COVID-19 response – hybrid learning

Hybrid learning as a key element in ensuring continued learning

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

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

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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
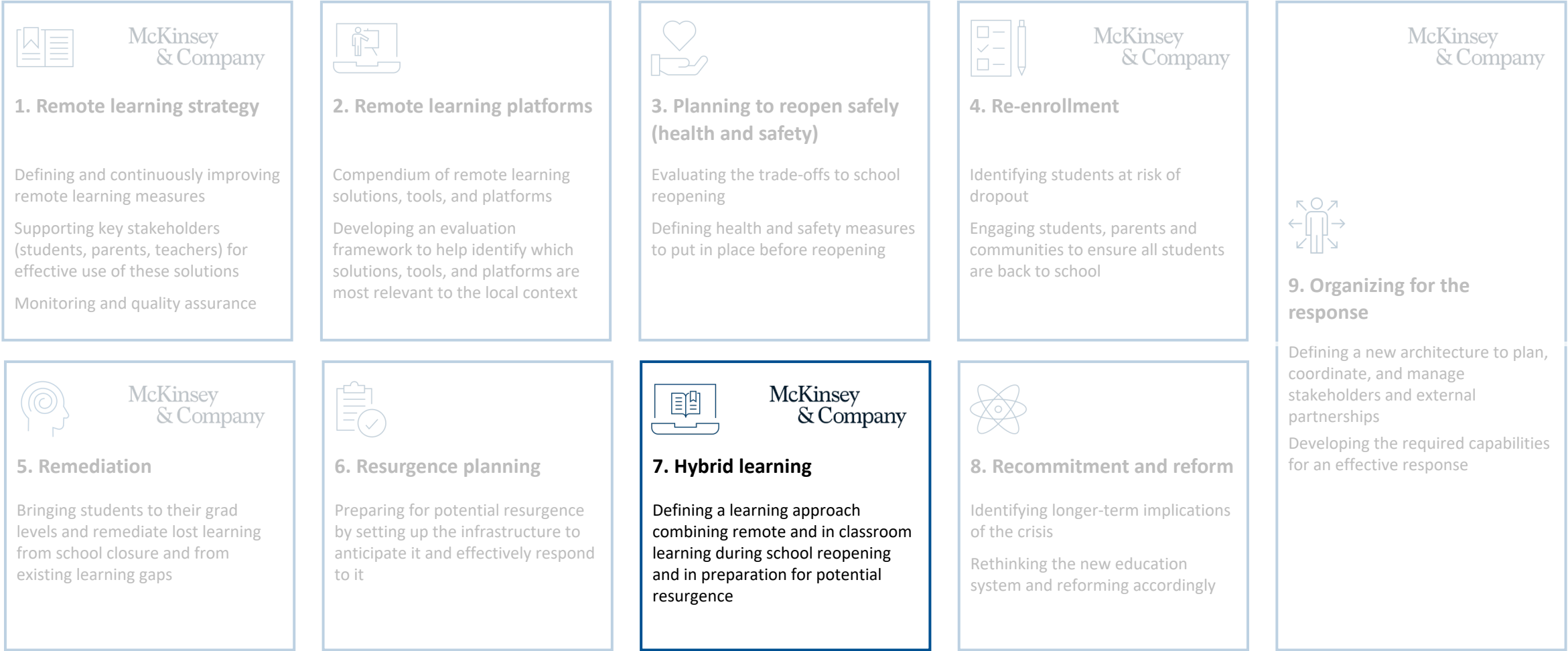
The response – framework and practices

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 hybrid learning

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Monitoring and quality assurance

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

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Evaluating the trade-offs to school reopening

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While treated as a stand-alone topic in this chapter, hybrid learning is intricately related to other parts of the response

7. Hybrid learning

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

Chapter		Relation to hybrid learning	Chapter closely linked
1. Remote learning strategy		Hybrid learning offering is dependent on the **remote learning strategy and solutions** that exist	
2. Remote learning platforms			
3. Planning to reopen safely (health and safety)		**School opening** timetables and health safeguards determine the amount of in-person learning that can be offered, thereby defining the hybrid learning possibilities	
4. Re-enrollment strategy		Hybrid learning strategy is **dependent** on the number of students that **re-enroll** and can help be a **factor in succeeding in re-enrolling students**	
5. Remediation		If students have additional needs, the hybrid learning strategy can be **part of the remediation solution**	
6. Resurgence planning		The ability to seamlessly switch between in-person, remote, and hybrid learning approach is a critical part of **resurgence planning**	
8. Recommitment and reform		Elements of hybrid learning may be desirable in the longer term even after the initial crisis is over	
9. Organizing for the response		The organization of hybrid learning should take place along with other aspects of the response through a **coordination response team**	

Glossary of key terms

Hybrid learning can be defined as a learning approach that combines both remote learning and in-person learning to improve student experience and ensure learning continuity - it is of particular relevance during school partial re-openings and in preparation for potential virus resurgence

In-person learning: learning that occurs when the **learner** and the **instructor,** or **source of information**, are **co-located physically** either in a traditional classroom setting or another space

Remote learning: learning that occurs when the **learner** and the **instructor,** or **source of information**, are **separated physically** and hence cannot meet in a traditional classroom setting – it includes "online learning" as well as lower-tech remote learning options
(e.g., TV, radio, mail)

Remote learning solution: a system, a platform, a method, or a tool that enables remote learning and is characterized in 4 dimensions, **experience** offered, **technology** used, **connection** enabled, and **learning activities** covered

Experience the solution offers the users can be live or on-demand:

- **Live stream (synchronous) learning:** learning occurs live (e.g., videoconferencing and live TV or radio programs) for real-time lessons – the student follows the pace and intensity of learning of the class
- **On-demand (asynchronous) learning**: students participate in self-paced on-demand learning (e.g., recorded videos, textbooks, and post mail assignments) – the student is more autonomous with the pace and intensity of learning

Level of connection the solution enables can be interactive or individual:

- **Human interactive learning:** students and teachers meet live (e.g., videoconferencing) for real-time collaborative lessons and discussion
- **Individual learning**: students pursue learning activities in isolation (e.g., adaptive software or textbook) from each other

Technology which the solution relies on can be digital or analog:

- **Digital:** advanced digital devices that generate, store, or process data:
    - **Adaptive software:** specially designed adaptive software that collects data through the interaction with the student to identify learning needs and adapt the content and practice accordingly (e.g., mobile app that adapts language exercises based on student performance) – frees up teacher for tailored and more in-depth 1-on-1 coaching
    - **Nonadaptive software:** software that can enable students to practice but does not collect data or adapt to student needs (e.g., computer word-processing program, coding programs) – demands teacher feedback and close supervision to ensure learning outcomes
- **Analog:** basic analog devices that do not generate, store, or process data (e.g., mail, textbook, radio)

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Since the beginning of the pandemic, schools have moved predominantly between 3 models: in person, remote, and hybrid

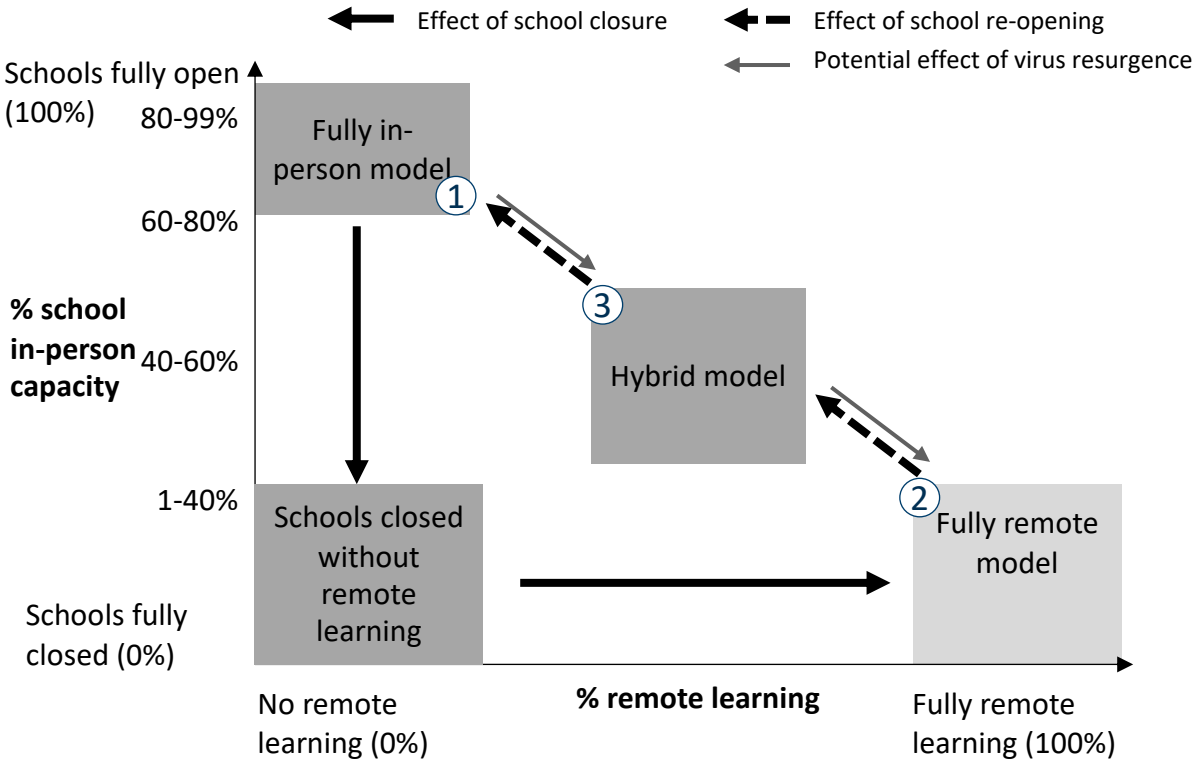## Learning models

The school capacity to offer in-person learning varies according to the local epidemiological scenario and the school's capacity to deal with it

