United Nations
Educational, Scientific and
Cultural Organization

COVID-19 response – remediation

Helping students catch up on lost learning, with a focus on closing equity gaps

Version 1 as of June 2020

In the context of the Global Education Coalition, UNESCO, in collaboration with key partners, is developing pioneering action toolkits to guide the educational response

1. Remote learning strategy

Defining and continuously improving remote learning measures

Supporting key stakeholders (students, parents, teachers) for effective use of these solutions

Monitoring and quality assurance

2. Remote learning platforms

Compiling a compendium of remote learning solutions, tools, and platforms

Developing an evaluation framework to help identify which solutions, tools, and platforms are most relevant to the local context

3. Planning to reopen safely (health and safety)

Evaluating the tradeoffs of school reopenings

Defining health and safety measures to put in place before reopening

4. Re-enrollment

Identifying students at risk of dropping out

Engaging students, parents, and communities to ensure all students are back at school

9. Organizing for the response

Defining a new architecture to plan, coordinate, and manage stakeholders and external partnerships

Developing the required capabilities for an effective response

5. Remediation

Bringing students to graduation level and remediating lost learning from school closures and existing learning gaps

6. Resurgence planning

Preparing for potential COVID-19 resurgence by setting up the infrastructure to anticipate it and effectively respond to it

7. Hybrid learning

Defining learning approaches combining remote and in-classroom learning during school reopenings and in preparation for potential COVID-19 resurgence

8. Recommitment and reform

Identifying longer-term implications of the crisis

Rethinking the new education system and reforming it accordingly

United Nations Educational, Scientific and Cultural Organization

In collaboration with McKinsey & Company

Version 1.0 as of June 2020

5 of these topics are the subject of a collaboration between UNESCO and McKinsey

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The goal of these chapters is to **support countries in their K–12 educational response to COVID-19** by providing practices and examples, concrete steps for intervention, and tactical action checklists

Each of these 5 chapters exposes the problem at hand and provides a response framework and a tactical checklist of actions

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Composition of each chapter

The problem – why it is important

Defining the chapter's topic and providing context on the challenge at stake

The response – framework and practices

Providing a framework of response including practices from other country responses in previous crises or during COVID-19

The checklist – summary of actions

Synthesizing the framework into a series of tactical actions that a country can take to prepare and implement its response

The focus of this chapter is on remediation

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Compendium of remote learning solutions, tools, and platforms

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Bringing students to their grad levels and remediate lost learning from school closure and from existing learning gaps

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Defining a learning approach combining remote and in classroom learning during school reopening and in preparation for potential resurgence

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Identifying longer-term implications of the crisis

Rethinking the new education system and reforming accordingly

While treated as a standalone topic in this chapter, remediation is intricately related to other parts of the response

5. Remediation

Bringing students to graduation level and remediating lost learning from school closures and existing learning gaps

Chapter	Relation to re-enrollment
1. Remote learning strategy	The effectiveness of the remote learning strategy defines the remediation needs, and remote learning platforms can be leveraged for remediation
2. Remote learning platforms	
3. Planning to reopen safely (health and safety)	The timeline of remediation will depend on the **ability of schools to reopen**
4. Re-enrollment	**Remediation can encourage re-enrollment** by bridging the gap in learning for those at risk of disengagement
6. Resurgence planning	When planning for resurgence, all topics need to be considered (including remediation)
7. Hybrid learning	n/a
8. Recommitment and reform	Lessons learned from remediation programs for COVID-19 can inform reforms and new programs
9. Organizing for the response	The organization of remediation should take place in concert with other aspects of the response through a **coordination response team**

Chapters closely linked

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Glossary of terms

Remediation: Ongoing effort to support students in catching up on lost learning through a variety of means, including additional teaching time, focused content, and specific pedagogy

Learning loss: Any specific or general loss of knowledge and skills (including socioemotional) or reversals in academic progress

Extent of learning loss: Depth and breadth of loss of knowledge and skills across the student population

Distribution of learning loss: Consistency with which learning loss is affecting the student population (including whether certain vulnerable groups are more affected than others)

Contents

Definition of **remediation**

The ongoing effort to **support students in catching up on lost learning** through a variety of means, including additional teaching time, focused content, and specific pedagogy

Observations of summer learning loss due to COVID-19 show that the need for remediation may be significant

Based on summer learning loss data, COVID-19 could generate high learning loss in the longer term

Preliminary COVID-19 estimates suggest students may return in fall 2020 with roughly:

70% of the learning gains **in reading** relative to a typical school year[1]

50% of the learning gains **in mathematics,** and in some grades, **nearly a full year behind** normal conditions[1]

Younger grades are likely to suffer **even higher losses**[1]

Even in cases when students have full access to remote learning, there will still be **significant learning loss**[2]

> Missing school for a prolonged period will likely have **major impacts on student achievement** come fall 2020. The COVID-19 crisis is a **call to action for practitioners and policy makers** alike.[1]

1. NWEA, https://www.nwea.org/content/uploads/2020/05/Collaborative-Brief_Covid19-Slide-APR20.pdf
2. Ahn, J., McEachin, A. (2017). Student Enrollment Patterns and Achievement in Ohio's Online Charter Schools. Sage

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Countries may need to remediate learning losses created or exacerbated by COVID-19 and be prepared to overcome the implementation challenges

COVID-19 has exacerbated existing gaps …

Gaps between students

- Students with difficulties may fall further behind
- Students in struggling families may have schooling deprioritized

Gaps between schools

- Teachers with many students will have trouble following up
- Schools with weak IT systems may lose time setting up platforms
- Gaps may widen between schools due to uneven school closures

… and created new, emerging gaps

Access to remote learning is not equitable

- Students and schools without reliable access to internet, electricity, digital tools, or reliable mail will be disadvantaged
- Differences in remote learning abilities between areas will create new inequities

The quality and efficacy of remote learning may not be comparable to in-person learning

- Risk of a slide in learning is potentially comparable to the "summer slide"[1] (learning loss that occurs during summer months)

Yet, remediation presents implementation challenges

- The **needs for remediation are not uniform** across geographies and can differ within schools and between students
- Remediation solutions may involve **significant investment from school systems** (e.g., additional teachers)
- Effective remediation requires **continuous assessment, monitoring, and adjustment, which can cause strain on schools**
- Teachers will face the challenge of **covering new material** and **catching up on learning gaps due to COVID-19**

1. https://www.mckinsey.com/industries/social-sector/our-insights/safely-back-to-school-after-coronavirus-closures

Contents

To address these needs, remediation requires a 3-step approach supported by continuous monitoring and adjustment

