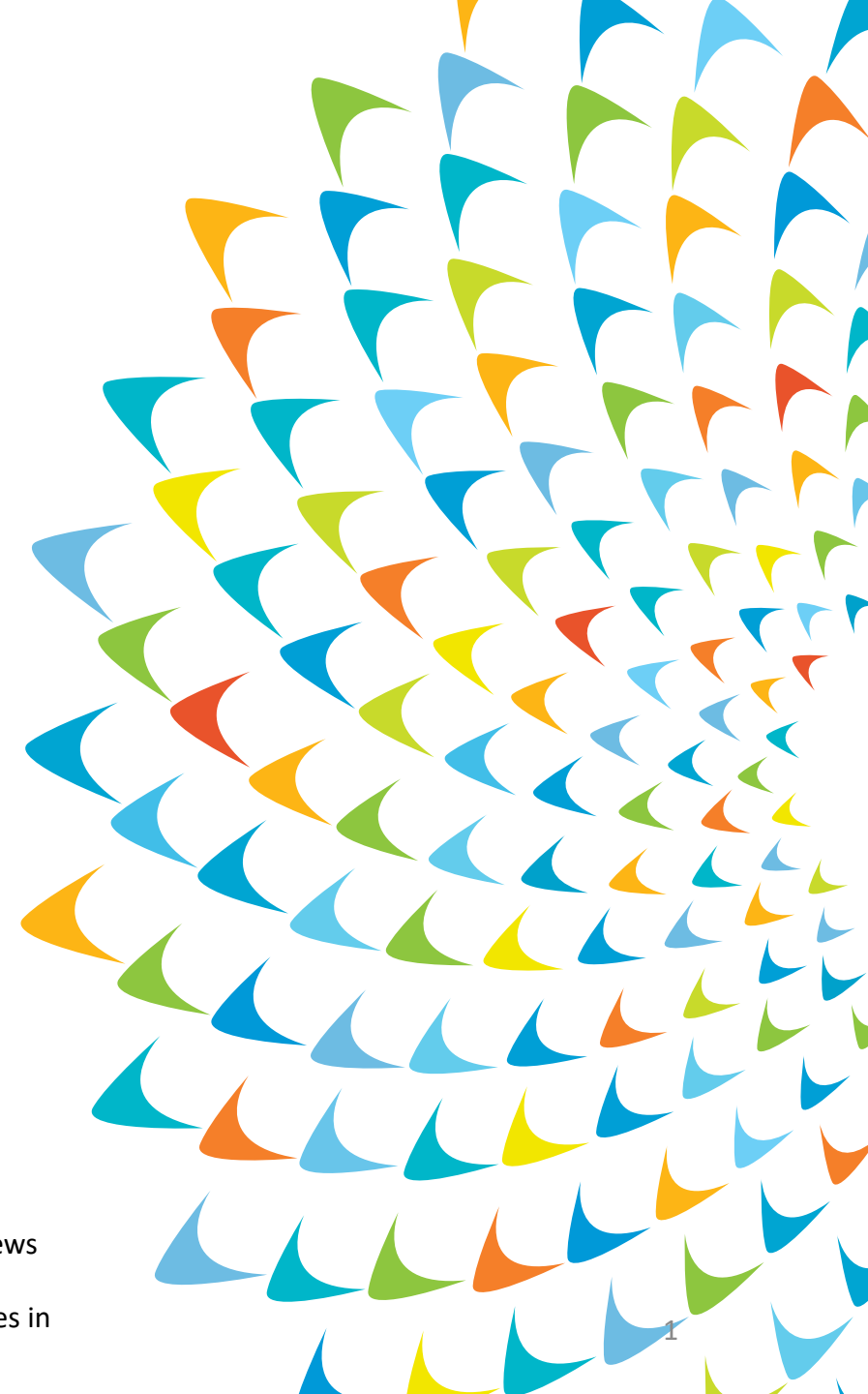


Learning Loss is Real: An Analysis of COVID-19 Student Learning Loss

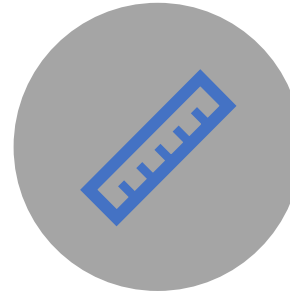
Dr Sungsup Ra
Asian Development Bank
24 August 2023



Contents



How significant is the learning loss?