E.g., 40% capacity means a school can receive 40% of its total student population at a given time

← Effect of school closure ◄ --- Effect of school re-opening
← Potential effect of virus resurgence

% school in-person capacity

Schools fully open (100%) 80-99%
60-80%
40-60%
1-40%
Schools fully closed (0%)

Fully in-person model
①
③
Hybrid model
②
Schools closed without remote learning
Fully remote model

No remote learning (0%)
% remote learning
Fully remote learning (100%)

The degree of remote learning a school offers means how much time of the student's learning is pursued through remote means, .e.g., 40% remote learning means that of all **student learning time** 40% is done through **remote methods**

Description

1. Schools open – in-person model

Prior to COVID-19, schools had a full in-person model as teachers and students interacted full-time in the school. Most schools had a traditional variant (i.e., textbook, blackboard teaching) while some had a blended variant (i.e., employed edtech solutions). It is possible for schools to return to this model after the risk of the virus becomes controlled

2. Schools closed – remote model

Schools closed to mitigate the spread of the virus and switched to a fully remote model with all learning and teacher-student interactions taking place remotely. It will probably continue in areas with high risk of transmission

3. Schools partially open – hybrid model

Following the immediate response and the peak of the virus, schools started opening partially so students could go in person for a partial school day or for a few days a week

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To become truly resilient, all schools must develop capacity to switch easily from in-person learning to remote learning …

% school in-person capacity
Example drivers of capacity: physical space, teacher availability, support operations

School fully open

School fully closed

Resilient learning continuity

Unstable learning continuity

No learning continuity

% remote learning capacity

School unable to offer remote learning

School able to fully offer remote learning

Example drivers of capacity: digital infrastructure, user capability, technology penetration in school

As school systems navigate school reopening and prepare for future virus resurgence, they can be found to be in 1 of 3 states:
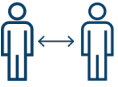
No learning continuity: school is at risk of not ensuring learning continuity given that in-person and remote learning capacities are not sufficient enough to address the full learning needs

Unstable learning continuity: schools are vulnerable to falling into "no learning continuity" if they experience a shock into their remote learning capacity (e.g., platform malfunctions)

Resilient learning continuity: school has capacity to ensure learning continuity as it has "extra" remote learning capacity to quickly switch to remote learning in case in-person learning is disrupted

School systems need to **channel** their **budgets** to **enable** enough **capacity** for both in-person and remote learning, the **operational agility** to be in a state of "resilient learning continuity" and allow for an **easy shift** between adequate mixes of in-person and remote learning methods

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… but educational systems and schools face significant challenges in setting up hybrid learning systems, and in preparing to switch between models

Type	Challenge		
Remote learning	Difficulties across **student adoption**, **teacher training**, choosing **right technological solutions,** and **school system constraints**		Difficulty in **achieving the same learning outcomes** through remote learning as in-person learning with the current level of system preparedness across the **majority of student population**
In-person learning	**Social distancing measures** and **limited teacher availability** due to vulnerable population, logistical constraints, and other factors		Difficulty in dealing with the increased complexity of **operationalizing diverse in-person schedules and segmentation** to adapt to the circumstances
Integration and switching	**Limited capacity** deciding which **students** and which **parts of the curriculum** are **prioritized** between **each method of learning or both**		**Limited experience** in designing integrated students' journeys across both learning methods
	Unfamiliarity with alternative **staffing models** that distribute capacity between learning methods and allocate students to teaching teams that deliver remote and in-person learning in an integrated way		Increased operational complexity to **adjust to** a **remote** and **in-person mix** and **switch between** both learning methods

Source: UNESCO; World Bank; Africa4tech

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Hybrid learning requires a 3-step approach supported by continuous monitoring and adjustment

☐ Deep dives follow

①

Understand and envision: assess the needs and capabilities

1a: Define **guiding principles** for hybrid learning strategy

1b: Assess **students' needs** for **remote** and **in-person learning**

1c: Assess the **accessibility** and **effectiveness** of current remote learning solutions

1d: Assess **teacher capacity** (e.g., ability to return to school or teach remotely)

1e: Assess **availability of physical space** for in-person learning

1f: Assess **availability** and **flexibility of support levers** (e.g., transportation, cleaning, and budget)

②

Decide and design: determine the allocation of hybrid learning by grade and student type

2a: Determine **which levels of education** should study in-person according to **health, economic** and **learning imperatives**

2b: Determine how to **allocate scarce in-person capacity** for each level of education

2c: Determine **within each level of education** the **degree of prioritization** of **certain student students** over general student population

③

Enable and execute: operationalize the hybrid learning model for each grade level

3a: Decide which **subjects** should be **studied remotely** and which ones **prioritized** for **in-person learning**

3b: Determine which **learning activities** should be **prioritized** for **in-person learning**

3c: Organize a **shift system** that distributes access to in-person learning amongst students (e.g., half days)

3d: Define the **teacher allocation model** between learning methods

3e: Fill **capability gaps** to enable delivery of quality hybrid learning

④

Monitor and adjust: evaluate hybrid learning experience

4a: Monitor **key indicators** of hybrid learning **processes** and **outcomes**

4b: Set up an **adjustment mechanism** to continuously adapt the hybrid learning strategy to emerging needs

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1a: When setting a vision, leaders should consider trade-offs within their hybrid learning strategy

Deciding between …

Left			Right
Creating a hybrid learning strategy simply to mitigate immediate disruptions of COVID-19	**Limited scope to "now"** ⟷ **Expanded scope to future**		Rethinking the learning strategy to optimize remote and in-person learning methods fully
Reducing the curriculum that has to be covered to reduce pressure on students and teachers	**Light curriculum** ⟷ **Full curriculum**		Maintaining full curriculum coverage expectations to prevent learning losses and disruption of future academic years
Having students follow the pace of the teacher and the class to keep everyone at same level	**Class pace** ⟷ **Self-pace**		Allowing students to study at their own pace to tailor expectations to their situation
Prioritizing in-person learning for a subset of students who have a higher learning and well-being risk	**Prioritize vulnerable students** ⟷ **Standardized allocation**		Distribute the same mix of remote and in-person learning across all students
Changing only incrementally from the traditional educational model starting point	**Play safe** ⟷ **Experiment boldly**		Innovating radically by leveraging ideas "outside the box"
Pausing all summative assessment to not impact disproportionally vulnerable students	**Pause assessment** ⟷ **Continue assessment**		Keeping summative assessment to incentivize students to study and facilitate academic progression

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1b-g: To understand the needs and capacities for hybrid learning, it is necessary to carry out key assessments

Assessing the need for in-person learning

Following government lockdowns, most schools switched to remote learning – now that restrictions are partially lifting, schools need to assess how their current remote learning is catering for its students' needs

1b Assess **students' needs** for **remote** and **in-person learning** ✓

1c Assess the **accessibility** and **effectiveness** of current remote learning solutions ✓

Assessing system in-person capacity

Several factors will influence a school's capacity to return to in-person learning, resulting in the hybrid learning alternatives

1d Assess **teacher capacity** (e.g., ability to return to school or teach remotely) ✓

1e Assess **availability of physical space** for in-person learning ✓

1f Assess **availability** and **flexibility of support levers** (e.g., catering, cleaning, and budget) ✓

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1b: There are student segments whose needs and circumstances need to be considered when crafting a hybrid learning strategy

