping Learners Catch Up and Return to Learning." Accelerated Education Working Group (2020).
- ²⁰⁵ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ²⁰⁶ Sarr, Karla Giuliano, Nitika Tolani, Idalia Rodriguez Morales, Ryan Aghabozorg and Amy Mulcahy-Dunn. [Reigniting learning: Strategies for accelerating learning post-crisis](#). Washington, D.C.: USAID (2020).
- ²⁰⁷ Japan Platform & World Vision. [Teacher's Handbook: Remedial Education](#). June 2021.
- ²⁰⁸ Institute for Education Policy. [Don't remediate, accelerate! Effective catch-up learning strategies - evidence from the United States](#). A paper developed for the Global education Coalition, UNESCO. 12 August 2020.
- ²⁰⁹ UNICEF. ["Learning Bridges accelerates learning for almost half a million students."](#) (2022).
- ²¹⁰ Berry, Chris and Edward Davis. [Mitigating COVID-19 Impacts and Getting Education Systems Up and Running Again: Lessons from Sierra Leone](#). April 20, 2020. UKFIET: The Education and Development Forum.
- ²¹¹ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ²¹² UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ²¹³ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ²¹⁴ Davidson, Marcia, Wedni Ralaingita, Eizabeth Marsden, Elizabeth Long. "Remediation Literature Review." Science of Teaching for Foundational Literacy and Numeracy. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://scienceofteaching.site/wp-content/uploads/2022/11/SOT-Remediation-Literature-Review_link4NOV.pdf (November 2022)
- ²¹⁵ UNESCO, UNICEF, World Bank & OECD. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). Paris, France: UNESCO, 2021. License: CC BY-SA 3.0 IGO.
- ²¹⁶ QITABI 2. Thirteenth Quarterly Report. (Unpublished) (July 30, 2022)
- ²¹⁷ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020. f
- ²¹⁸ Ndaruhutse, Susy. ["Learning Loss, Learning Gains and Wellbeing: A Review of Policy and Grey Literature."](#) Education Development Trust (2021).
- ²¹⁹ UNICEF Mongolia Country Office. [COVID-19 Education Case Study: Mongolia - Remediation of Learning After School Reopening](#). 7 January 2021.
- ²²⁰ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ²²¹ Ndaruhutse, Susy. ["Learning Loss, Learning Gains and Wellbeing: A Review of Policy and Grey Literature."](#) Education Development Trust (2021).
- ²²² World Learning Inc, "Quality Instruction towards Access and Basic Education Improvement 2. Twelfth Quarterly Report. January-March 2022," 2022.
- ²²³ Page, Ella, Rosie Leonard-Kane, Elnaz Kashefpakdel, Anna Riggall and Sonia Guerriero. ["Learning loss, learning gains and wellbeing: a rapid evidence assessment."](#) Educational Development Trust (2021).
- ²²⁴ Lassa, Jonatan, Marla Petal and Akhilesh Surjan. ["Understanding impact of floods on learning quality, schools facilities and educational recovery in Indonesia."](#) Disasters. April 13, 2022.
- ²²⁵ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²²⁶ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ²²⁷ Zhang, Qiyang and Nathan Storey. "Controversies behind COVID learning loss: historical issues, current measurements, and future strategies." Theory Into Practice (2022).
- ²²⁸ UNESCO. ["From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures."](#) 2022.
- ²²⁹ Page, Ella, Rosie Leonard-Kane, Elnaz Kashefpakdel, Anna Riggall and Sonia Guerriero. ["Learning loss, learning gains and wellbeing: a rapid evidence assessment."](#) Educational Development Trust (2021).
- ²³⁰ Basnet, Bal Krishna. ["Earthquake and Its Impacts on Education: Aftermath Nepal Quake 2015."](#) European Educational Researcher, 3, no. 3 (2020): 101-118. DOI: 10.31757/euer.332.
- ²³¹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²³² Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, D.C.: Center for Global Development, 2020).