Deep dive follows

1 Envision and understand: Set a vision and determine remediation needs

1a **Define a vision of success** for remediation

1b Determine **which aspects contribute to remediation needs**

1c **Assess academic and socioemotional needs** for remediation

2 Decide and design: Choose a remediation strategy

2a Choose **levers of remediation** (e.g., summer school), taking into account feasibility and impact

2b Agree on **channels of delivery** for the strategy (e.g., remote)

3 Enable and execute: Prepare for delivery and execute

3a Identify **the requirements for operationalization** for each lever

3b Consider **strategies to address capacity gaps** (e.g., a hiring campaign for teachers)

4 Monitor and adjust: Track progress through continuous assessment and adjust the plan

4a Monitor progress for both **impact and process** with specific metrics and KPIs

4b **Adjust the program based on the metrics monitored**

1a: Countries should set the vision of the plan as the "north star," essential to guiding the remediation effort

Agree on a guiding vision, building on the on-the-ground reality and taking into account tradeoffs

"For our country, we aim that all students catch up on any lost learning due to COVID-19"

Deep dive follows

Align on a definition of success

"Success will be achieved if each cohort performs within a 5% margin of last year's results on the summative test"

Make your vision time bound

"We want to roll out our program in 3 months and will test student progress at the end of the fall term"

The vision should be set by the body in charge of governance and decision-making for the response

See "Chapter 9: Organizing for the response" for additional detail

1a: When setting a vision, leaders should consider tradeoffs within remediation

	Deciding between …			
Rolling out remediation quickly	Speed	⟷	Longevity	Planning remediation strategies for the long term so that they are relevant to other crises
Limiting the scope of the remediation strategy to mitigate gaps created by COVID-19	COVID-19-specific	⟷	Structural	Designing a strategy to cover all gaps, even those prior to COVID-19
Targeting specific student segments that are most at risk of learning loss	Targeted	⟷	Universal	Generalizing remediation initiatives to the entire student population to ensure engagement across student segments
Changing the core curricula to include remediation	Core	⟷	Comple-mentary	Creating a complementary remediation program in parallel to the core curricula (e.g., summer school)

1b: Although the remediation strategy is **not meant to solve all challenges** related to school systems, countries should **aim to close the gaps between current and expected learning across the student population** and **beyond COVID-19**

1b: 2 aspects can help illustrate what the needs for remediation are

Extent of learning loss

Represents **the extent of learning loss due to COVID-19** (e.g., lost contact hours, student–teacher interaction, and curriculum coverage)

Significant learning loss due to COVID-19

Extent

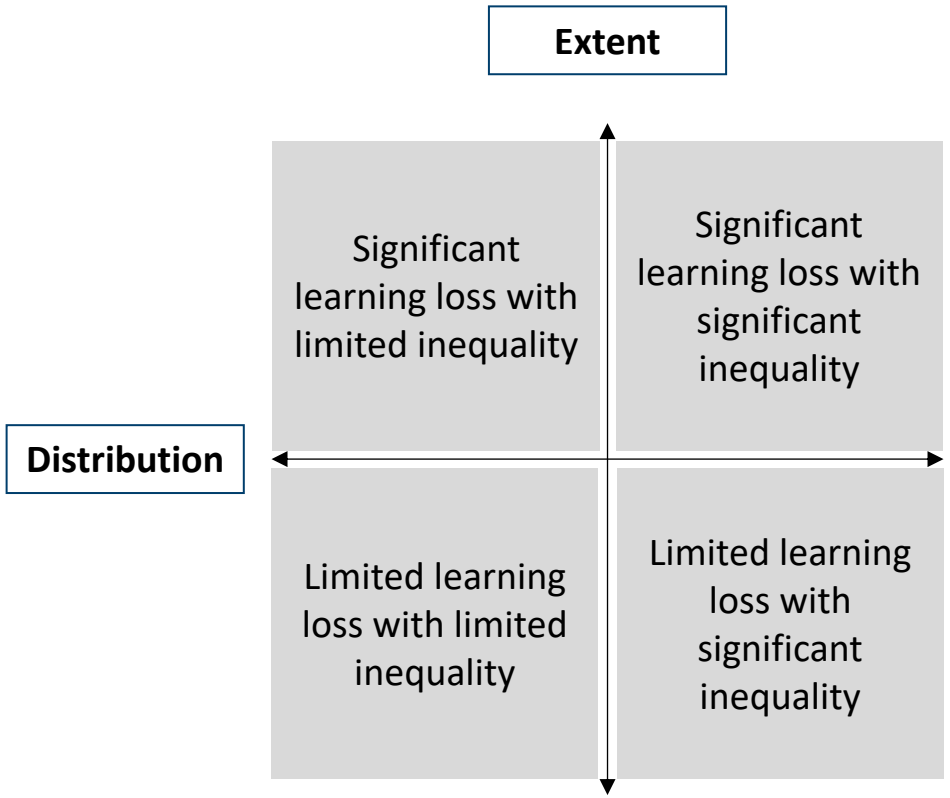
Limited learning loss due to COVID-19

Distribution of learning loss

Represents **"horizontal" differences in learning due to unequal access and quality**

Limited inequality between students ← Distribution → Significant inequality between students