	1 Vulnerable student at risk by being away from school	**2** Students without childcare	**3** Transition students	**4** General student population	**5** Students whose parents do not allow in-person return	**6** Students at high risk if infected by the virus
	Students at risk of having their learning or well-being impacted while away from in-person learning (e.g., second language, at-risk home, special education students, parents unable to support)	Students whose parents cannot provide childcare (e.g., essential workers)	Students who are in the last grade of their education system (e.g., 12th grade) and who have more to lose academically from the disruption	Students who have no particular risks and that can either study remotely or in person	Students who do not have any particular risk and could study remotely or in person but whose parents will not allow to return	Students who due to intrinsic health factors, living with people of high-risk or another factor cannot attend in-person learning until vaccine
Primary school	• Lack of access to remote learning • Urgent need to mitigate learning and well-being risks from being remote	• Less effective remote learning • Urgent need of childcare	• Less effective remote learning • Need for stability and in-person assessments for academic progression	• Less effective remote learning	• Need to continue using remote learning solutions • Need to show the safety measures for in-person learning	• Need to continue using remote learning solutions until the virus threat becomes negligible
Secondary school	• Lack of access to remote learning • Urgent need to mitigate learning and well-being risks from being remote	• Less need for childcare • Remote learning more effective, therefore flexibility to stay remote or return to in-person learning	• Need for stability and in-person assessments to determine academic progression	• Remote learning more effective, therefore flexibility to stay remote or return to in-person learning	• Might need to be quickly accommodated into segment 3	

Learning method considerations

Urgency to return High ────────────────────► Low

Need to stay remote Low ────────────────────► High

Countries can have different segments or prioritize them differently according to local circumstances

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1c: As part of their remote learning strategy, school systems will have already determined a solution mix which will now influence their hybrid learning alternatives

Type of learning activities ⬜ Communication activities ⬜ Content activities 🟦 Remote learning mix being illustrated across the document

Core learning activities

Comprehensiveness of the solution		Communicating new assignments and information	Teaching new concepts remotely	Enabling student practice	Providing formative feedback and coaching
Integrated	Paper-based materials	Teachers deliver physical notes with instructions	Students read textbooks	Students complete paper based worksheet	Teachers collect assignments and returns them with feedback
	Live VC	Teachers explain assignments through VC	Teachers deliver class through VC	Students work in small groups through VC	Teachers coach small groups or 1-on-1 through VCs
	Adaptive software program	Program guides students to current assignments	Program shares new content with student	Students complete assignments in the program	Students receive feedback from the program
Com-munication	Online platform	Teachers upload instructions and assignments			Teachers upload feedback
	E-mail	Teachers send e-mails with instructions			Teachers send e-mail with feedback
Content	Recorded video created		Teachers share video		
	Recorded video leveraged		Teachers share video		
	Nonadaptive software program			Students complete non-adaptive assignments	
	Offline devices		Students access content through offline device		
Hybrid	TV and radio programs	Teachers describe assignments	Teachers describe concepts		

Solution mix

- To offer a complete remote learning strategy, schools had to cover each learning activity with at least one solution
- Certain solutions have high technological requirements and end up only being suitable for systems with high digital maturity (high tech penetration in general population + high user capability + high tech in school)
- The remote solution mix which schools have adopted will influence the hybrid learning possibilities

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1c: Schools need to assess the access, quality, and equity outcomes of their remote learning solutions to evaluate their overall effectiveness

Educational outcomes

	Remote learning access	**Remote learning quality**	**Remote learning equity**
Goal	Ensure all students fulfill the necessary prerequisites to participate in remote learning solutions	Ensure learning outcomes in remote learning are as close to in-person expectations as possible	Ensure remote learning solutions do not create or worsen inequities between student groups
Assessment question	How many students have access to the remote learning solutions and the content covered?	How well are students achieving learning outcomes?	Are any groups in particular being left behind?
Assessment elements	Stakeholders' access to digital tools (e.g., students access to advanced devices) Stakeholders' capabilities to use devices (e.g., parents ability to use advanced devices) Students' attendance and participation	Summative exams scores Formative exams scores Samples of key documents and students' work Stakeholders' experience (e.g., teachers satisfaction)	Variations of access and quality indicators across: • Gender • Geography • Ethnic background • Family education • Economic status

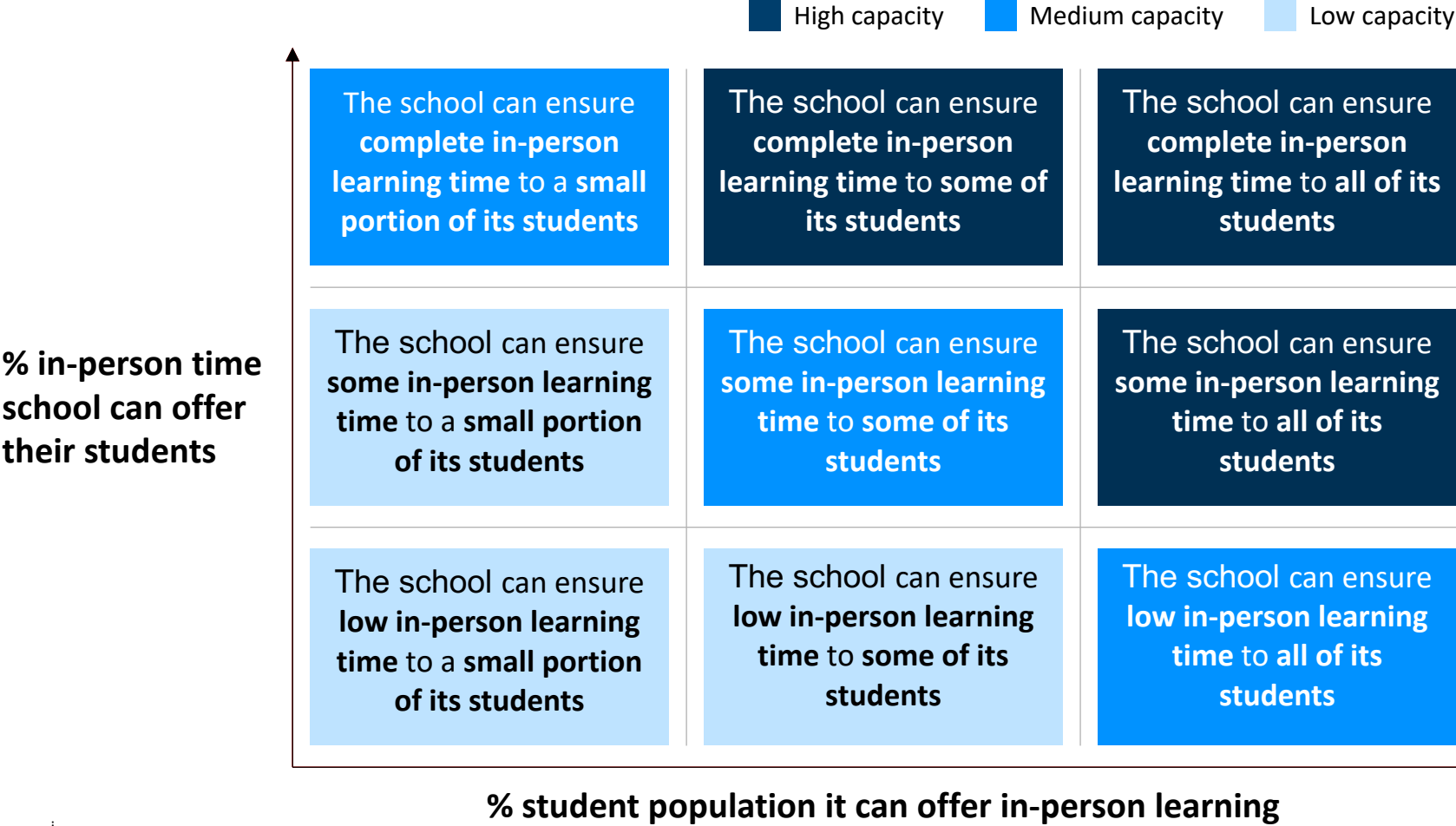The urgency to return to in-person learning is dependent on a number of factors among which is the level of **effectiveness of remote learning**

The effectiveness of remote learning can be assessed through 3 key **educational outcomes** – **access, quality,** and **equity**

This assessment should be segmented per **school grades** and **geographies** and focused on the **latest state** of remote learning

1d-f: School capacity to offer in-person learning can be distributed between the amount of time it can offer and the number of students it can cover

School in-person learning capacity matrix

■ High capacity ■ Medium capacity □ Low capacity

% in-person time school can offer their students

The school can ensure **complete in-person learning time** to a **small portion of its students**	The school can ensure **complete in-person learning time** to **some of its students**	The school can ensure **complete in-person learning time** to **all of its students**
The school can ensure **some in-person learning time** to a **small portion of its students**	The school can ensure **some in-person learning time** to **some of its students**	The school can ensure **some in-person learning time** to **all of its students**
The school can ensure **low in-person learning time** to a **small portion of its students**	The school can ensure **low in-person learning time** to **some of its students**	The school can ensure **low in-person learning time** to **all of its students**

% student population it can offer in-person learning

A school's in-person capacity is distributed by:

- How **much time** it can offer its students
- How **many students** it can offer in-person learning to

For example, if a school has **40% of capacity** to offer in-person learning it can mean it can be **full-time for 40% of its students or** have **all of the students 40% of their time** in person

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1d: Teacher availability can be affected by different factors and can be segmented between grades and subjects

