# REMEDIATING LEARNING LOSS

*Remedial action to accelerate the recovery of learning loss should be an essential element of national COVID-19 response education strategies. Given that the extent of learning loss is likely to vary across individual students, teaching at the right level will be more important than ever to help students catch up to grade-level standards. National tutoring programs, individualized self-learning programs, and computer-assisted instruction have also been found to improve student learning in various contexts. Summer school may be expanded to accommodate additional students and can be effective if combined with the approaches that align levels of instruction with goals and needs of students. Grade retention by itself has limited effectiveness as a remediation strategy unless combined with other targeted interventions.*
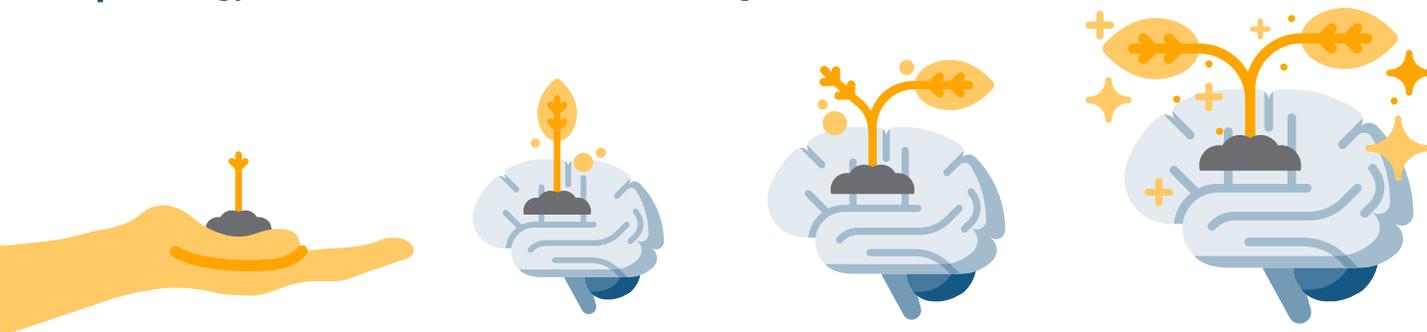
## Why Countries Should Prioritize Remediating Learning Loss

Remedial or accelerated education services can be effective strategies to tackle the issue of learning loss (Azevedo et al. 2020) caused by extended school closures, disruptions in the academic calendar, and uneven access to remote learning opportunities. These services can address gaps and get students to grade level. Data on learning loss during long school closures shows that the COVID-19 pandemic could result in students' achieving only 70 percent of the learning gains in reading and 50 percent of the learning gains in mathematics compared to a normal year, affecting the early grades more severely (UNESCO 2020a). In addition to delaying cognitive development, learning loss due to school shutdowns will have economic consequences if not treated: A five-month school shutdown could cause learning losses with a current value of US$10 trillion, representing a loss of 16 percent in public investment in basic education for this cohort of students (UNESCO 2020a). Different approaches to remedial education for learning recovery are possible. Examples of different approaches for countries to consider, depending on local context and needs, are provided below. Examples and evidence presented in this section come from both pre-pandemic and current experiences, and elements can often be combined as part of a national remediation strategy.

# Potential Country Response

## *Establish Programs for Teaching at the Right Level*

The fundamental principle underlying teaching at the right level is that children are grouped by their level of achievement, not by their age or grade. This approach includes specific activities and instruction designed to move students to the next level, with close tracking of children's progress. These learning activities focus on foundational skills in language and mathematics and are not exclusively linked to the curriculum. The approach starts with the administration of a brief oral assessment (virtual, or face to face if conditions allow for in-person schooling) of reading or mathematics ability. Grouping children by ability as determined through this assessment. In an extra dedicated hour of the school day, students move from grade-based classrooms to classrooms based on level as determined by the diagnostic assessment. In these level-based classrooms, trained volunteers or government schoolteachers deliver specialized instruction designed to help students quickly advance from level to level. When used in India, in 50 days of focused teaching by lightly trained volunteers, this approach raised achievement levels for students in grades 3 to 5 from close to the lowest achievement levels to the level of learning of the third-highest achieving state (Banerjee et al. 2016). Similar positive results were achieved in Ghana using this approach under Ghana's Teacher Community Assistant Initiative (Lucas, Beg, and Fitzpatrick 2018).