How to measure and evaluate learning?



What are the examples of practices?

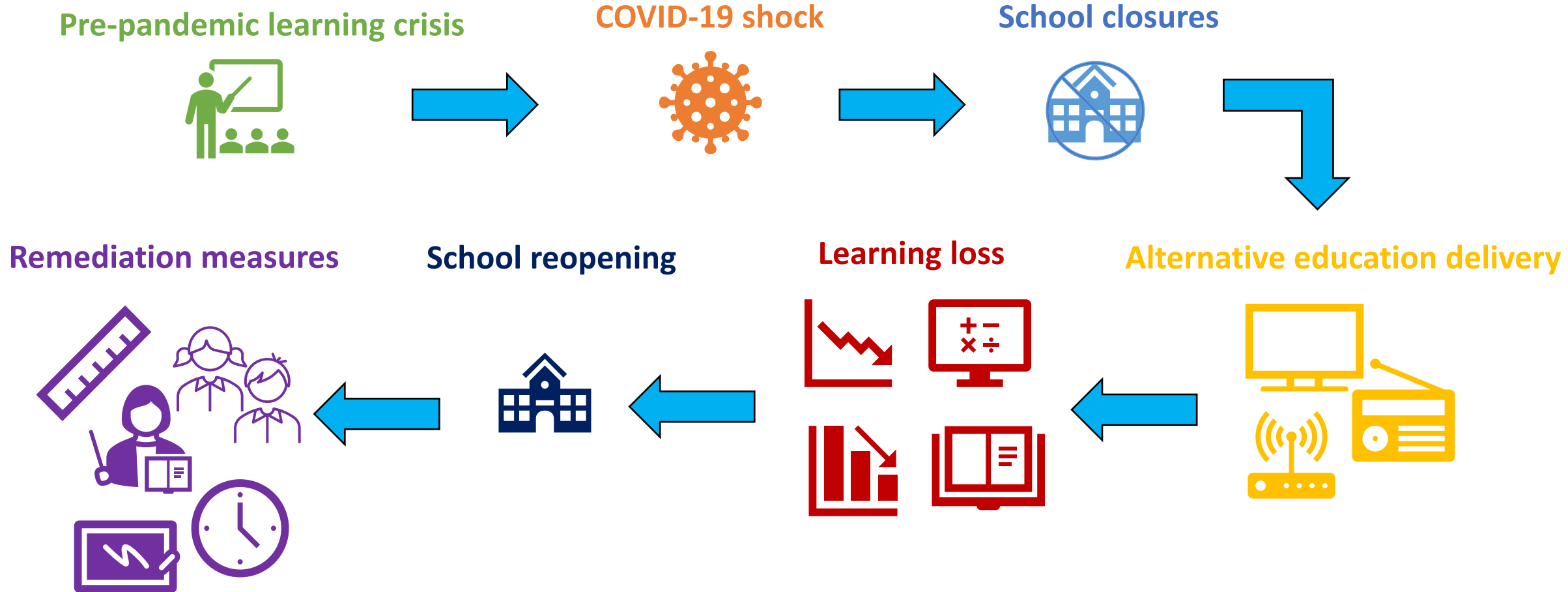


Way forward and recommendations

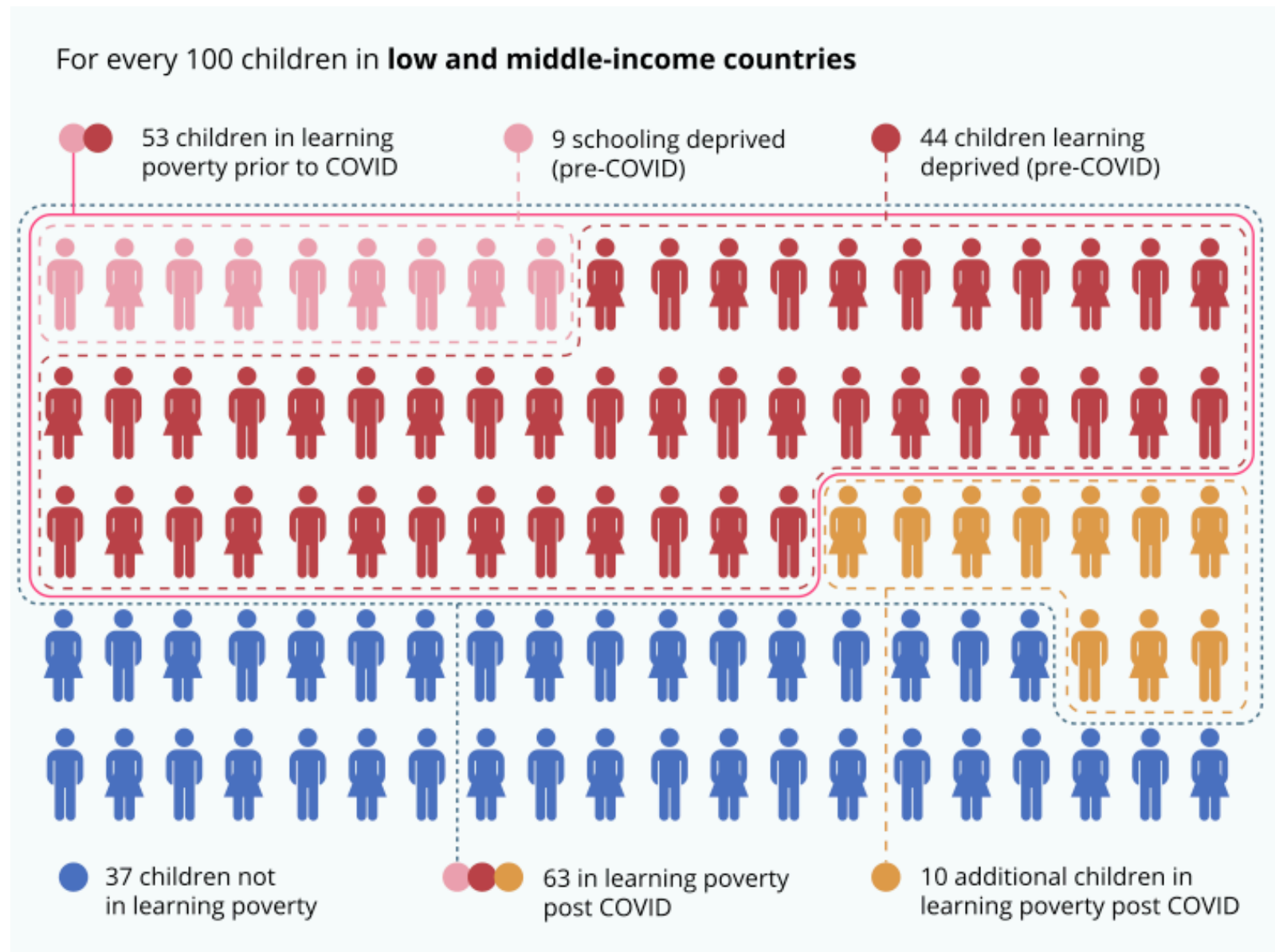
The background of the slide is a blurred ECG (heart rate) tracing on a grid. A semi-transparent white circle with a thin gold border is centered on the left side of the image. Inside this circle, the text "How significant is the learning loss?" is written in a bold, black, sans-serif font.

How significant
is the learning
loss?