-
- ²³³ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ²³⁴ Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1-11.
- ²³⁵ Page, Ella, Rosie Leonard-Kane, Elnaz Kashefpakdel, Anna Riggall and Sonia Guerriero. "Learning loss, learning gains and wellbeing: a rapid evidence assessment." Educational Development Trust (2021).
- ²³⁶ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²³⁷ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²³⁸ Carvalho, Shelby, Rossiter, Jack, Angrist, Noam, Hares, Susannah, Silverman, Rachel. [Planning for School Reopening and Recovery After COVID-19](#). (Washington, DC: Center for Global Development, 2020).
- ²³⁹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²⁴⁰ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.
- ²⁴¹ Chiwaula, Lizzie W., Esme Chipo Kadzamira, and Elizabeth Selemani Meke. "The Impact of COVID-19 on Primary Education in Malawi: Exploring Policy Responses and Practices." Journal of international cooperation in education 24, no. 2 (2021): 61-76.
- ²⁴² Pershad, Devyani. [Teaching at the Right Level \(TaRL\): The Story of Catch Up in Zambia](#). https://riseprogramme.org/sites/default/files/inline-files/Devyani_Pershad.pdf (September 2021)
- ²⁴³ Ndaruhutse, Susy. ["Learning Loss, Learning Gains and Wellbeing: A Review of Policy and Grey Literature."](#) Education Development Trust (2021).
- ²⁴⁴ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.
- ²⁴⁵ Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358-374.
- ²⁴⁶ Al-Fadala, Asmaa, Donvan Ameny, Rachael Fitzpatrick, Katie Godwin, Julia Kirby, Astrid Korin. [Rwanda Learning Partnership: Insights on School and System Leadership during COVID-19](#). WISE, Qatar Foundation, Education Development Trust, Rwanda Basic Education Board (2021).
- ²⁴⁷ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.
- ²⁴⁸ Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358-374.
- ²⁴⁹ USAID Ghana and FHI360, in discussion with author, October 3, 2022
- ²⁵⁰ Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358-374.
- ²⁵¹ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.
- ²⁵² Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358-374.
- ²⁵³ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.
- ²⁵⁴ Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358-374.
- ²⁵⁵ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.
- ²⁵⁶ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.
- ²⁵⁷ Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358-374.
- ²⁵⁸ Al-Fadala, Asmaa, Donvan Ameny, Rachael Fitzpatrick, Katie Godwin, Julia Kirby, Astrid Korin. [Rwanda Learning Partnership: Insights on School and System Leadership during COVID-19](#). WISE, Qatar Foundation, Education Development Trust, Rwanda Basic Education Board (2021).
- ²⁵⁹ Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358-374.
- ²⁶⁰ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.

- 261 Al-Fadala, Asmaa, Donvan Amenya, Rachael Fitzpatrick, Katie Godwin, Julia Kirby, Astrid Korin. Rwanda [Learning Partnership: Insights on School and System Leadership during COVID-19](#). WISE, Qatar Foundation, Education Development Trust, Rwanda Basic Education Board (2021).
- 262 Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358–374.
- 263 Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." Educational Review, (2021). DOI: 10.1080/00131911.2021.1966389.
- 264 Fletcher, Jo and Karen Nicholas. ["What Can School Principals Do to Support Students and Their Learning During and After Natural Disasters?"](#) Educational Review, 68, no. 3 (2016): 358–374. Page 367.
- 265 USAID. [USAID Reading MATTERS conceptual framework](#). November 2019.
- 266 UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020. p.57.
- 267 World Learning Inc, "Quality Instruction towards Access and Basic Education Improvement 2. Twelfth Quarterly Report. January-March 2022," 2022.
- 268 Chiwaula, Lizzie W., Esme Chipo Kadzamura, and Elizabeth Selemani Meke. "The Impact of COVID-19 on Primary Education in Malawi: Exploring Policy Responses and Practices." Journal of international cooperation in education 24, no. 2 (2021): 61-76.
- 269 Mahmut, Ö. Z. E. R., Eren, S. U. N. A., ŞENSOY, S., CENGİZ, M., GENÇ OĞLU, C., NUMANOĞLU, K. V., & GÜL, M. N. (2021). The Turkish National Remedial Program (TNRP) to Combat the Negative Effects of the Covid-19 Pandemic. Kastamonu Eğitim Dergisi, 29(2), 442-451. doi: 10.24106/kefdergi.901367
- 270 UNICEF Jordan. [Learning Bridges Impact Study](#). Amman Jordan: UNICEF, January 2022.
- 271 Chiwaula, Lizzie W., Esme Chipo Kadzamura, and Elizabeth Selemani Meke. "The Impact of COVID-19 on Primary Education in Malawi: Exploring Policy Responses and Practices." Journal of international cooperation in education 24, no. 2 (2021): 61-76.
- 272 Mahmut, Ö. Z. E. R., Eren, S. U. N. A., ŞENSOY, S., CENGİZ, M., GENÇ OĞLU, C., NUMANOĞLU, K. V., & GÜL, M. N. (2021). The Turkish National Remedial Program (TNRP) to Combat the Negative Effects of the Covid-19 Pandemic. Kastamonu Eğitim Dergisi, 29(2), 442-451. doi: 10.24106/kefdergi.901367
- 273 Louge, Nathalie, Emily Miksic, and Yuntian Lu. ["Remedial Education: models and approaches for successful impact on student achievement. Technical Brief."](#) FHI 360, January 2022.
- 274 UNICEF. "Learning Bridges accelerates learning for almost half a million students." (2022).
- 275 UNICEF Jordan. [Learning Bridges Impact Study](#). Amman Jordan: UNICEF, January 2022.
- 276 World Learning Inc, "Quality Instruction towards Access and Basic Education Improvement 2. Twelfth Quarterly Report. January-March 2022," 2022.
- 277 UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- 278 Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1-11.
- 279 Molato-Gayares, Rhea, Daniel Suryadarma, Albert Park, Milan Thomas, David Anthony Raitzer, and Paul Vandenberg. "How to Recover Learning Losses from COVID-19 School Closures in Asia and the Pacific." ADB Briefs 217 (2022): 1-11.
- 280 The World Bank, UNESCO, UNICEF, FCDO, USAID & BMGF. [The State of Global Learning Poverty: 2022 Update](#). June 23, 2022. p. 27.
- 281 UNESCO; UNICEF; World Bank; OECD. 2021. [What's Next? Lessons on Education Recovery : Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). UNESCO, Paris, UNICEF, New York, World Bank, Washington, DC, and OECD, Paris. © UNESCO, UNICEF, World Bank, and OECD. License: CC BY-SA 3.0 IGO, 5.
- 282 UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022. p.15.
- 283 UNESCO. ["From Learning Recovery to Education Transformation. Insights and Reflections from the 4th Survey on National Education Responses to COVID-19 School Closures."](#) 2022.
- 284 UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- 285 Ashleigh Morrell (Teaching at the Right Level/TaRL), in discussion with expert, September 19, 2022; Noam Angrist (Youth Impact), in discussion with expert, November 10, 2022.
- 286 Ashleigh Morrell (Teaching at the Right Level/TaRL), in discussion with expert, September 19, 2022.
- 287 Bridget Drury (EDC) and Mónica Sahonero (EDC), in discussion with the implementing partner, September 20, 2022; Grazzia Mendoza (USAID Honduras), in discussion with USAID/Honduras Mission, October 12, 2022.
- 288 The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- 289 The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- 290 Ministerio de Educación de Chile. ["Estudiantes de Enseñanza Media No Alcanzaron el 60% de los Aprendizajes Necesarios en 2020."](#) Ministerio de Educación (Chile) online. May 26, 2021.