Learning loss can be mapped on a matrix of needs



Source: UNESCO

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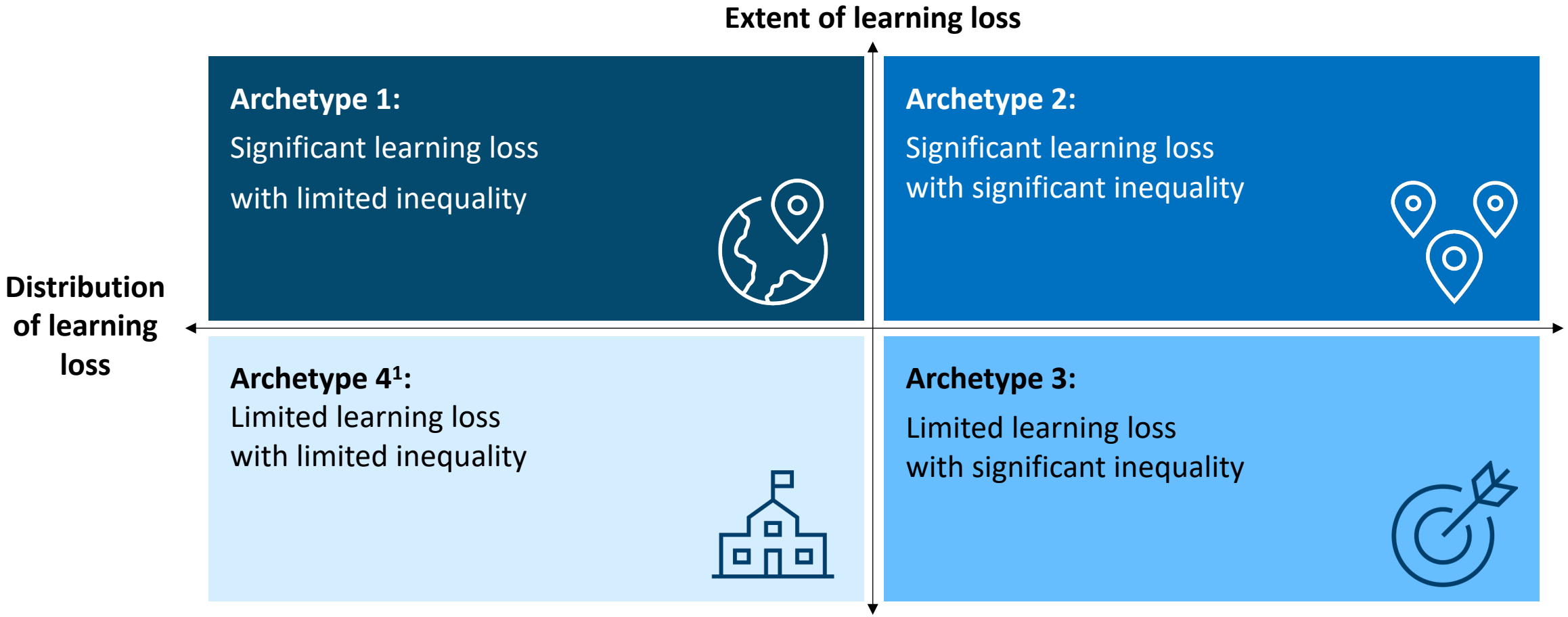
1b: Based on these 2 aspects, countries can be classified into 4 archetypes



1. Archetype 4 will not be detailed, as the needs can be addressed through normal channels

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1b: The type of response could depend on the archetype of need

Archetypes	Response type	Details
 Archetype 1: Significant learning loss with limited inequality	**System-wide response or parallel program**	Archetype 1 will require a large-scale response either through a **system-wide change** (e.g., altering the educational curriculum) or a **parallel remediation program** (e.g., obligatory summer school for all students)
 Archetype 2: Significant learning loss with significant inequality	**Hybrid response** – 2 cases possible • Uneven gaps between schools	If gaps are uneven between schools, Archetype 2 will require a **school-wide response** (e.g., obligatory summer school, additional funding, appointment of an experienced principal) based **on data collected at the school level** (vs. student level)
	• Uneven gaps within schools	If gaps are uneven within schools, Archetype 2 will require a **group response** (e.g., summer school for students below a certain testing threshold) based on **data collected at the student level** (vs. school level)
 Archetype 3: Limited learning loss with significant inequality	**Targeted response**	Archetype 3 will require a **targeted response** either **within schools** (e.g., after-school programs for all children who are behind) or **across schools** (summer programs for specific students)

1c: In order to understand which archetype a country belongs to, remediation needs should be assessed

Deep dives follow

How should needs be assessed?

- Needs can be **assessed directly or indirectly** in a way that should minimize student stress
- Assessments will ensure that **remediation programs are fully targeted and tailored**, and based on needs

When should needs be assessed?

- Assessments should be rolled out when this can be done both **safely and reliably**
- Depending on the means needed for rollout (e.g., remote vs. in-person), **assessments may be implemented at different points in time,** and formative assessments can be used to understand the learning trajectories

Note: Although the assessment of needs is important to ensure that the strategy put in place is tailored and relevant, countries should **use data that they already have** or that is **easily accessible** through proxies to **avoid any delay in rollout**

1c: The extent and distribution of learning loss can be measured by the same direct or indirect assessments

Deep dive next

There are 2 aspects that help illustrate remediation needs

Extent of learning loss – level of learning loss due to COVID-19 across students

Distribution of learning loss – level of inequality between students

Countries can use the same assessments and metrics to measure them

Direct		Indirect	
Assessment	**Example metric**	**Assessment**	**Example metric**
Academic needs		Academic needs	
Recent formative or summative assessments (e.g., data from mid-term or final tests)	% of students who pass No. of students who took the test Average or median grade	Surveys of parents/teachers	% of parents who believe their child is behind
		Absenteeism (e.g., level of engagement)	% of classes attended or homework completed
		Baseline formative or summative assessments	% of students who passed prior to COVID-19
		National (PNEA) or international testing (PISA, PIRLS, TIMMS)	% of students who passed prior to COVID-19
Socioemotional needs		Socioemotional needs	
Surveys of students' personal, social, and digital skills	% of students experiencing increased difficulty with resolving conflicts	Conversations with parents and teachers	% of parents who feel that their children have increased difficulty with resolving conflicts

Key takeaways

- The 2 key aspects are **interrelated** and it will be **important to have some understanding of both to assess needs**
- However, given time-sensitive planning, countries should make initial decisions based on **data that they already have** or that is **easily accessible through proxies to avoid any delays**
- **The school system at the local level** will be **best placed** to assess learning loss and learning gaps (e.g., teachers and school principals)

1c: Both academic and socioemotional needs should be assessed

What are academic needs?

Academic needs include all skills that revolve around a school curriculum, which can be classified as