Context

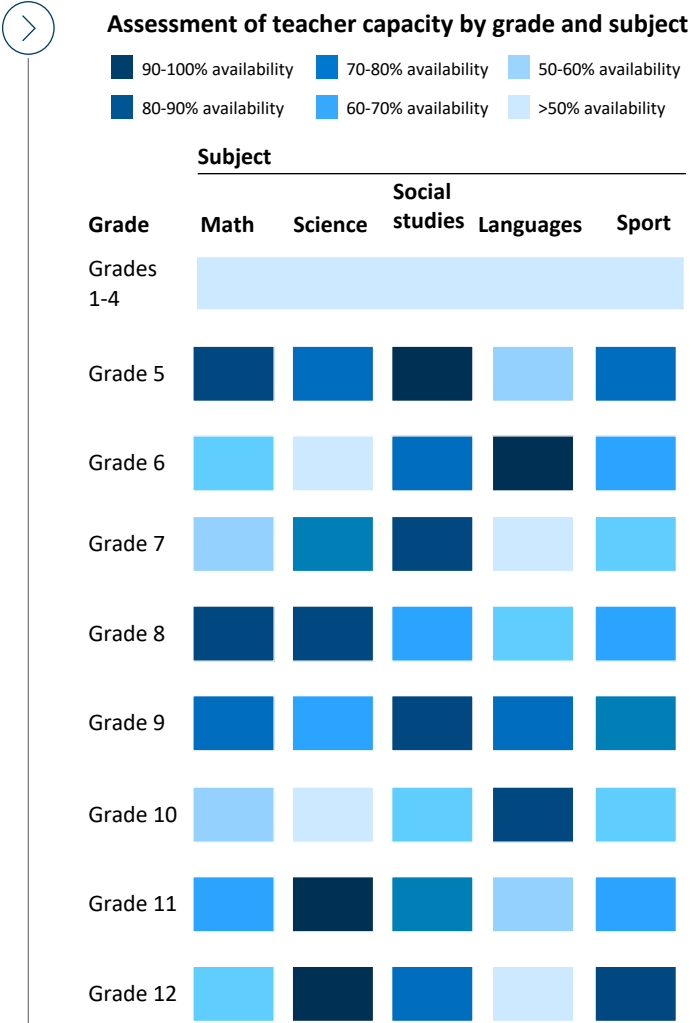Schools need to assess their teacher availability to work in person

Schools have several pools of teachers and due to specificities across grade and subject this segmentation needs to be done for each

This can help indicate which grades can be held in-person learning, and for students in hybrid learning which subjects to study in person

Teachers who are less familiar with teaching remotely should be prioritized to return for in-person learning

Teacher segmentation

	1 Vulnerable teachers	**2** Suspected case	**3** Unwilling to return	**4** Compromised logistically	**5** Available to work in person
Factor	Vulnerable teachers	Suspected case	Unwilling to return	Compromised logistically	Available to work in person
Description	Teachers that are part of the vulnerable group to the virus, due to age, health conditions, or other reasons	Teachers that have had contact with a suspected case and are unable to come to school due to the risk they pose to infecting other staff or the children	Teachers who live with someone who is vulnerable or are simply afraid and unwilling to return to work in person	Teachers might be unable to go to work due to logistical issues (e.g., their children's school is still not open, the transport they use to get to school is unavailable)	Teachers who do not have any factors that constrain their return to in-person classes
Challenge	Cannot work in person	Cannot work in person	Unwilling to return to work in person	Needs support to be able to reach school	n/a
Action	Assign to remote teaching and further develop capabilities for remote learning		Engage teachers and communicate about health and safety measures to help them become comfortable with health safeguards in school	Take constraints into consideration and find ways to support (e.g. enable to bring children to work or create a customized schedule)	Engage to ensure teachers remain available
Segment	Unavailable for in-person learning		Can become available for in-person learning		Available

Assessment of teacher capacity by grade and subject

- 90-100% availability
- 80-90% availability
- 70-80% availability
- 60-70% availability
- 50-60% availability
- >50% availability

Subject

Grade	Math	Science	Social studies	Languages	Sport
Grades 1-4					
Grade 5					
Grade 6					
Grade 7					
Grade 8					
Grade 9					
Grade 10					
Grade 11					
Grade 12					

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1e: Safety measures define how many students can share the physical space available

-xx% Lost classroom capacity

Among safety measures schools need to implement, some are related to classroom layout …

… which can reduce physical space availability …

… but can be mitigated by 3 levers

Health and behavioral norms

- Use masks
- Ensure increase of circulation of outdoor air
- Post signs in highly visible locations that promote everyday protective measures
- Clean and disinfect frequently touched surfaces
- Avoid and discourage sharing objects

Physical infrastructure

- Adjust space seating at least 2m apart
- Turn desks to face in the same direction or students sit only on side of tables
- Install physical barriers when difficult for physical distancing

Pre-COVID classroom size and class size

Classroom size m2	Class size No. pupils	Av. space per person (students + 1 teacher)	
52m2	30	~1.7m2	🇨🇷
50m2[1]	24	~2.0m2	🇫🇷

Post-COVID, as classrooms remain the same, governments are issuing guidelines to limit number of students

Classroom size m2	Class size No. pupils	Av. space per person (students + 1 teacher)	
52m2[2]	10	-66%	~5m2	🇨🇷
50m2[2]	15[2]	-37,5%	~3m2	🇫🇷

Hiring new spaces or not yet used

Repurposing other functional spaces like a hall

Leveraging outside spaces

There will be additional steps of preparation for locations that used schools as COVID-19 quarantine facilities during school closure

1f: Supporting levers will influence schools' capacity to receive students for in-person learning and need to be assessed

NOT EXHAUSTIVE

● Level of capacity at school re-opening

Supporting levers

	Availability assessment	What to assess?
Transportation		**How many students can we ensure safe transport to school?** • Number of students that can be safely brought to school in public transports
Cleaning		**With the current cleaning schedule, how many students would it be safe to receive?** • Frequency and rigorousness of cleaning rosters that ensure common areas and objects are frequently cleaned
PPE and other healthcare products		**How many students can we receive given our expected supply of PPE?** • Volume of masks, hand sanitizer, and other equipment that can be necessary to ensure students and staff safety on premises
Catering		**How many students can we offer food to?** • Interventions in the kitchen to abide by food production safety regulations or other external alternatives
School capacity for in-person learning		**How many students can we offer food to?** • Interventions in the kitchen to abide by food production safety regulations or other external alternatives

0-10%   10-40%   40-70%   70-90%   90-100%

The budget is the enabler of all the capacity levers (teacher and space availability and supporting levers) as it sustains increased payroll hours for teachers, admin staff, supervisors, janitors, extended infrastructure use, transportation of students, extra PPE, and healthcare products, etc.

A school's capacity to offer in-person capacity is limited to the lowest levers capacity (e.g., PPE and other healthcare products) so the budget should be channeled to the levers at highest risk of acting as bottleneck of school capacity

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Hybrid learning requires a 3-step approach supported by continuous monitoring and adjustment

Deep-dives follow

(1)

Understand and envision: assess the needs and capabilities

1a: Define **guiding principles** for hybrid learning strategy

1b: Assess **students' needs** for **remote** and **in-person learning**

1c: Assess the **accessibility** and **effectiveness** of current remote learning solutions

1d: Assess **teacher capacity** (e.g., ability to return to school or teach remotely)

1e: Assess **availability of physical space** for in-person learning

1f: Assess **availability** and **flexibility of support levers** (e.g., transportation, cleaning, and budget)

(2)

Decide and design: determine the allocation of hybrid learning by grade and student type

2a: Determine **which levels of education** should study in-person according to **health, economic** and **learning imperatives**

2b: Determine how to **allocate scarce in-person capacity** for each level of education

2c: Determine **within each level of education** the **degree of prioritization** of **certain student students** over general student population

(3)

Enable and execute: operationalize the hybrid learning model for each grade level

3a: Decide which **subjects** should be **studied remotely** and which ones **prioritized** for **in-person learning**

3b: Determine which **learning activities** should be **prioritized** for **in-person learning**

3c: Organize a **shift system** that distributes access to in-person learning amongst students (e.g., half days)

3d: Define the **teacher allocation model** between learning methods

3e: Fill **capability gaps** to enable delivery of quality hybrid learning

(4)

Monitor and adjust: evaluate hybrid learning experience

4a: Monitor **key indicators** of hybrid learning **processes** and **outcomes**

4b: Set up an **adjustment mechanism** to continuously adapt the hybrid learning strategy to emerging needs

2a: School systems have different pressures to respond to when opening for in-person learning again