## *Establish Small Group Tutoring Programs*

The existing literature provides strong evidence that tutoring can substantially increase student achievement, especially among low-achieving students, but the efficacy of this approach depends critically on group size and the frequency of sessions. High-dosage tutoring, defined as groups of six or fewer students who meet at least four times per week (equivalent to 50 hours or more over 36 weeks) has been found to produce substantial increases in test scores. Other evidence shows that the most successful tutoring programs happen during the school day, and students remain with the same tutor throughout the year (Education Endowment Foundation 2018a). One-to-one tutoring can also increase achievement, but it is significantly more costly. Tutors can be college students or even high school students (for the lower grades). They receive training to follow a structured tutoring program. High-dosage tutoring can also contribute to small-scale economic stimulation. For example, the United Kingdom recently launched a National Tutoring Program, which offers high-quality tutoring services to public primary and secondary schools, providing additional support to students who have missed out the most because of school closures. Subsidized or free tutoring is offered through both contracted service providers (tuition partners) and individuals (academic mentors) to provide additional instruction in six subject areas. Teachers and school leaders decide which approach best fits their needs, which partners with whom to work, and which students will benefit most from additional tutoring.

## *Provide Individualized Self-Learning Programs, Including Computer-Assisted Instruction*

Self-learning programs can be used with limited teacher input and guidance, enabling students to progress incrementally towards mastery of foundational skills. These activities can be pencil-and-paper based, or in systems where the adequate technology is available in schools or homes, remediation can occur through computer-assisted self-learning programs. Computer-assisted instruction can illustrate a concept through interactive animation, sound, and demonstration, followed by opportunities for students to complete tasks and solve problems at their own pace while providing immediate feedback. Adaptive software programs assess students, assign practice of particular skills, and monitor student progress. Students can work asynchronously and at their own pace, which allows more flexibility. This approach operationalizes teaching at the right level in a cost-effective way. It can be implemented during the regular school day or after school.

In a randomized control trial in Bangladesh, an individualized, paper-and-pencil self-learning program was found to significantly improve students' mathematical abilities. The program was designed to ensure that each student works at the level that is appropriate for their individual skills, advancing and learning new concepts in small steps through easily understandable hints and examples. Using technology, examples from India and Uruguay show that that computer-assisted instruction can increase learning, with suggestive evidence of positive impacts that were larger for students from disadvantaged backgrounds (Global Education Evidence Advisory Panel 2020). Computer-assisted instruction can be used in teacher-led classrooms, helping them tailor instruction to students' learning needs.

## *Summer School*

Holding classes during the summer is another targeted approach to providing more instructional time for remediation. While summer school is a fairly common intervention, it may need to be expanded to more students due to COVID-19 disruptions (Perry 2020). Belgium offered free summer school for all in summer 2020 (UNESCO 2020b). A summer school program in Tanzania was successful in providing remediation for vulnerable students (UNESCO 2020b). Summer school programs are associated with learning gains when they are intensive, well-resourced, involve small group instruction by trained and experienced teachers, and focus on academic content (in contrast to recreational or extracurricular activities). One risk area for summer school programs is ensuring regular attendance, which is more difficult owing to the voluntary nature of summer school.

## *Grade Retention*

Given the extraordinary challenge posed by extended school closures and the reduction in instructional time, grade retention may emerge as a potential option to remediate students who have fallen behind. Evidence on the impact of grade retention on short- and long-term outcomes is mixed, and it is generally understood that the effects of retention vary by the student's abilities and the timing of retention. Some research shows that the benefits of retention are unclear and that the risk of negative socioemotional outcomes, such as increased stress and lower self-esteem, is high (Brophy 2006; Peixoto et al. 2016; Mariano, Martorell, and Berglund 2018). Other research shows that student experiences with retention improve greatly when complementary programs, such as early identification of at-risk students, small-group instruction, after-school programs, assessments, and summer school, are part of the remediation package. Overall, the available evidence points to using retention only when students are truly unprepared for the next level of instruction and when complementary remedial interventions are provided (Education Endowment Foundation 2018b; Valbuena et al. 2020).

# Useful Resources

**Teaching at the Right Level**

- Teaching at the Right Level: Strengthening Foundational Skills to Accelerate Learning
- Aligning Levels of Instruction with Goals and the Needs of Students (ALIGNS): Varied Approaches, Common Principles
- School Practices to Address Student Learning Loss

**Small Group Tutoring**

- Evidence summary
- Apart but Connected: Online Tutoring and Student Outcomes during the COVID-19 Pandemic

**Individualized Self-Learning Programs, Including Computer-Assisted Instruction**

- Fighting the Learning Crisis in Developing Countries: A Randomized Experiment of Self-Learning at the Right Level
- Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India

**Summer School**

- Summer school toolkit

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