COVID-19 school closures in perspective

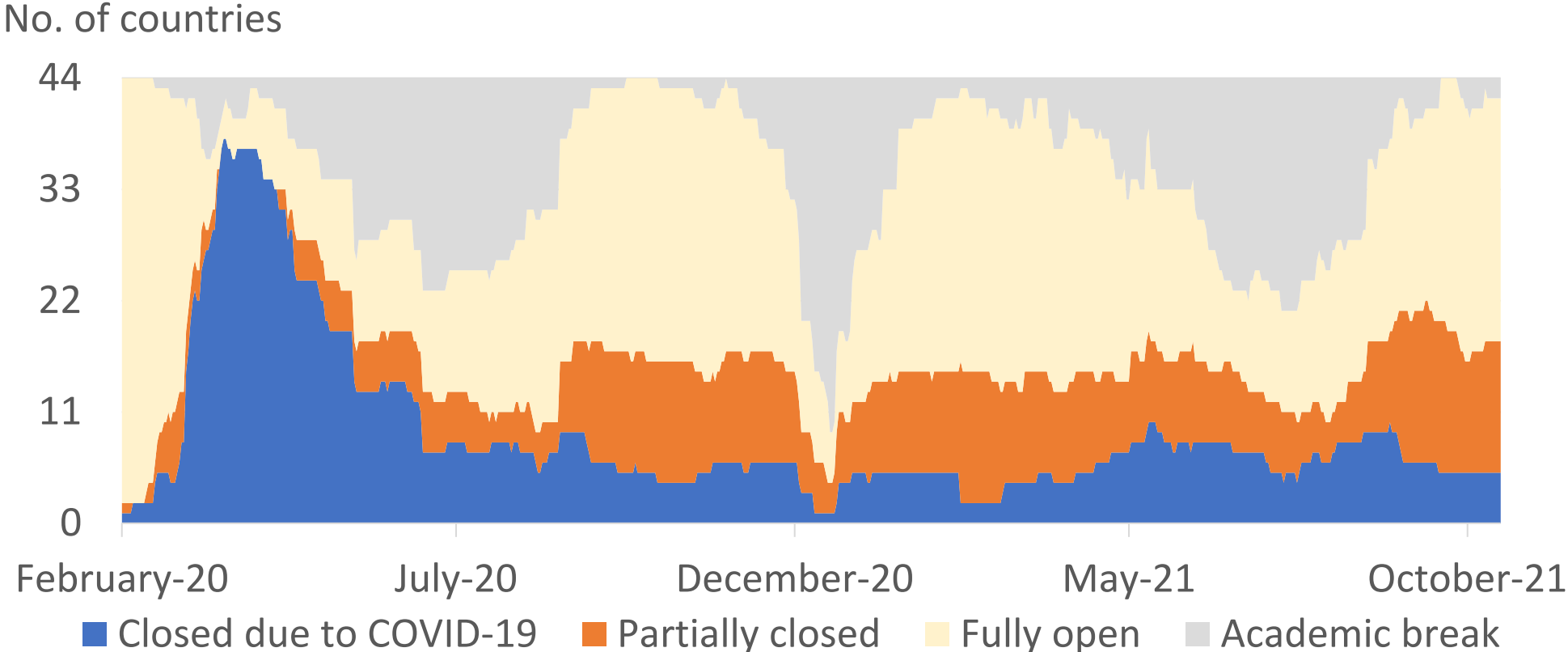


Learning poverty increase due to COVID-19 related school closures



Source: [Rewrite future: How Indonesia's education system can overcome the losses from the COVID-19 pandemic and raise learning outcomes for all](#). World Bank 2021.

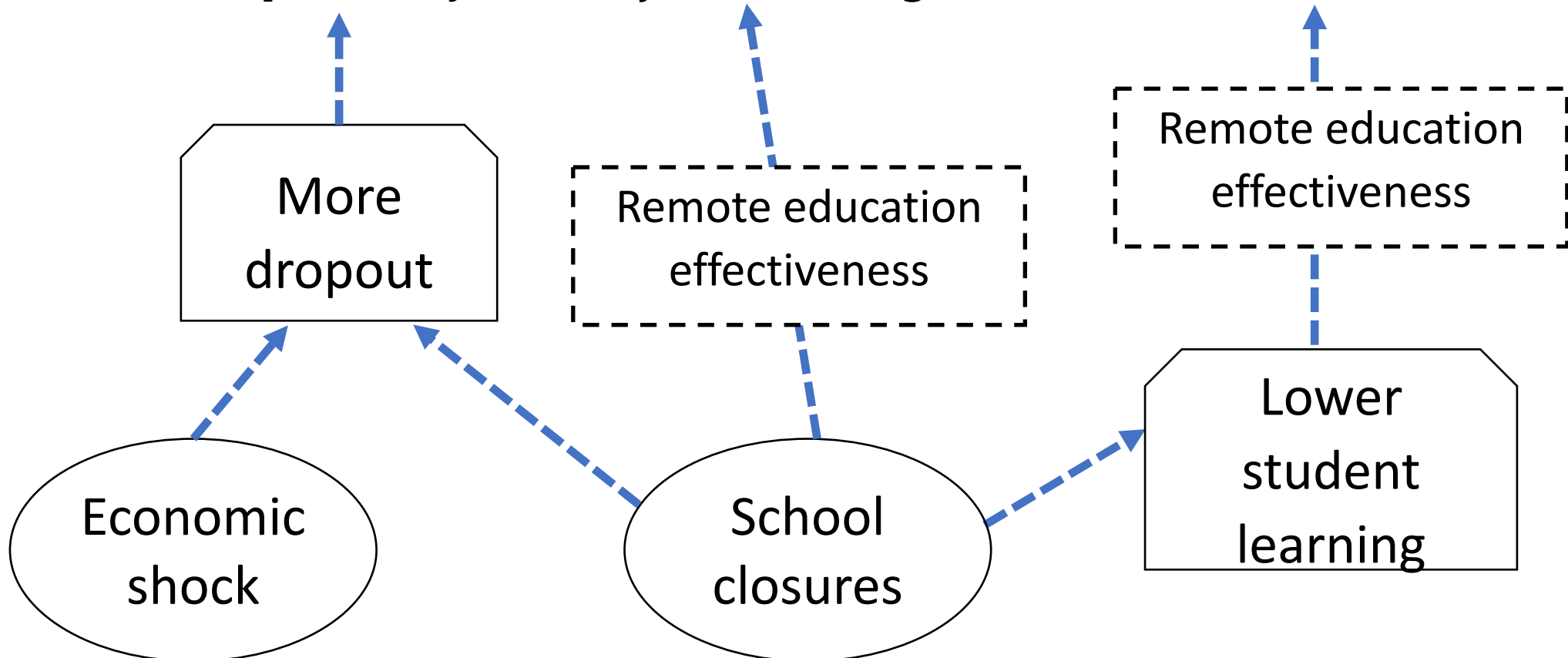
Developing Asia also had lengthy school closures...