Current evidence leads us to …

🟦 Return in person   🟧 Undecisive   🟥 Stay remote

Considerations		Early elementary	Late elementary	Secondary	Secondary graduating class
	Student age	4-8	8-12	12-17	17-18
	Criticality of remoteness for public safety[1]	🟧 Children may face less intrinsic risk of contracting the virus but face higher risk of failing at implementing physical distance measures	🟧 Children may face less intrinsic risk of contracting the virus but face higher risk of failing at implementing physical distance measures	🟥 Students may face more intrinsic risk of contracting the virus but face lower risk of failing at implementing physical distance measures	🟥 Students may face more intrinsic risk of contracting the virus but face lower risk of failing at implementing physical distance measures
	Criticality of school reopening for economic activity	🟦 Students have high need of childcare to free up parents	🟧 Students have a medium need of childcare to free up parents	🟥 Students have a low need of childcare to free up parents	🟥 Students have a low need of childcare to free up parents
	Stakes of losing learning during school closure	🟦 High risk of disruption of academic progression to initial literacy	🟧 Medium risk of disruption of academic progression to initial literacy	🟧 Medium risk of disruption of academic progression at the stage of decisions of academic paths to follow	🟦 High risk of disruption to academic progression to university
	Effectiveness of remote learning	🟦 Very low effectiveness due to social learning and basic literacy[2]	🟦 Low effectiveness due to social learning and need for teacher in-person coaching	🟧 Medium effectiveness due to nature of learning and existing remote learning options	🟥 High effectiveness due to autonomy of students and what they are learning

1. US CDC statistics of COVID-19 deaths (as per 6th of June) suggest mortality of virus is inferior to the seasonal flu for children between 1-14 years old but superior from 15 years old onwards; The National Institute for Public Health and the Environment of the Netherlands suggest "children play a small role in the spread of the new coronavirus" (as per 18th of June)

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2b: Each system can be closed, partially open, or fully open depending on the level of capability for in-person learning
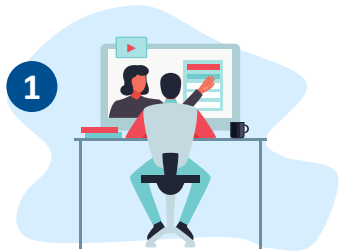
Lever capacity ○ 0%-10% ◔ 10-40% ◑ 40-70% ◕ 70-90% ● 90-100%

Level of in-person capacity for each key lever

Level of school opening

Secondary school system

Level of capability	Teacher availability	Physical space availability	Supporting levers
Low	Small teacher portion available as most face constraints that prevent from teaching in-person	Limited physical space available due to physical distancing measures	Transportation constrained due to strict social distancing measures
Mid-low	Some teachers available to teach in-person as some constraints relax	Limited physical space available due to physical distancing measures	Transportation less constrained as social distancing measures have been relaxed
Mid-high	All teachers available to teach in person again as most constraints overcome	More physical space available as space repurposed for learning	Transportation further less constrained as social distancing measures have been further relaxed
High	All teachers available to teach in person again as most constraints overcome	Physical space fully available as all pandemic constraints lifted	Transportation at full capacity as all pandemic constraints lifted

Elementary school system

…

Options		Description
Remote learning	**Schools fully closed**	Schools closed with in-person learning suspended • Exception for narrow segments (e.g., vulnerable groups) who still attend in person • Remote learning provided to most students
	Minor capacity	Schools partially open with limited capacity (20-40%) • Majority of students studies only remotely with a portion full-time in person • Or hybrid learning to be provided to all students with the majority of delivery remotely and some of it in person
	Most capacity	Schools partially open but with less constraints (50-80%) • Majority of students studies in person but significant portion still only studying remotely • Or hybrid learning to be provided with majority of delivery in person and some of it remotely
In-person learning	**Schools fully open**	Schools fully open and learning resumes in person • Exception for narrow segments of high risk students who continue studying remotely • Some level of integration of remote learning to improve student experience and outcomes

2c: Schools need to decide which student segments to prioritize for the limited in-person learning available

Options of prioritization	Vulnerable groups	Essential workers' children	Transition years	Open for everyone
Rationale	Schools open or remain open for **specific segments that are disproportionately impacted by school closures** (e.g., special education schools, vulnerable population)	Schools prioritize opening for **children of essential workers** to enable them to continue working	Schools prioritize **opening for students in grades** that have **high-stake exams** to allow progression to the next level	Schools **do not prioritize any group of students** and open partially to all
Examples[1]	Estonia · United Kingdom · Israel	Norway · Denmark · United Kingdom	Germany · Portugal · France	Iceland · Nicaragua · China

There are 2 main ways to prioritize the first 3 groups:

- Bringing **prioritized groups full time** while the majority of the student population remains fully remote

- Allocate a **higher portion of in-person time** for **prioritized groups** than for the general student population

1. Examples based on public reports; includes likely scenarios announced in the press

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Hybrid learning requires a 3-step approach supported by continuous monitoring and adjustment

Deep-dives follow

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3

Enable and execute: operationalize the hybrid learning model for each grade level

3a: Decide which **subjects** should be **studied remotely** and which ones **prioritized** for **in-person learning**

3b: Determine which **learning activities** should be **prioritized** for **in-person learning**

3c: Organize a **shift system** that distributes access to in-person learning amongst students (e.g., half days)

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4

Monitor and adjust: evaluate hybrid learning experience

4a: Monitor **key indicators** of hybrid learning **processes** and **outcomes**

4b: Set up an **adjustment mechanism** to continuously adapt the hybrid learning strategy to emerging needs

3: The operationalization of the hybrid learning strategy relies on 4 key questions

WHAT?

What educational activities and which subjects are prioritized for in-person or remote learning?

3a Decide which **subjects** should be **studied remotely** and which ones to **prioritize** for **in-person learning**

3b Determine which **elements of the learning value chain** should be **prioritized** for **in-person learning**
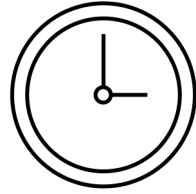
WHEN?

When does in-person or remote learning take place?

3c Organize a **shift system** that distributes access to in-person learning amongst students (e.g., half days)

WHO?

Who are the teachers that support in-person or remote learning?

3d Define **teacher allocation model** between learning methods

HOW?

How can capacity be built to offer more in-person learning?

3e Identify **levers** to **bridge** the **capability gaps** to ensure optimal delivery of the **hybrid learning strategy**

3a: Some subjects may be prioritized for in-person learning

ILLUSTRATIVE

NOT EXHAUSTIVE

Level of pressure for subject to be studied in person

● High ◑ Medium high ◐ Medium ◔ Medium low ○ Low

Prioritization assessment

Criteria / Subjects	How **critical** is the subject?	To what degree does this subject need **in-person equipment**?	To what degree does this subject need **dynamic teacher interaction**?	To what degree does this subject need **interactive peer collaboration**?	To what extent is **future learning** dependent upon **current building blocks**?	To what degree is it not suitable for **adaptive software** for remote learning?
Emotional connectivity	●	●	●	●	●	●
Mathematics	●	◔	◑	◔	◑	○
Reading and writing	●	◔	◑	◔	◔	○
Sciences	◑	◐	◐	◐	◑	◑
Social studies	◐	◐	◑	◐	◐	◐
2nd language	◐	◑	◑	◑	◑	◐
Art	◔	◑	◑	◔	○	●
Sport	◔	◑	◔	◑	○	●

Implications

Prioritization **assessment** can be different for every class and should be completed with the **reality of each class in mind**

Certain **criteria** might be **weighed differently** depending on the **circumstances,** taking into account, for example, the class environment, the quality of the teachers, the strengths and difficulties of the students

It is, however, likely in-person learning should be prioritized for **mathematics** and **literacy** as well as **emotional connection**

Source: Expert interview

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3b: Schools need to decide for each subject which learning activities will be carried out in person

Level of pressure for subject to be studied in person

● High ◗ Medium high ◖ Medium ◔ Medium low ○ Low

Core learning activities

Ensuring social connection | **Communicating new assignments and information** | **Teaching new concepts[1]** | **Enabling student practice** | **Providing formative feedback and coaching**

| | | | Independent practice | Guided practice | Small group collaboration and class discussion | Experiments | Coaching/ office hours | Formal evaluation and feedback |

Level of prioritization for in-person learning

● (Ensuring social connection) ○ (Communicating new assignments) ◖ (Teaching new concepts) ◖ (Independent practice) ◔ (Guided practice) ◔ (Small group collaboration) ● (Experiments) ◖ (Coaching/office hours) ◔ (Formal evaluation and feedback)

Rationale

Ensuring social connection	Communicating new assignments	Teaching new concepts	Independent practice	Guided practice	Small group collaboration	Experiments	Coaching/office hours	Formal evaluation and feedback
In-person interaction fundamental for a student to create social connection with his teacher and peers	Information can be shared as effectively remotely or in person	Teacher explanation can benefit from practical demonstrations. Teacher can see student understanding and readjust teaching	Teacher can immediately react to difficulties and questions	Activity requires a certain rhythm that is easier for the teacher to set with the students in person	Activity might need in-person physical interaction with colleagues	Activity might need physical equipment	If adaptive software is not available. Students can contact teachers with their questions	Teacher can ensure academic integrity

- **The current remote learning platforms are likely to not be effective in fulfilling every element of the learning value chain**
- **But it would be unproductive to occupy the scarce in-person learning time with elements of the value chain that are effectively fulfilled remotely**
- **Schools need to decide which activities for each subject are carried out in person or remotely**