- ²⁹¹ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ²⁹² Mahmut, Ö. Z. E. R., Eren, S. U. N. A., ŞENSOY, S., CENGİZ, M., GENÇ OĞLU, C., NUMANOĞLU, K. V., & GÜL, M. N. (2021). The Turkish National Remedial Program (TNRP) to Combat the Negative Effects of the Covid-19 Pandemic. *Kastamonu Eğitim Dergisi*, 29(2), 442-451. doi: 10.24106/kefdergi.901367
- ²⁹³ World Learning Inc, "Quality Instruction towards Access and Basic Education Improvement 2. Twelfth Quarterly Report. January-March 2022," 2022.
- ²⁹⁴ Republic of South Africa, Department of Basic Education. [Release of the Curriculum Recovery Annual Teaching Plans for 2021](#). by H.M. Mweli. Circular S13 of 2020. Pretoria, South Africa, 2020. (Accessed August 3, 2022).
- ²⁹⁵ John Collins (USAID Middle East Regional Platform), Samah Eid (USAID Yemen), Brooke Estes (USAID Yemen), Mia Shakkour (USAID), and Muwadda AlHady (USAID), in discussion with USAID/Yemen Mission, January 10, 2023; Devyani Pershad (Pratham), in discussion with expert, October 26, 2022; Alaaddin Zaza (Save the Children Yemen) and Amr Daiban (Save the Children Yemen), in discussion with the implementing partner, January 26, 2023; Marcia Davidson (USAID Africa Bureau), Rasheena Reid (USAID Ghana), Paul Napari (USAID Ghana), Mama Laryea (FHI 360), Stephen Adu (FHI 360), Betty Temeng Mensah-Bonsu (FHI 360), and Nina Menezes Cunha (FHI 360), in discussion with USAID/Ghana Mission and the implementing partner, October 3, 2022.
- ²⁹⁶ Marcia Davidson (USAID Africa Bureau), Rasheena Reid (USAID Ghana), Paul Napari (USAID Ghana), Mama Laryea (FHI 360), Stephen Adu (FHI 360), Betty Temeng Mensah-Bonsu (FHI 360), and Nina Menezes Cunha (FHI 360), in discussion with USAID/Ghana Mission and the implementing partner, October 3, 2022.
- ²⁹⁷ Louge, Nathalie, Emily Miksic, and Yuntian Lu. [Remedial Education: models and approaches for successful impact on student achievement](#). Technical brief. FHI 360 (2022).
- ²⁹⁸ Norman, Julianne, Dr. Wendi Ralaingita, Dr. Marcia Davidson, Elizabeth Long, and Elizabeth Marsden. [Remediation in Foundational Literacy and Numeracy: A How-To Guide. Science of Teaching for Foundational Literacy and Numeracy](#) (2022).
- ²⁹⁹ Devyani Pershad (Pratham), in discussion with expert, October 26, 2022.
- ³⁰⁰ John Collins (USAID Middle East Regional Platform), Samah Eid (USAID Yemen), Brooke Estes (USAID Yemen), Mia Shakkour (USAID), and Muwadda AlHady (USAID), in discussion with USAID/Yemen Mission, January 10, 2023; Alaaddin Zaza (Save the Children Yemen) and Amr Daiban (Save the Children Yemen), in discussion with the implementing partner, January 26, 2023.
- ³⁰¹ UNICEF, UNESCO, and the World Bank. *Where are We in on Education Recovery?* (New York: UNICEF, 2022, page p. 27)
- ³⁰² UNICEF, UNESCO, and the World Bank. *Where are We in on Education Recovery?*
- ³⁰³ World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID, and UNESCO. *Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better*. (Washington, D.C.: World Bank, 2022).
- ³⁰⁴ The World Bank, FCDO and BE2. [COST-EFFECTIVE APPROACHES TO IMPROVE GLOBAL LEARNING](#). October 2020.
- ³⁰⁵ Owsim, Akram, Chakma, Jefarson and Mahbub, Amina. "Continuing Education in Disaster-Affected Schools in Bangladesh: An Evaluation of the Education in Emergencies Project." *Children, Youth and Environments*, 22, No.
- ³⁰⁶ Tarricone, Pina, Kemran Mestan and Ian Teo. [Building resilient education systems: A rapid review of the education in emergencies literature](#). Melbourne, Australia: Australian Council for Educational Research.
- ³⁰⁷ USAID. [USAID Reading MATTERS conceptual framework](#). November 2019. p. 5-6, emphasis added
- ³⁰⁸ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ³⁰⁹ UNESCO, UNICEF, World Bank & OECD. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). Paris, France: UNESCO, 2021. License: CC BY-SA 3.0 IGO.
- ³¹⁰ UNESCO, UNICEF, World Bank & OECD. [What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic](#). Paris, France: UNESCO, 2021. License: CC BY-SA 3.0 IGO.
- ³¹¹ Giannini, Stefania, Robert Jenkins and Jaime Saavedra. *Mission: Recovering Education 2021*. March 30, 2021. [GEM Report](#).
- ³¹² UNESCO, UNICEF and World Bank. [Mission: Recovering Education in 2021](#). May 2021.
- ³¹³ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ³¹⁴ Harmey, Sinéad and Gemma Moss. "Learning Disruption or Learning Loss: Using Evidence from Unplanned closures to inform returning to school after COVID-19." *Educational Review*, (2021). DOI: 10.1080/00131911.2021.1966389.
- ³¹⁵ Page, Ella, Rosie Leonard-Kane, Elnaz Kashfepakdel, Anna Riggall and Sonia Guerriero. "Learning loss, learning gains and wellbeing: a rapid evidence assessment." *Educational Development Trust* (2021), p. 33.
- ³¹⁶ UNICEF, UNESCO and the World Bank. [Where are we in Education Recovery](#). 2022.
- ³¹⁷ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.
- ³¹⁸ UNICEF Democratic Republic of Congo Country Office. [UNICEF Education: Mission Recovery Case Study: Democratic Republic of Congo](#). February 2022. p. 2