Source: Based on data from UNESCO Global Monitoring of School Closures.

Losses evident in quantity and quality of education

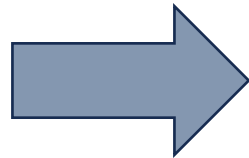
$$LAYS = \text{Expected years of schooling} \times \text{Harmonized test scores}$$



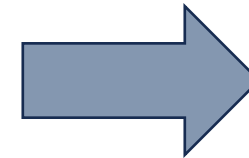
Projected learning and earnings losses in absence of remedial measures



**9/10 of a year
of schooling**



**Lower ability to
earn income**

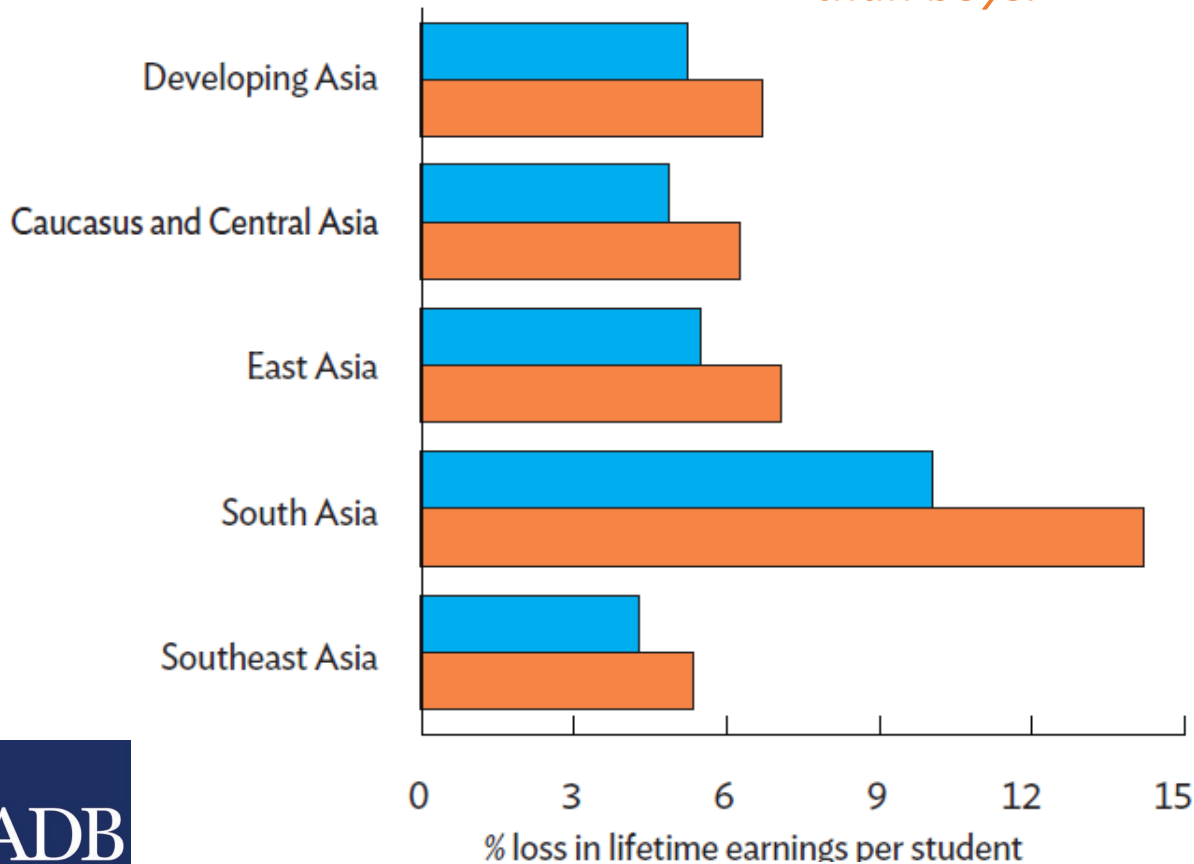


**\$3.2 trillion in lost
lifetime earnings**

Projected gender and wealth gaps are immense

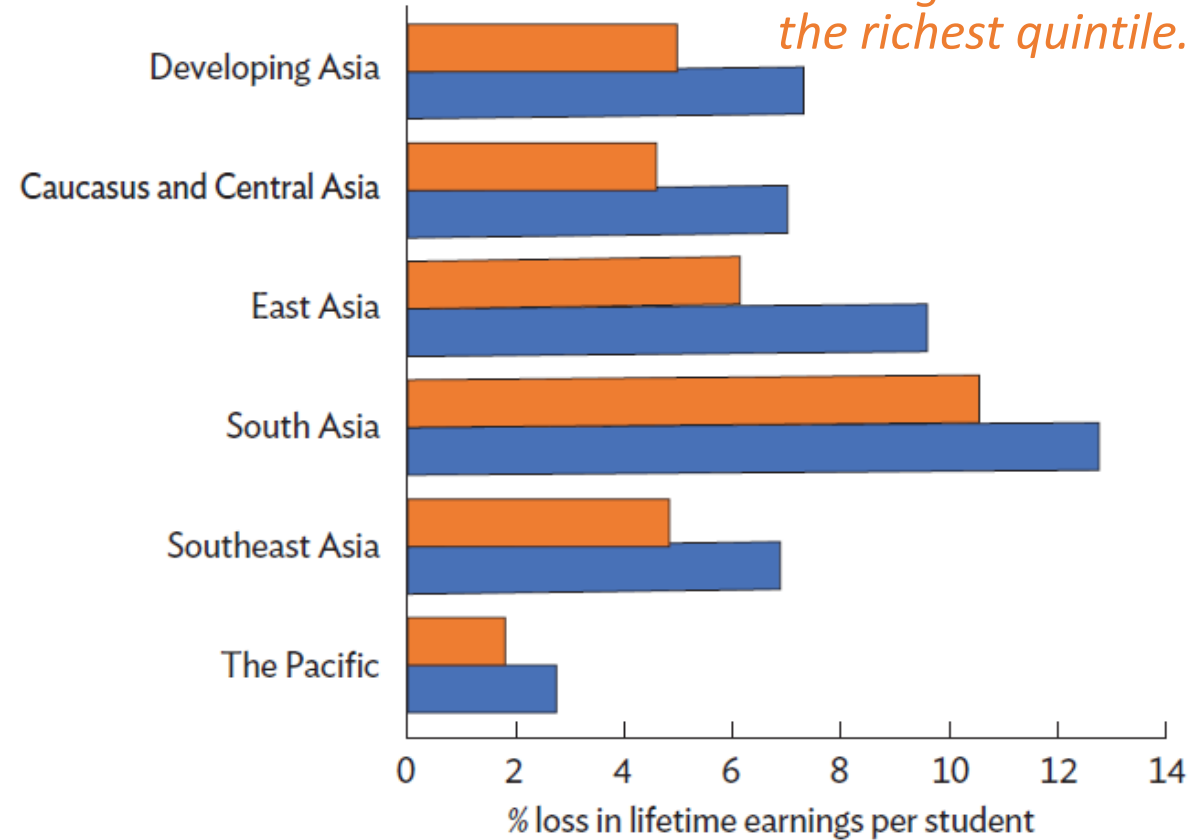
Male
Female

Girls incur 28% more earning loss than boys.