1. This learning activity in particulaar depends on age, it will have higher pressure to be in-person for younger ages

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3b: There are several archetypes of hybrid learning models …

6 archetype models of hybrid learning

① **In person**
Students go through the entire learning value chain in person

② **Homework model (instruction at school, practice at home)**
Teachers transmit new concepts to a group of students in person, who then complete exercises and assignments remotely

③ **Flipped classroom (instruction at home, practice at school)**
Students learn about new concepts remotely and then complete their exercises and assignments and review them in person with the teacher

④ **Synchronous live (with one group in person and one remote simultaneously)**
Teachers have a full normal class with a group of students in person while another group follows remotely through VC
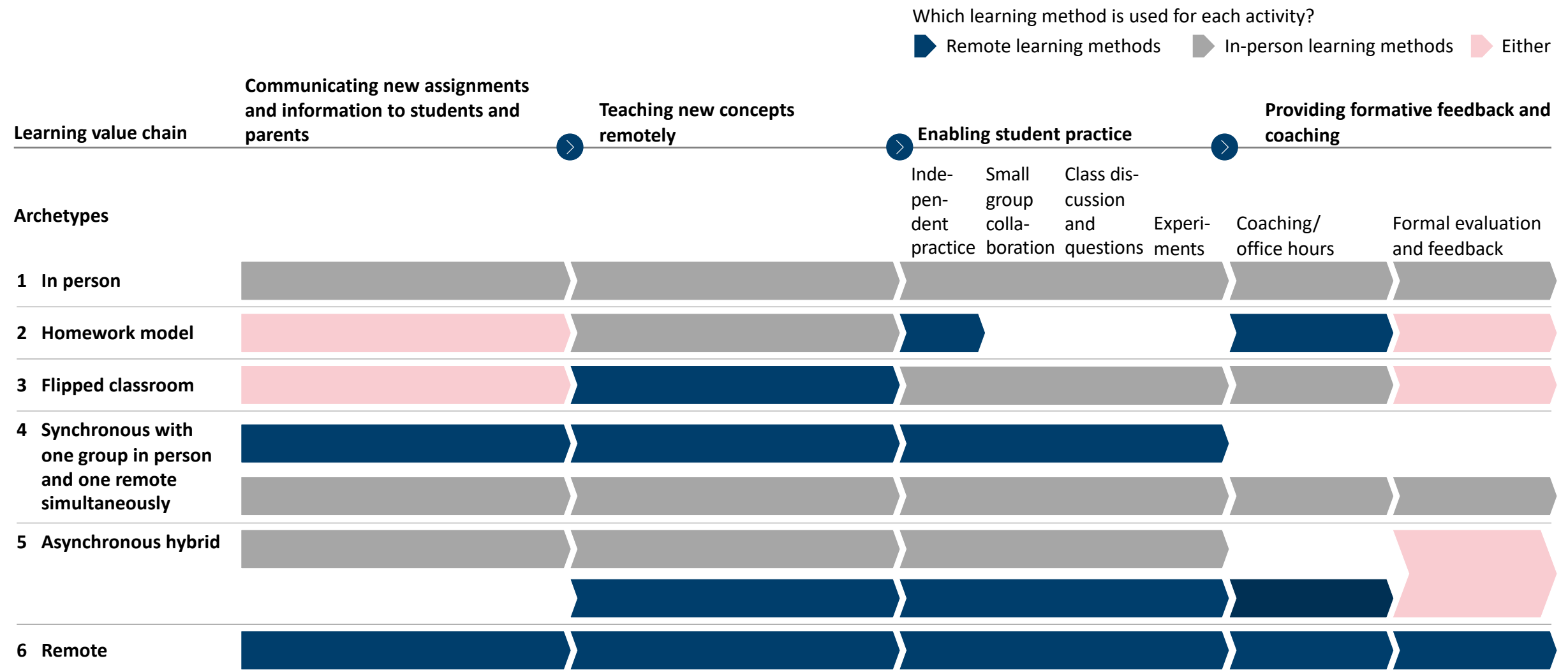
⑤ **Asynchronous hybrid (mix of learning activities at school and at home)**
Hybrid of flipped classroom and homework model in which the remote element is asynchronous. Teachers provide instruction, practice and feedback at school then provide asynchronous platform for students to do the same at home which is then reviewed again in the classroom

⑥ **Remote**
Students go through the entire learning value chain remotely

3b: … which distribute remote and in-person learning methods across the learning activities differently …

Which learning method is used for each activity?

▶ Remote learning methods ▶ In-person learning methods ▶ Either

Learning value chain	Communicating new assignments and information to students and parents	Teaching new concepts remotely	Enabling student practice				Providing formative feedback and coaching	
Archetypes			Inde-pen-dent practice	Small group colla-boration	Class dis-cussion and questions	Experi-ments	Coaching/office hours	Formal evaluation and feedback
1 In person	In-person	In-person	In-person				In-person	In-person
2 Homework model	Either	In-person	Remote				Remote	Either
3 Flipped classroom	Either	Remote	In-person				In-person	Either
4 Synchronous with one group in person and one remote simultaneously	Remote	Remote	Remote					
	In-person	In-person	In-person				In-person	In-person
5 Asynchronous hybrid	In-person	In-person	In-person					Either
		Remote	Remote				Remote	
6 Remote	Remote	Remote	Remote				Remote	Remote

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Cultural Organization

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3b: … each with their own pros and cons

Models	Pros 👍	Cons 👎
1 In person	• Traditional learning method students are most familiar with • Facilitates teacher interaction and peer collaboration	• Due to physical distancing measures, there is a limited capacity to offer to students
2 Homework model	• Teachers can focus on what is happening in the classroom • Remote and in-person learning are integrated • Students can ask questions during instruction phase and benefit from other students' questions	• Students and parents cannot review instruction (as it happened live) which can make it difficult to complete exercises • School is only used for instruction and has no social function • Teachers do not know how students did in their practices and as a result cannot adapt teaching
3 Flipped classroom	• Teachers can observe if instructions have been understood and offer additional instruction as needed • Students and parents can view and review instruction at home at their own pace • Possible to focus in-person time to do practical activities with groups of students	• Requires support of the parents for initial instruction • Students can forget previous day instruction by the time they need to complete the respective exercises
4 Synchronous with VC	• Class does not have to be split • Teachers work synchronously with all students and do not split time	• Teacher cannot see the children at home or children see each other • Students cannot review instruction • Difficult for remote students to follow
5 Asynchronous hybrid	• Students can continue with activities and assignments immediately after watching the instruction video • Coherent learning experience	• High investment from the teacher and availability of online resources are required
6 Remote	• Highest safety from the virus • Enables deployment of certain specialized software	• Not effective for specific ages and subjects • Can require demanding requirements for advanced solutions • Students do not benefit from socialization and interaction at school

3a-b Each subject can have a different hybrid model

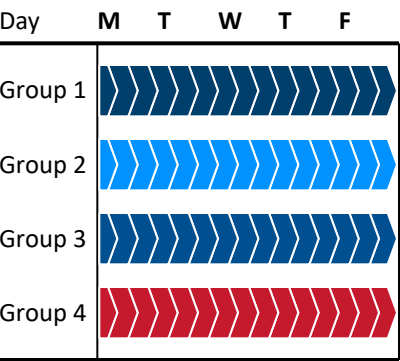| Age group	4-8	8-12	12-17	17-18
Subject				

Math

Reading and writing

Sciences

Social studies

2nd language

Art

Sport

4-8 / 8-12:

1. In person
- Remote learning methods for young children are not very effective

8-12:

1. In person
- Core subjects for which remote learning is not very effective

12-17 / 17-18:

3. Flipped classroom
- Students can learn autonomously at their own pace through asynchronous learning
- Students require tailored coaching and complete exercises at school
- Learning can be complemented with additional remote learning solutions to practice at home

5. Asynchronous hybrid
- Students require in-person interaction with peers and teachers
- Learning can be strengthened with complementary learning activities at home that are reviewed in-person

6. Remote
- Non-core subjects with difficulties to carry out safely in person
- Remote alternatives are available

- **Hybrid model suitability across subjects and age will depend on the remote learning solution mix and the possibilities it offers for teacher-student interaction, student practice, and adaptive coaching**
- **Schools with several age groups need to consider if the mix of hybrid models is manageable**

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3c: Shift systems can be an effective way to distribute in-person learning to most students and each model had a set of pros or cons