- Direct measures of learning
- Indirect measures of learning

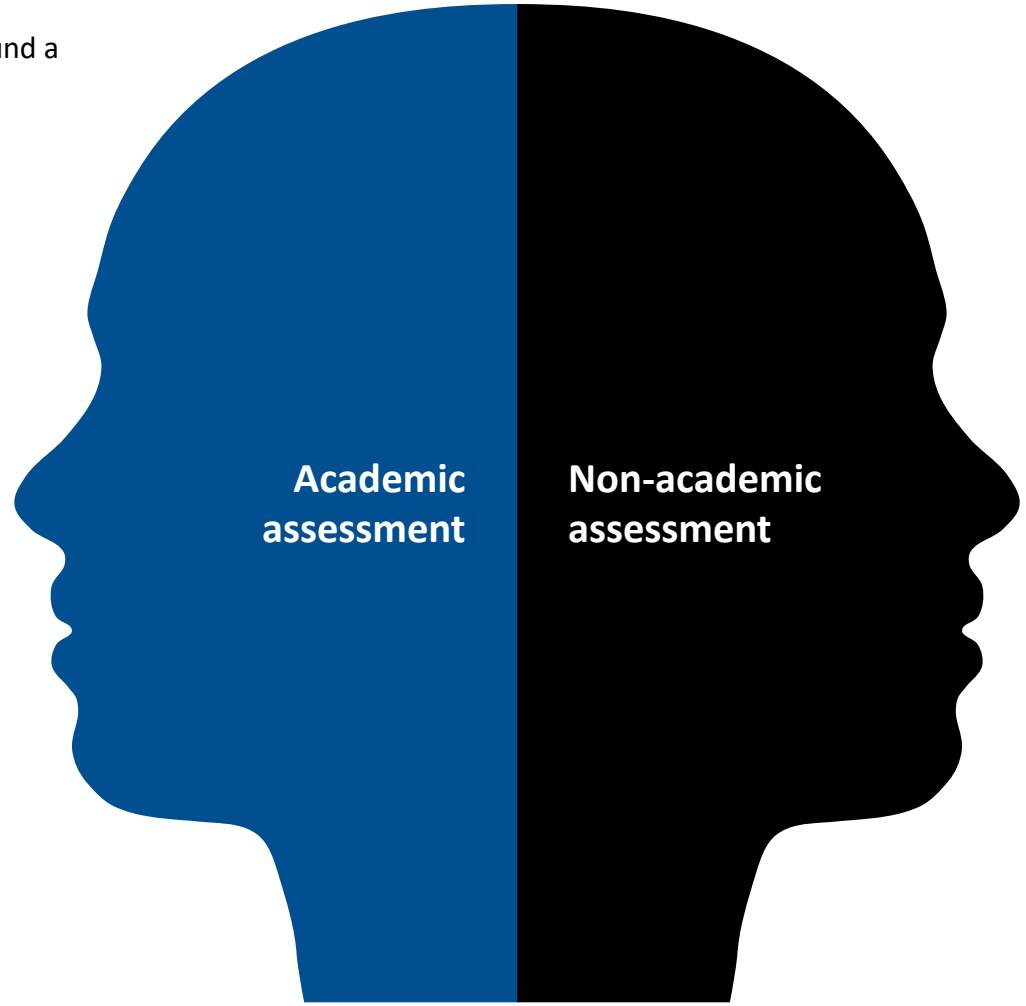
Which dimensions can be assessed?

Direct measures of learning include dimensions such as

- Embedded assessments (e.g., exams, papers, quizzes)
- Class attendance
- Homework completion

Indirect measures of learning include dimensions such as

- Level and quality of participation in classes
- Assessment of curriculum understanding (e.g., by surveys, interviews, focus groups)



What are non-academic needs?

Non-academic needs include all skills that are indirectly taught through education (e.g., decision-making, problem solving, conflict management) which can be classified as

- Personal skills
- Social skills
- Digital skills

Which dimensions can be assessed?

Personal skills include dimensions such as

- Ability to work autonomously
- Comfort with decision-making

Social skills include dimensions such as

- Ability to resolve conflicts peacefully
- Willingness to help peers
- Potential for socialization

Digital skills include dimensions such as

- Ability to retrieve information from learning platforms
- Tech literacy
- Online communication skills

1c: Academic and socioemotional gaps should be assessed differently (1/2)

Academic needs can be assessed by

Increasing individual assessments
e.g., increased number of tests, papers, projects, and quizzes

Engaging students individually / in small groups to obtain first-hand impressions
e.g., revision of students' homework individually / in small groups

Engaging families to help identify student learning gaps
e.g., educational surveys to assess student progression

Collecting data from online remote learning tools to compare assessments and progression

Examples

- Japan has migrated standardized testing to **online platforms to assess and benchmark student progress**
- In France, teachers maintain contact with their students to ensure pedagogical continuity and **obtain informal, first-hand impressions of student progress**
- France developed a platform (les-fondamentaux.fr) with both academic and socioemotional content to **help teachers and parents assess student progression and needs**

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Source: Frenchlanguagek12.org; Repository Fukujo; press search (see notes)

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1c: Academic and socioemotional gaps should be assessed differently (2/2)

Socioemotional needs can be assessed by

Engaging families and encouraging them to report rising socioemotional needs
e.g., regular parent–teacher conferences during the crisis to check in on student needs

Encouraging students to express socioemotional needs through individual or group sessions that foster open communication
e.g., gamified classes, dialogue around the challenges of COVID-19

Observing student behavior once back in school to identify socioemotional or digital needs
e.g., observation of social interactions during recess, observation of digital literacy (computer use, typing, etc.)

Examples

In the USA, various federal agencies have released resources **allowing parents to assess their own socioemotional well-being and that of their children**

In Singapore, designated teachers are responsible for well-being, and **call students to provide assessment and support**

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Source: OECD; ACF; NCBI; Stanford; press search (see notes)

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1c: Countries should roll out assessments continuously but consider tradeoffs when assessing students remotely and in person

Assessments should be rolled out continuously

Timeline options for assessments	Pros	Cons	Requirements
Deploy remote assessments	• No delay in assessments means more time to plan and the ability to roll them out during disruption • If digital capacities are highly developed, they have the potential to reach more students • Health and safety standards can be respected	• Need for adequate remote capabilities (e.g., trained teachers, online platforms) • Potential for equity issues and bias in assessments, resulting from uneven remote capabilities (e.g., network issues) • Difficulty of assessment quality monitoring (e.g., verifying identity of assessment author)	• Developed remote channels • Assessment quality checks • Equity of access
Deploy assessments in person	• No need for special remote capability-building • High potential to monitor the assessment environment	• Delayed assessment if schools are not open • Potential health and safety risks • If not all students are back in school, risk of low/uneven reach of assessments	• Well suited for countries with less developed remote channels • A clear view on schools reopenings so that in-person assessments can take place • Advanced health and safety protocols to lower risk • Risk mitigation of uneven assessments if some students are still remote

To address these needs, remediation requires a 3-step approach supported by continuous monitoring and adjustment

Deep dive follows

1 Envision and understand: Set a vision and determine remediation needs

1a **Define a vision of success** for remediation

1b Determine **which aspects contribute to remediation needs**

1c **Assess academic and socioemotional needs** for remediation

2 Decide and design: Choose a remediation strategy

2a Choose **levers of remediation** (e.g., summer school), taking into account feasibility and impact

2b Agree on **channels of delivery** for the strategy (e.g., remote)

3 Enable and execute: Prepare for delivery and execute

3a Identify **the requirements for operationalization** for each lever

3b Consider **strategies to address capacity gaps** (e.g., a hiring campaign for teachers)

4 Monitor and adjust: Track progress through continuous assessment and adjust the plan

4a Monitor progress for both **impact and process** with specific metrics and KPIs