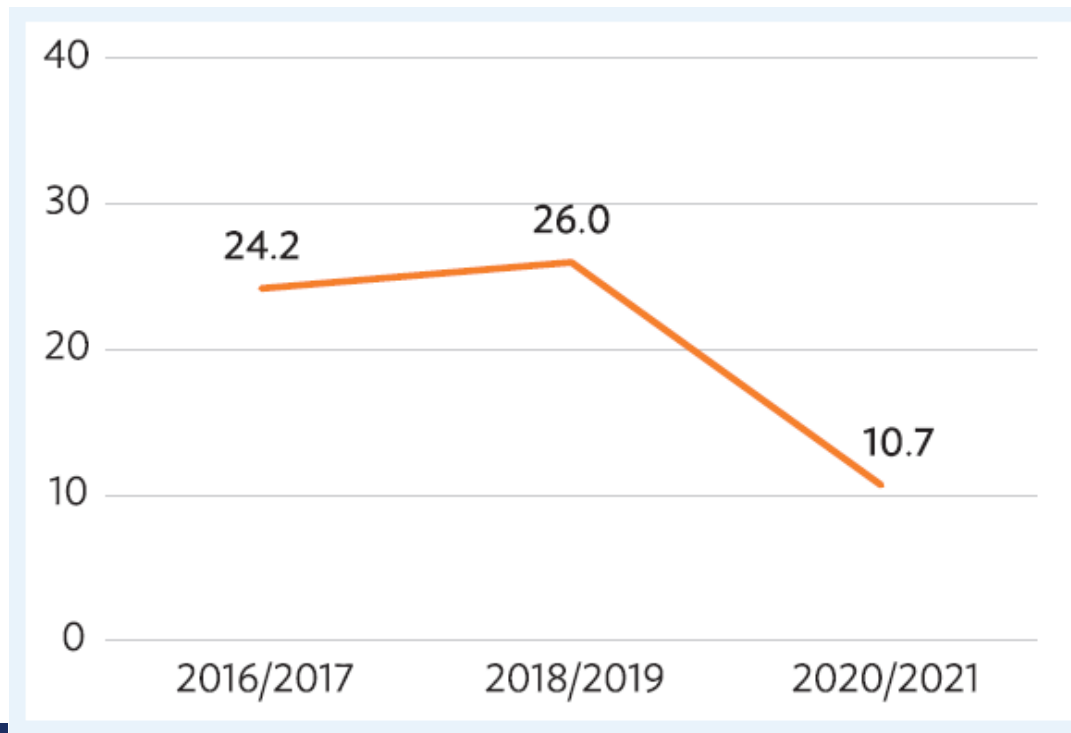
Richest quintile
Poorest quintile

The poorest quintile incurs 47% more earning loss than the richest quintile.