Pre-COVID

Full time x 5 day model

Students from all grades come to school

Day	M	T	W	T	F
Group 1					
Group 2					
Group 3					
Group 4					

Option 1 – Hours based model

Day	M	T	W	T	F
Group 1					
Group 2					
Group 3					
Group 4					

Option 2 – Days based model

Day	M	T	W	T	F
Group 1					
Group 2					
Group 3					
Group 4					

Option 3 – Weeks based model

Week	1	2	3	4
Group 1				
Group 2				
Group 3				
Group 4				

	Description	Pros	Cons
Option 1 – Hours based model	• Students have a block of hours per day (e.g., morning and afternoon as 2 blocks) • Schools can have between 2 and 4 blocks	• Students can go to school every day which reduces their learning and well-being risk • Students can get direct support from teachers if they have questions about online content • Students constantly interact with peers improving their emotional connection	• Parents cannot fully return to work • Logistically demanding for parents and schools • Face to face instruction time is short • Hard to schedule if teachers have several classes
Option 2 – Days based model	• Students go to school every other day - the remaining time they continue learning at home (e.g., 1 day, a week) • Students can change schedule every week	• Students have classes with their usual teachers, reducing disruption • Students follow a usual day schedule when at school	• Students are not in school everyday which puts their learning and well-being at risk • Alternative childcare is needed for off days • Difficult for parents and schools to organize • Students might be impacted by constant change
Option 3 – Weeks based model	• Students comes to school full-time for a week (e.g., week 1, grade 1, week 2, grade 2, etc.)	• Students have one week of normal classes • Students have exposure to all subjects • Students follow a usual day schedule when at school	• Long period in which students are not at school • Teachers in-person availability is not maximized

Considerations

- Schools can choose to **define** a group as a **whole grade**, or **part of a grade** with different advantages and disadvantages
- Bringing grades at the same time **facilitates communication** with the parents
- Bringing half grades can **reduce the need for teachers to come to school**
- Some of the shift **models** might be **more adequate** for **specific grades or ages groups**
- However having **different models for different grades** will be a **logistical challenge for school**

3c: Different teacher allocation models can be deployed, considering factors as flexibility, consistency, and teacher skill maximization

Pre-COVID teacher allocation …

With in-person learning being adjusted into hybrid learning and students potentially being switched between methods across different subjects, the teacher allocation could need to change
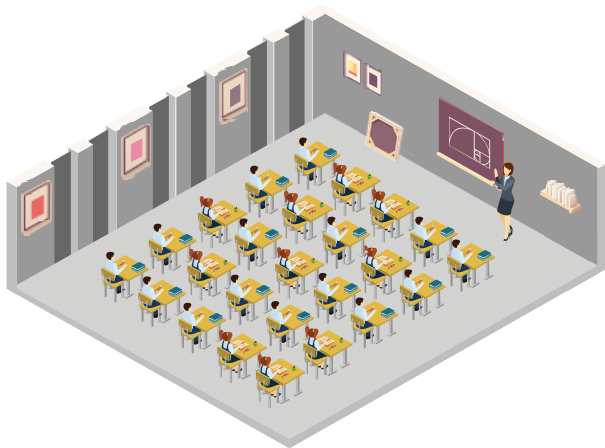
| … can adjust to hybrid learning	Pros	Cons	Could be an option
Teacher allocation to classes remains the same and **students follow teacher availability** (e.g., if teacher can only teach remotely because of a high risk of contracting the virus, students learn remotely)	Students keep the same teachers Consistency of interaction Familiar method Easy to accommodate switching students	Students study remotely because of teacher situation	For high school electives for which there is one teacher only, and one class that takes the elective
Student **classes are restructured between remote and in person** and teachers are allocated full time between either method	Students study in person if they can Consistency of learning method	Potentially new classes and new teachers Harder to accommodate switching students	When the numbers of vulnerable teachers and vulnerable students are proportional For early elementary (K-4)
Teachers are part of **collaboration groups** per grade and subject where some become **experts in remote instruction** to **large groups** and others **accompany small groups in person**	Excellent teaching Teacher accompaniment	Different format Harder to accommodate switching students	For subjects where there are multiple classes of the same topic For high school (age 14-18)

Whatever model chosen, it is beneficial for all of the teachers to be trained on both learning methods given the need to be ready to switch seamlessly as epidemiological situation evolves

3e: To ensure optimal delivery of hybrid learning, capability gaps need to be bridged

Remote learning | **In-person learning**

Maximizing remote learning access, quality and equity to reduce the number of students who need to return to in-person learning
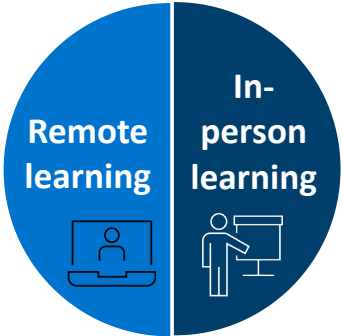
Maximize in-person learning capacity to receive the highest possible number of students

	Technology	Teacher training	Teachers, mentors, tutors, and aides	Space
Potential initiatives	Distribute existing devices (fix broken ones) from schools Enhance access by using simple platforms Partner with companies or foundations to provide access to hardware, software, or broadband for teachers and students Enhance quality by adopting adaptive software	Create mentorship programs that partner more experienced teachers in remote teaching solutions with less experienced ones Partner with private companies to train teachers Leverage existing technical training for remote teaching (e.g., through Zoom, Moodle, school's platforms) Leverage existing technical training for remote teaching (e.g., through Zoom, Moodle, school's platforms)	Reallocate teachers' responsibilities to focus on teaching, leverage aides for supervision and small group interaction Increase number of hours for teachers (if feasible) Expand teaching capacity through hiring additional teachers, aides, and coaches Leverage volunteer capacity (if health risks can be mitigated)	Use own outdoor spaces (e.g., sports areas), cafeterias, meeting rooms (if appropriate) Extend use of classrooms for additional time beyond current school times Reallocate classrooms within the same school or between schools within the same urban area Partner with organizations with a vacancy to alternate space and create designated classrooms (e.g., community centers, community-based organizations, religious centers, universities, town hall)
Examples	France and the Orange Foundation partner to provide tablets and computers to disadvantaged students to promote remote learning	India partnered with an ed-tech provider to offer IT training to primary teachers Armenia created a database of mentor teachers experienced in distance learning to assist their colleagues	Israel integrated pedagogy university students as faculty to support the education system, operating in smaller groups Sierra Leone rehired recently retired teachers to increase teaching capacity	In Denmark, schools are using outdoor spaces to meet physical distancing criteria but allow most children to come back

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1d: Assess **teacher capacity** (e.g., ability to return to school or teach remotely)

1e: Assess **availability of physical space** for in-person learning

1f: Assess **availability** and **flexibility of support levers** (e.g., transportation, cleaning, and budget)

2

Decide and design: determine the allocation of hybrid learning by grade and student type

2a: Determine **which levels of education** should study in-person according to **health, economic** and **learning imperatives**

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**3e:** Fill **capability gaps** to enable delivery of quality hybrid learning

4

Monitor and adjust: evaluate hybrid learning experience

4a: Monitor **key indicators** of hybrid learning **processes** and **outcomes**

4b: Set up an **adjustment mechanism** to continuously adapt the hybrid learning strategy to emerging needs

4: Monitoring and adjustment are continuous processes, supporting the relevance of the hybrid learning strategy

Monitor
Both the success of **execution of the strategy** (e.g., shift operationalization) and **the outcome** (e.g., student access) of **hybrid learning** should be assessed continuously based on data

4a

A central team should ensure that both monitoring and adjustment take place

4b
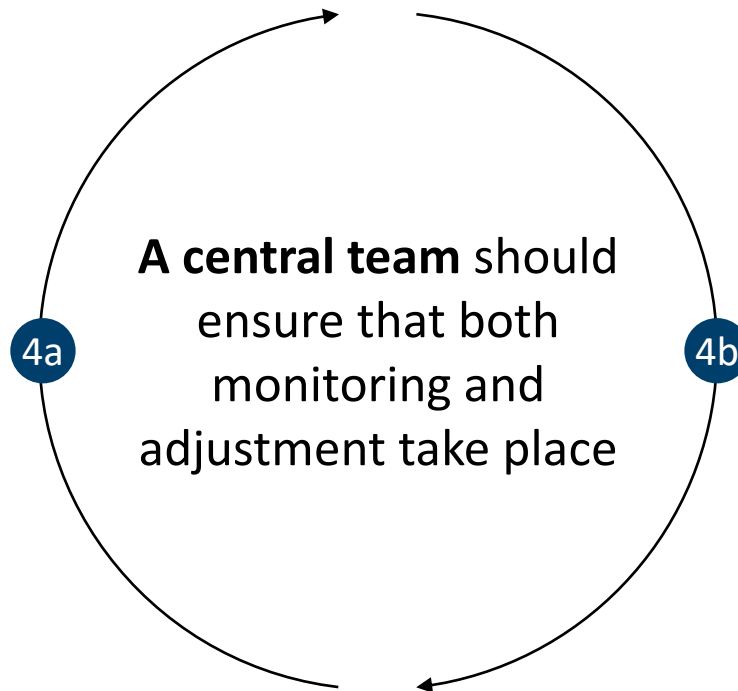
Adjust
Based on **assessments of the execution of hybrid learning strategy and its outcome**, adjustments should be made on a **regular basis**

4a: Both the process and outcomes of hybrid learning should be assessed through monitoring a set of indicators

Systems can leverage a variety of data sources to monitor hybrid learning execution and outcomes …