4b **Adjust the program based on the metrics monitored**

2a: Countries can consider 3 levers for remediation, depending on their archetype

I More time

Extend the number of hours spent on the material to ensure full retention

Examples

- Weekend school
- Extended school day
- Summer school

II Dedicated attention

Increase the quality of learning by promoting better attention to the material

Examples

- Peer-to-peer learning
- Breakout groups

III Compressed content

Reduce, synthesize, or revise the content of curricula to emphasize fundamentals within the same time period

Examples

- Intersubject or intrasubject prioritization
- Condensed curriculum

Note

A **combination of these levers** is likely to be used in the remediation plan

NON-EXHAUSTIVE

2a: To remediate lost learning, more time can be allocated to learning

I. More time

Extend the number of hours spent on the material to ensure full retention

Suggested strategies	Best fit for …	Examples
Extended day/week Weekend school Extended school day Decreased recess time	**Archetype 1 – significant learning loss with limited inequality** *Rationale: Change of weekly calendar across the system will bring large-scale remediation*	The US government provides summer school for students with learning deficits and special education needs
Extended calendar Summer school Early school start Late school end	**Archetype 1 – significant learning loss with limited inequality** *Rationale: Large-scale extension of calendar will bring system-wide remediation* **Archetype 2 – significant learning loss with significant inequality** *Rationale: Large-scale response that can be targeted to students who are most behind (e.g., girls in underserved regions, students under a certain testing score)*	Sierra Leone, after the Ebola epidemic in 2014, set up a transition program for girls who had become pregnant during the epidemic that allowed them to close the learning gap and go back to school
		In India, The Balsakhi Program, a remedial education program in the late 1990s, introduced a 2-week training model at the beginning of the year and ongoing reinforcements of several hours a week while school was in session

Note: Students who attend summer school programs can gain 2 months of extra learning progress compared to similar students who do not[1]

The impacts of summer programs are larger when they are academically focused and delivered intensively with tuition in small groups by experienced teachers[2]

1. https://evidenceforlearning.org.au/the-toolkits/the-teaching-and-learning-toolkit/all-approaches/summer-schools/
2. https://ies.ed.gov/ncee/edlabs/regions/west/pdf/REL_2015096.pdf

SOURCE: World Bank; MIT; Global Partnership; press search (see notes)

Attention should be paid to students' readiness and capacity to handle extra school work

NON-EXHAUSTIVE

2a: To remediate lost learning, learning time benefits from dedicated attention

II. Dedicated attention

Increase the quality of learning/ teaching by promoting better attention to the material

Suggested strategies	Best fit for ...	Examples
Greater attention and contact time Fewer students per teacher, more aides Breakout groups	**Archetype 2 – significant learning loss with significant inequality** *Rationale: Promote breakout groups or add more aides in vulnerable communities*	In Ghana, the "school for life" (SFL) program (since 1995), uses peer tutoring to increase students' progression
1-on-1 models Peer-to-peer Adult-to-child	**Archetype 3 – limited learning loss with significant inequality** *Rationale: Small-scale response targeted at students most in need of remediation*	In Cambodia, child-to-child networks are developed locally, establishing homework clubs, absentee follow-up, tutoring, and support for disabled children
		In Sierra Leone, the PLAN initiative established 29 study groups for 330 affected children. Although no comparative data is available, the evaluation reported high rates of school return, progression to junior secondary school, and exam passes

- Evidence generally shows **the smaller the learning group, the bigger the effects**
- **1-on-1 tutoring has the largest effects in most cases,** but given that it is more expensive, teaching in small groups could be tried as a 1st step[1]

Additional attention should be paid to students' socioemotional skills as well (e.g., through counselors)

1. Slavin, R., Davis, C. (2011). Effective Programs for Struggling Readers. https://eric.ed.gov/?id=EJ916476; https://evidenceforlearning.org.au/the-toolkits/the-teaching-and-learning-toolkit/all-approaches/small-group-tuition/

SOURCE: World Bank; Hallgarten, J. (2020) Evidence on efforts to mitigate the negative educational impact of past disease outbreaks K4D Helpdesk Report 793. Reading, UK: Education Development Trust; UNICEF; UNESCO; press search (see notes)

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NON-EXHAUSTIVE

2a: To remediate lost learning, content can be synthesized or fundamentals can be emphasized

III. Compressed content

Reduce or synthesize the content of educational programs to emphasize fundamentals within the same time period

Suggested strategies	Best fit for ...	Examples
Reduced content Intrasubject prioritization Intersubject prioritization	**All archetypes** *Rationale: Prioritizing core subjects or fundamental concepts within subjects is a no-regrets move*	Sierra Leone revised lesson plans to focus on essentials for all grade levels Liberia developed COPE, an accelerated education program for children displaced during the civil war in the 1990s; COPE was a 3-year primary school program that compressed the 6-year curriculum down to 3 years
Synthesized content Summarize and condense the same curriculum (e.g., keep all subjects)	**Archetype 3 – limited learning loss with significant inequality** *Rationale: Only possible when the learning loss is not significant*	

Attention should be paid to students' socioemotional growth in addition to academic needs

Source: World Bank; UNICEF; NCEE; press search (see notes)

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2a: Countries can decide which combination of strategies suits them best, based on an evaluation of complexity

Implementation complexity: Low → High

Levers	Strategies	Complexity: Cost[1]	Complexity: Tech/logistical complexity[2]	Complexity: Social complexity[3]	Complexity: Curriculum complexity[4]
I. More time	**Extended day/week** • Weekend school • Extended school day • Decreased recess time	Some additional budget for infrastructure and teachers	Mild reorganization of the school day (e.g., bell times)	Little impact on family organization (e.g., transportation, child care), some impact on teacher well-being (e.g., workers' rights)	Need to prepare additional school materials for extended day/week
	Extended calendar • Summer school • Early school start • Late school end	Additional budget for infrastructure and teachers	Some complexity given the need to reorganize the use of facilities (e.g., if facilities have been booked over the summer)	Some impact on student well-being due to shortened vacation (especially in tropical climates) and on teachers (difficulty of convincing them)	Need to prepare additional school materials for extended calendar
II. Dedicated attention	**Greater attention and contact time** • Fewer students per teacher • Breakout groups	Significant budget for additional infrastructure and teachers	Need to source solutions to accommodate smaller classes (e.g., outdoor space, online platforms)	Hiring process or longer hours may be disruptive to teachers, have little impact on families	Some need to ensure uniformity across a higher number of classes and formats (e.g., online)
	1-on-1 models • Peer-to-peer • Adult-to-child	Significant budget for additional staff for 1-on-1s, resulting in greater impact	Significant given the need to organize calls, higher difficulty in low tech settings, additional supervision needed for peer-to-peer interaction, tracking	Low impact but potential need to hire additional staff may be somewhat disruptive	Some need to adapt the curriculum to specific needs
III. Compressed content	**Reduced content** • Intrasubject prioritization • Intersubject prioritization	Additional budget for curriculum advisors or for teachers to reorganize content	Low impact, need for meetings to align on the curriculum (e.g., online) or use of an online platform for the curriculum	Mild need to ensure students can keep up with an accelerated program, some disruption to teachers' class content	High impact given the need to reorganize and reshape the entire curriculum, and tailor it to specific student needs
	Synthesized content				