³¹⁹ UNESCO and McKinsey and Company. [COVID-19 response mediation: Helping Students Catch Up on Lost Learning, with a Focus on Closing Equity Gaps](#). July 2020.

³²⁰ Mahmut, Ö. Z. E. R., Eren, S. U. N. A., ŞENSOY, S., CENGİZ, M., GENÇ OĞLU, C., NUMANOĞLU, K. V., & GÜL, M. N. (2021). The Turkish National Remedial Program (TNRP) to Combat the Negative Effects of the Covid-19 Pandemic. *Kastamonu Eğitim Dergisi*, 29(2), 442-451. doi: 10.24106/kefdergi.901367

³²¹ Tarricone, Pina, Kemran Mestan and Ian Teo. [Building resilient education systems: A rapid review of the education in emergencies literature](#). Melbourne, Australia: Australian Council for Educational Research.

³²² Zhang, Qiyang and Nathan Storey. "Controversies behind COVID learning loss: historical issues, current measurements, and future strategies." *Theory Into Practice* (2022).

³²³ The World Bank, Bill & Melinda Gates Foundation, FCDO, UNICEF, USAID and UNESCO. [Guide for Learning Recovery and Acceleration: Using the RAPID Framework to Address COVID-19 Learning Losses and Build Forward Better](#). June 2022.

³²⁴ World Bank. [Education Systems' Response to COVID-19 Brief](#). July 29, 2022.