- Platform statistics
- Test scores
- Healthcare data
- Teacher survey
- Student survey
- Parent survey
- Principal survey

… across 7 dimensions …

i. Evaluate hybrid learning strategy execution

ii. Evaluate hybrid learning solution outcomes

… which can be assessed through a set of indicators

Dimension	What to assess	Example metric
A. Student and time distribution	Health risk	Transmission rates
	Economic activity	Percent of parents able to return to work
	Student segmentation	Number of students per segment
	Student participation	Number of clicks on remote learning platform
B. Subject and activity prioritization	Curriculum progression per subject	Student progression by topic
		Completion rates
	Activities allocation between learning methods	Student satisfaction by age and grade
		Teacher satisfaction by subject and grade
	Student well-being	No. of hours dedicated to emotional connection
C. Shift and teacher organization	Student and parent satisfaction with shifts	Student participation in shifts
		Number of teacher-student 1-on-1 hours
	Teacher experience across models	Number of hours teachers work
		Teacher-student ratio
D. Capability enhancement	Remote learning capability	Number of students with access to devices
		Number of teachers trained on remote solutions
	In-person capacity	Number of teachers available
		Number of students schools can receive in person
E. Access	Student engagement	Adoption rates of remote platforms
		Attendance (in person and remote)
F. Quality	Learning outcomes	Reading score
	Student experience	Student satisfaction
G. Equity	Access distribution	Access/progression by gender
	Quality distribution	Scores/satisfaction by economic background

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4b: Based on the indicators monitored, the plan could be adjusted along strategy design and execution decisions

Monitoring the hybrid learning strategy should start as soon as it is rolled out and continue regularly

But the pace and frequency of adjustments depends on the maturity of the system as some elements need time to evolve

Constantly adjusting direction can lead to ineffective change

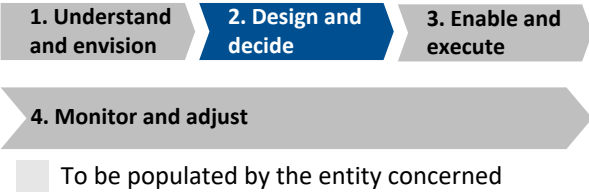|	Dimensions		Indicators monitored	Result	Potential adjustments
Decide and design	**Which students?**	**Student and time distribution**	• Health risk • Student engagement • In-person capacity	• Transmission rates low • Remote learning attendance low • Number of teachers available increased	• Bring more grades of the school system for in-person learning leveraging on initial lessons learned
			• Health risk • Equity • In-person capacity	• Transmission rates remain the same • Vulnerable groups reading score significantly lower • Number of teachers remain the same	• Increase in-person learning time allocation for vulnerable students
Execute and enable	**What activities?**	**Subject and activity prioritization**	• Curriculum progression per subject • Student satisfaction by age and grade • Student satisfaction by age and grade • Remote learning capability	• Students regressing considerably in reading • Students satisfied with overall number of in-person hours • Students unsatisfied with the lack of emotional connection • School still unable to ensure synchronous learning to all students	• Reallocate the in-person time dedicated to each subject • Shift hybrid learning model archetype to prioritize in-person 'emotional connection' over other activities
	When in the week and taught by whom?	**Shift and teacher organization**	• Student and parent satisfaction with shifts • Teachers' satisfaction with shifts • Teacher experience across models • Student segmentation	• Students satisfied with shift system • Teachers unsatisfied with shift system due to demands of managing different shift systems • Teachers feel overwhelmed with constant change of number of students • Number of students returning for in-person learning increasing	• Make shift systems standardized across grades • Revert teacher allocation model back to a teacher for a fixed class
	How to do it well?	**Capability enhance-ment**	• Student experience • Remote learning capability	• Students unsatisfied with remote learning solutions • Number of teachers trained on advanced remote solutions has increased	• Expand technology options for remote learning

Contents

The problem – why it is important

The response – framework and practices

The checklist – summary of actions

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1: Identify hybrid learning possibilities through the following actions

☐ To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Understand and envision	**1a. Define guiding principles for hybrid learning strategy**			
	☐ Convene **all stakeholders** relevant for hybrid learning (including health authorities, leaders for finance, IT, infrastructure, principal, teacher and parent representatives, etc.)	…	…	…
	☐ Determine priorities for hybrid learning strategy, and how to handle **critical trade-offs** (e.g., equity, risk and experimentation appetite, curriculum coverage, degree of personalization)	…	…	…
	☐ Determine **level of compliance expected from schools** regarding guidance been issued (e.g., guidelines to be leveraged or mandates to follow)	…	…	…
	1b. Assess students' needs for remote and in-person learning			
	☐ Define relevant **student segments,** assess **urgency of in-person learning** vs. **need for remote learning** for each, and estimate the **number of students** across each segment	…	…	…
	☐ Define the **standards for learning outcomes** and assess the **effectiveness of remote learning solutions**	…	…	…
	☐ Assess the **public opinion** to understand feasible options and the feeling of teachers, parents, and unions on in-person prioritization	…	…	…
	1 def. Assess school in-person capacity drivers			
	☐ Segment teachers in pools across grades and subjects, **assess** their **availability** to **return to in-person teaching,** and take action to increase availability for priority pools	…	…	…
	☐ Estimate **space availability** given the implementation of physical distancing measures, identify interventions to expand capacity, and make a plan of action	…	…	…
	☐ Identify **key supporting levers**, estimate capacity constraints and channel budget to de-bottleneck the constrained capacity	…	…	…
	☐ Determine the **overall capacity** for each school within the system given teacher, student, and space constraints	…	…	…

2: Define hybrid learning allocation through the following actions

1. Understand and envision
2. Design and decide
3. Enable and execute
4. Monitor and adjust

To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Design and decide	**2abc. Determine the allocation of hybrid learning by grade and student type**			
	☐ Determine which **school grades should be prioritized** for in-person learning based upon health data, childcare needs, and learning needs	…	…	…
	☐ Determine the precise **amount of in-person time per grade** (e.g., equivalent of 1 day per week, 2 days per week, 5 days per week)	…	…	…
	☐ Determine if **vulnerable groups** get **additional in-person learning time** (e.g., special education, essential workers' children)	…	…	…
	☐ Determine the precise **amount of additional in-person time for vulnerable students** (e.g., full-time vs. incremental time by grade)	…	…	…
	☐ Determine **progression to increase/decrease in-classroom allocation** as epidemiological situation shifts	…	…	…

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3: Prepare to operationalize hybrid learning model through the following actions

To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Enable and execute	**3ab. Determine the subjects and learning activities split across learning methods**			
	Determine **which subjects** should be prioritized for in-person learning based upon criticality, need for in-person equipment, interaction needs, and availability of adaptive software	…	…	…
	Determine which **elements of the learning value chain should be prioritized** for in-person learning	…	…	…
	Determine **models of hybrid learning** to use (asynchronous hybrid, flipped classroom, synchronous with 1 in-person group + 1 remote group simultaneously, instruction at school + assignments at home, combination across)	…	…	…
	Cross hybrid learning archetypes with student age groups and subjects of study and determine **coherent manageable strategy** for schools	…	…	…
	3cd. Determine how to distribute students and teachers across learning methods			
	Develop **shift system** to distribute the available in-person learning time across students (staggered daily model, morning/afternoon layer model, rolling weekly model)	…	…	…
	Engage with teachers to **allocate teachers** according to student split between in-person and remote learning, chosen hybrid learning model, and chosen shift system	…	…	…
	3e. Fill capability gaps to enable delivery of quality hybrid learning			
	Explore possibilities to **expand remote learning accessibility** and **quality** and **in-person capacity** to enhance the hybrid learning strategy	…	…	…
	Gather support and approval of relevant stakeholders (e.g., teacher unions, legal)	…	…	…

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4: Monitor and adjust through the following actions

1. Understand and envision
2. Design and decide
3. Enable and execute

4. Monitor and adjust

☐ To be populated by the entity concerned

	Action	Responsible	Focal point	Time frame
Monitor and adjust	**4a. Monitor key indicators of hybrid learning processes and outcomes**			
	☐ Choose which **dimensions the team should monitor:** both the process of the implementation (e.g., design and implementation choices) and the outcomes of the strategy (student access, quality, and equity)	…	…	…
	☐ Determine the **sources of data to be leveraged** (e.g., teacher survey)	…	…	…
	☐ Align on which **metrics** will be tracked for these dimensions (e.g., student progression by grade and age) and **how often** (e.g., every 2-3 months)	…	…	…
	☐ Agree on **responsible parties** and timeline for the collection of each metric	…	…	…
	4b. Set up an adjustment mechanism to continuously adapt hybrid learning strategy to emerging needs			
	☐ Regularly **compile data** and **share** findings with the central team	…	…	…
	☐ **Adjust design choices** (e.g., which school systems participate in in-person learning) as well as **implementation choices** (e.g., shift systems)	…	…	…
	☐ Identify and disseminate **practices** between teachers and schools	…	…	…