1. Estimated budget implications of strategies
2. Implications related to logistics, IT infrastructure, tech skills, hardware/software
3. Implications on social disruption (e.g., teacher discontent, student comfort, family organization, general well-being)
4. Impact on curriculum change

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2b: Once the remediation levers have been picked, specific channels of delivery should be identified

	Channels of delivery	
Levers	**Who?**	**How?**
 **More time** Extend the number of hours spent on the material to ensure full retention	• Additional teachers (or time per teacher) • Other teaching providers (e.g., tutors, teaching assistants)	• Online platform learning • Video calls with teachers or other providers • In-person teaching time once safe
 **Dedicated attention** Increase the quality of learning/teaching by lessening distractions and promoting better attention to the material	• Additional teachers, tutors, or assistants (as well as additional classrooms) • Peer-to-peer support	• Online video calls either 1-on-1 or in small groups • Peer-to-peer phone calls • In-person once safe
 **Less content** Reduce, synthesize, or prioritize educational content to focus on fundamentals within the same time period	• Teachers • School administrators	• Remotely on online platforms or by mail • In-person once safe

To address these needs, remediation requires a 3-step approach supported by continuous monitoring and adjustment

Deep dive follows

1 Envision and understand: Set a vision and determine remediation needs

1a **Define a vision of success** for remediation

1b Determine **which aspects contribute to remediation needs**

1c **Assess academic and socioemotional needs** for remediation

2 Decide and design: Choose a remediation strategy

2a Choose **levers of remediation** (e.g., summer school), taking into account feasibility and impact

2b Agree on **channels of delivery** for the strategy (e.g., remote)

3 Enable and execute: Prepare for delivery and execute

3a Identify **the requirements for operationalization** for each lever

3b Consider **strategies to address capacity gaps** (e.g., a hiring campaign for teachers)

4 Monitor and adjust: Track progress through continuous assessment and adjust the plan

4a Monitor progress for both **impact and process** with specific metrics and KPIs

4b **Adjust the program based on the metrics monitored**

3a: Based on the strategy for remediation chosen, countries can determine what they need and which capabilities they are missing for implementation

NOT EXHAUSTIVE

Deep dives follow

		Resources needed for implementation			
Levers	**Strategies**	**Budget**	**Infrastructure**	**Human resources**	**Curriculum/materials**
I. More time	**Extended day/week** **Extended calendar**	Payroll hours for teachers, admin staff, supervisors, janitors, extended infrastructure use, transportation of students; additionally for extended calendar: loss of revenue from canceled summer programs replaced with school	Extended use of school grounds, communication materials for new schedules, organization of new bell times	Extended staff hours or new staff (teachers, admins, cleaning staff), curriculum advisors	New materials, print outs, books, notebooks, and other writing materials
II. Dedicated attention	**Reduced class sizes**	Budget for additional teachers, aides, tutors, cleaning staff (due to more classrooms), new classrooms or buildings	Outdoor spaces, other repurposed spaces for teaching (e.g., cafeteria)	Teachers, supervisors, and aides for smaller classes; more janitors and security for new buildings/classrooms	Same curriculum but tailored to class needs and smaller groups; chalkboards, online platforms for remote classes
	1-on-1 models	Budget for additional teachers, aides, tutors, cleaning staff, new classrooms or buildings (to respect social distancing)	Space for 1-on-1 teaching	Teachers, supervisors, and aides for smaller classes, adults for supervision of peer-to-peer mentoring	Tailored materials for special student needs; potential need for online connectivity, smartphones
III. Compressed content	**Reduced content** **Synthesized content**	Budget for additional teaching and school admin time, curriculum advisors	Meeting rooms, online platforms, communication mediums (e.g., phone or e-mail) to align on content	Teachers, curriculum advisors, and administrators to tailor content	New books, worksheets, and homework templates for the new curriculum

Key takeaways

- **Each remediation strategy will require different resources** to be implemented: budget, materials/ infrastructure, human resources, curricula
- Countries can **adapt the strategies to their needs**, **expanding their current capacity** or **using innovation and collaboration** to bridge the gap

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3b: Where gaps in capacity exist, countries can either make the most out of current resources or explore new avenues through innovation and collaboration (1/3)

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Materials/infrastructure

How can we increase infrastructure capacity, including IT and tech, to meet social distancing guidelines and enable remediation?

Capacity needed	Leverage current capacity	Explore new avenues	Examples
Infrastructure	• Use own outdoor spaces, cafeterias, meeting rooms (if appropriate) • Extend use of classrooms for additional time or weekend classes	• Partner with organizations with vacancies to alternate space and create designated classrooms (e.g., community centers, community-based organizations, religious centers, universities, town halls)	 In Denmark, schools are using outdoor spaces to meet social distancing guidelines but have allowed most children to come back to school
Technology	• **IT system infrastructure:** Prioritize fixing broken fixtures, purchase or rent hardware from local libraries/tech stores • **Live-streaming platforms:** Use free programs (e.g., Skype) • **Online teaching platforms:** Use free programs (e.g., Google Drive, e-mail)	• **IT system infrastructure:** Partner with companies or foundations to provide access to hardware for teachers or students • **Live-streaming platforms:** Apply for online platforms' special education programs (e.g., Zoom or Google Hangouts) • **Online teaching platforms:** Set up group subscriptions for teaching (e.g, padlet.com)	 The USA is partnering with Logitech to provide webcams and headsets for teachers to facilitate remote learning  France and the Orange Foundation are partnering to provide tablets and computers to disadvantaged students to promote remote learning

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Source: CNN; Learning Policy Institute; Fondation Orange; Logitech; press search (see notes)

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3b: Where gaps in capacity exist, both innovation and collaboration can provide solutions and support effective remediation (2/3)

NOT EXHAUSTIVE

Human resources

How can we assign enough qualified educators or additional teaching time to enable execution?

Capacity needed	Leverage current capacity	Explore new avenues	Examples
Teachers, mentors, tutors, and aides	• Extend the current working hours of teachers and aides • Divide activities that require teaching and those that require supervision more optimally between staff • Deprioritize administrative work for teachers who were doubling as administrators • Bring on older students to support younger ones	• Reach out to university students to provide teaching services for junior grade levels • Engage capable parents to support lower-level classes • Work with nonprofits to deliver targeted learning to the most challenged students • Reintegrate recently retired teachers to manage the increased workload • Integrate technological solutions to reduce the number of teachers needed (e.g., AI-based homework revision)	Israel has integrated education students from universities as faculty to support the education system, operating in smaller groups Sierra Leone rehired recently retired teachers to increase teaching capacity
Training	• Centralize all training to expedite delivery • Leverage the abilities of current staff to train others using central training guidelines • Let school administrators choose standardized training topics that teachers can take offline	• Create or leverage existing technical training for remote teaching (e.g., through Zoom, Moodle, school platforms) • Create mentorship programs to guide teachers in their planning and execution	The United Arab Emirates is offering training programs for teachers and school administrators on remote teaching and the use of technology in education India partnered with an edtech provider to offer IT training to primary teachers Armenia created a database of mentor teachers experienced in distance learning to assist their colleagues

Source: Springer; Teach Online; Gulf News; press search (see notes)

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3b: Where gaps in capacity exist, both innovation and collaboration can provide solutions and support effective remediation (3/3)

NOT EXHAUSTIVE

Curriculum

How can we increase capacity to tailor curricula during the crisis?

Leverage current capacity

- Ask teachers to tailor the curriculum to the specific needs of their students
- Ask school administrators to review existing summer programs or extended school materials

Explore new avenues

- Partner with companies and organizations to curate content aligned with a region's curriculum
- Enable teachers to use online platforms to tailor teaching and classes (e.g., subscription fees, guidelines, and information)
- Digitize the curriculum for others to be able to curate and provide lesson plans

Examples

- Peru has curated content aligned with the national curriculum, combining existing content with external proprietary content from partner institutions
- French teachers and students are using an official online curriculum platform focused on fundamentals to ensure the coverage of basic knowledge (les-fondamentaux.fr)

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Source: World Bank; http://lesfondamentaux.fr/; Bett Show; press search (see below)

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To address these needs, remediation requires a 3-step approach supported by continuous monitoring and adjustment

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3b Consider **strategies to address capacity gaps** (e.g., a hiring campaign for teachers)

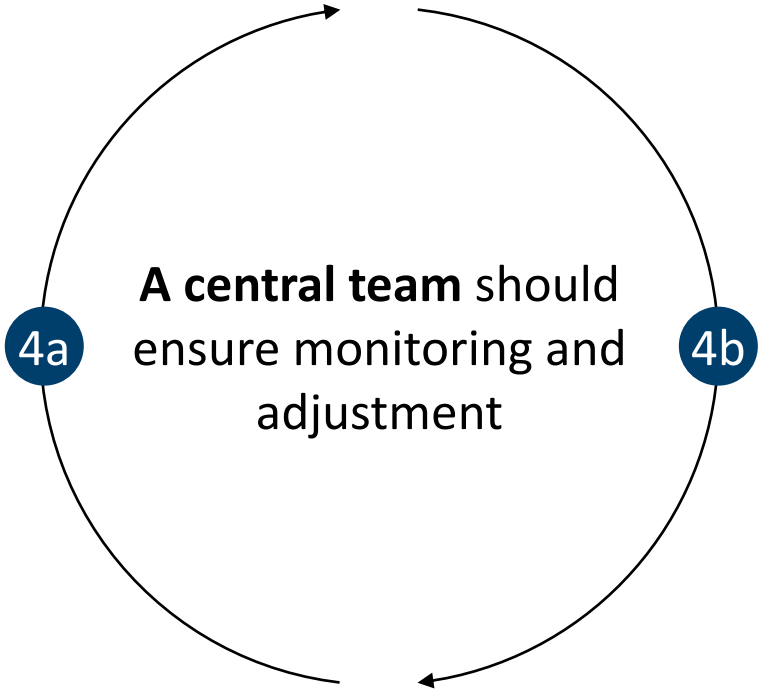
4 Monitor and adjust: Track progress through continuous assessment and adjust the plan

4a Monitor progress for both **impact and process** with specific metrics and KPIs

4b **Adjust the program based on the metrics monitored**

4: Monitoring and adjustment are continuous processes, supporting the relevance of the remediation plan

Monitor and evaluate
Both the success of **the impact** (e.g., student progression) and **the process** (e.g., student experience) of remediation should be assessed continuously based on data



Adjust
Based on **assessments of student progression and experience** of the remediation program, the plan should be adjusted on a **regular basis**

The central team should agree on the monitoring procedures and protocols (e.g., who collects which information, who shares it) and adjustment processes (e.g., who makes which decisions based on certain information)

See "Chapter 9: Organizing for the response" for additional detail on the central team

4a: Monitoring and evaluation – both the process of delivery (e.g., quality) and the outcomes of remediation (in grades and learning) should be evaluated continuously

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	i. Evaluate the process: overall quality of plan			ii. Evaluate outcomes: the impact of the remediation plan on student progression		
What to evaluate	**A. Logistics of the remediation plan** Ability to manage resources effectively Effectiveness of management team Use of budget	**B. Reception of the plan** Satisfaction of teachers, students, and families with the plan Effective communication of the plan	**C. Longevity of the plan** Ability of the system to continue amid another lockdown Effective compilation of learnings	**D. Student attendance and participation** Attendance/engagement Participation in class Equity of access	**E. Student results on formative and summative exams vis-à-vis the learning goals stated in the curriculum** Standardized summative exams Standardized formative exams throughout the year Evaluation on a curve (vs. other students [in remediation])	**F. Student feeling of "being behind"** Confidence in learning ability Feeling of general effectiveness of plan
Who to consult	Management team, experts, auditors	Parents, teachers, students	Experts, auditors	Teachers, school administrators	Teachers, online platforms, administrators	Students, teachers, parents
How to evaluate it	Team satisfaction rate External audit of budget use Benchmarks	Staff satisfaction surveys Interviews and informal discussions	Qualitative review of adaptability by experts Presence of compilation documents and open-source knowledge sharing	Attendance and absenteeism data (with focus on vulnerable groups) Discussions/interviews with teachers on participation Virtual lesson visits	Standardized and centralized formative and summative exam grades Samples of key documents and student work	Interviews with students, teachers, parents Surveys
How often	Periodically (1-3 months)	Periodically (1-3 months)	After action (after 3-4 months)	Regularly (every 2-5 weeks, if possible)	Regularly (every 2-5 weeks, if possible)	Regularly (every 2-5 weeks, if possible)

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4b: Adjustment – based on the monitoring and evaluation of the process and impact of remediation, the plan should be adjusted in 2 ways

NOT EXHAUSTIVE

	i. Adjustment of the process (overall quality of plan)			ii. Adjustment of the content (impact of the plan on student progression)		
What is evaluated	**A. Logistics of the remediation plan** Ability to manage resources effectively Effectiveness of management team Use of budget	**B. Reception of the plan** Satisfaction of teachers, students, and families Effective communication of the plan	**C. Longevity of the plan** Ability of the system to continue amid another lockdown Effective compilation of lessons learned	**D. Students attendance and participation** Attendance/engagement Participation in class Equity of access	**E. Student results on formative and summative exams** Standardized summative exams Standardized formative exams throughout the year Evaluation on a curve	**F. Student feeling of "being behind"** Confidence in learning ability Feeling of general effectiveness of plan
What should be adjusted	Management team dynamics, distribution, and management of financial resources	Inclusion of other stakeholders into the plan, communication strategy	Compilation of lessons learned, applicability of the plan	Remediation program and target	Remediation program and target	Focus on confidence building in addition to progression
How it should be adjusted	• Clarify roles and responsibilities • Adjust team structure (e.g., hiring) • Reorganize (e.g., add, take out, or simplify budget allocations	• Iterate the plan with students/teachers (e.g., through workshops) • Start a communication/ awareness campaign (targeting specific grievances)	• Simulate other crises to ensure relevance and adapt • Start compilation of lessons learned (e.g., a dedicated team member writes an after-action report)	• Classify students into tiers and use monitoring to understand which segments are improving and which ones are not • Move students from tiers and adapt plan to focus on specific needs	• Classify students into tiers and use monitoring to understand which segments are improving and which ones are not • Move students from tiers and adapt plan to focus on specific needs	• Integrate aspects of confidence building into remediation plan (e.g., focus on strengths)

Contents

Based on the framework, countries can tactically implement remediation through 4 action checklists

Deep dives to follow

1 **Envision and understand**

2 **Design and decide**

3 **Enable and execute**

4 **Monitor and adjust**

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1: Set a vision and assess remediation needs through the following actions

To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Envision and understand	**1a. Define a vision of success**			
	☐ Convene all stakeholders relevant for remediation (including leaders for finance, IT, infrastructure, etc.)	…	…	…
	☐ Set a time-bound and precise vision with clear goals and targets for remediation and agree on priorities, considering key tradeoffs	…	…	…
	1b. Determine who needs remediation and how much			
	☐ Classify types of remediation needs that students could be experiencing	…	…	…
	☐ Map out the extent of these needs using the learning quadrant in the student population (e.g., the extent and distribution of learning loss)	…	…	…
	☐ Derive appropriate response archetype based on need	…	…	…
	1c. Assess academic and socioemotional needs for remediation			
	☐ Decide on the types and the tools to be used for the assessments	…	…	…
	☐ Choose metrics to be used to evaluate needs based on available data and proxies	…	…	…
	☐ Determine which skills and knowledge should be tested to assess these needs (e.g., academic vs. socioemotional criteria)	…	…	…
	☐ Decide on the timeline of the rollout for these assessments, differentiating based on the specific requirements (e.g., in-person assessment requires more time)	…	…	…
	☐ Weigh different options for the delivery of assessments of students (e.g., in person or online), taking into account equitable access, health, and safety	…	…	…

2: Develop a remediation strategy through the following actions

To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Design and decide	**2a. Choose levers of remediation, taking into account feasibility and impact**			
	☐ Classify types of levers that are available and appropriate to use for specific needs identified (e.g., additional learning time, dedicated attention, reduced content)	…	…	…
	☐ Map out which specific strategies within these levers would suit remediation needs (e.g., facilitate 1-on-1 time between teachers and students, synthesize curriculum to focus on fundamentals)	…	…	…
	☐ Evaluate the feasibility of different strategies and choose which combination is best suited both to current capabilities and to the needs of the country's population (including public opinion of teachers, parents, labor unions)	…	…	…
	2b. Agree on channels of delivery for the strategy			
	☐ List potential channels through which strategies can be delivered (e.g., additional teachers), including who will deliver and where will it be delivered	…	…	…
	☐ Assess feasibility and impact of these channels depending on needs (e.g., if country is low tech, find in-person alternatives)	…	…	…
	☐ Choose rollout time of remediation plan depending on archetype and the timeline of school reopening (e.g., if remote capacity is weak, consider implementing remediation once schools are reopened)	…	…	…
	☐ Design timeline of implementation from current date to full school opening, including strategies, channels, and levers	…	…	…
	☐ Develop full remediation plan materials (including new curriculum, communication materials)	…	…	…

3: Prepare for delivery and execute through the following actions

To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Enable and execute	**3a. Identify the requirements for operationalization for each lever**			
	☐ List which capacities will be needed to implement the remediation plan (e.g., additional teachers)	…	…	…
	☐ Analyze current levels of the required capacities in the system already in place or available	…	…	…
	☐ Assess the gap between capacity needed for remediation and existing abilities	…	…	…
	3b. Consider strategies to address capacity gaps where they exist			
	☐ Prioritize capacities with the largest gap and the highest potential to address learning issues	…	…	…
	☐ Map out potential strategies to fill these gaps, taking into account collaboration opportunities, innovative capacity building solutions (e.g., partnership with nonprofits)	…	…	…
	☐ Capacity building: train and recruit teachers, provide budget for additional infrastructures, deliver curriculum guidance, etc.	…	…	…
	☐ Implementation: set up extended school day/week/year programs, tailor curriculum, reduce class size, or introduce 1-on-1 models	…	…	…

4: Monitor and adjust through the following actions

To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Monitor and adjust	**4a. Monitor progress both for impact and process with specific metrics and KPIs**			
	☐ Choose which evaluation criteria will be used to monitor the progress and inform adjustment (take into account the evaluation of both the progression of students and the quality of the overall plan)	…	…	…
	☐ Develop and agree on the KPIs with baseline and target	…	…	…
	☐ Design process to monitor dimensions of evaluation regularly (e.g., collection of data)	…	…	…
	4b. Adjust the program based on the metrics monitored			
	☐ Compile lessons learned (including challenges) regularly	…	…	…
	☐ Regularly compile data and share findings with the central team	…	…	…
	☐ Adjust process and outcome targets as necessary, including communication strategy and materials	…	…	…