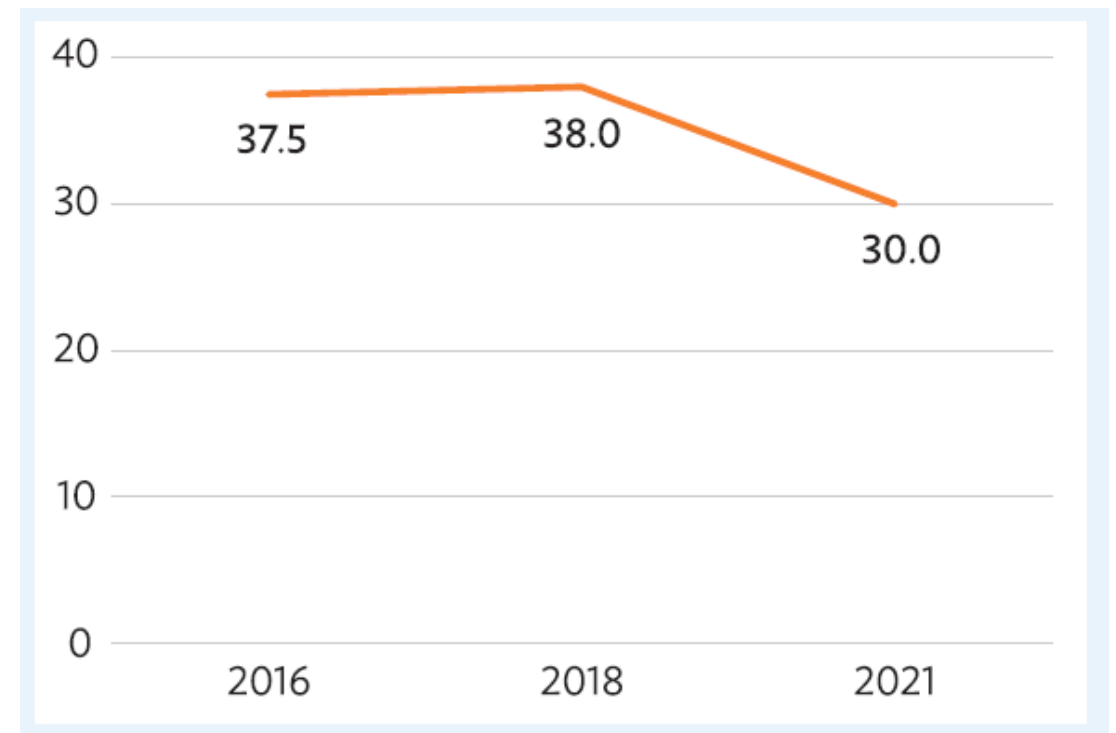


Student assessments show evidence of learning loss in South Asia

Change in the share of students able to read Grade 2 text in rural Karnataka, India (pp)

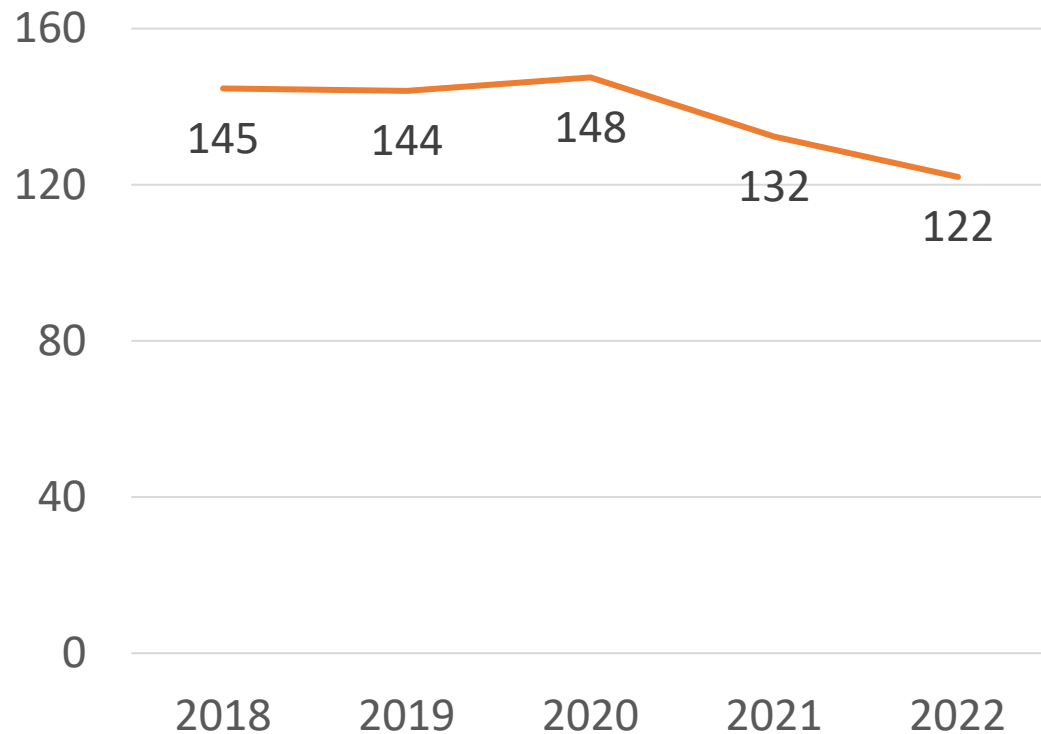


Change in the share of students capable of 2-digit arithmetic division in rural Pakistan (pp)



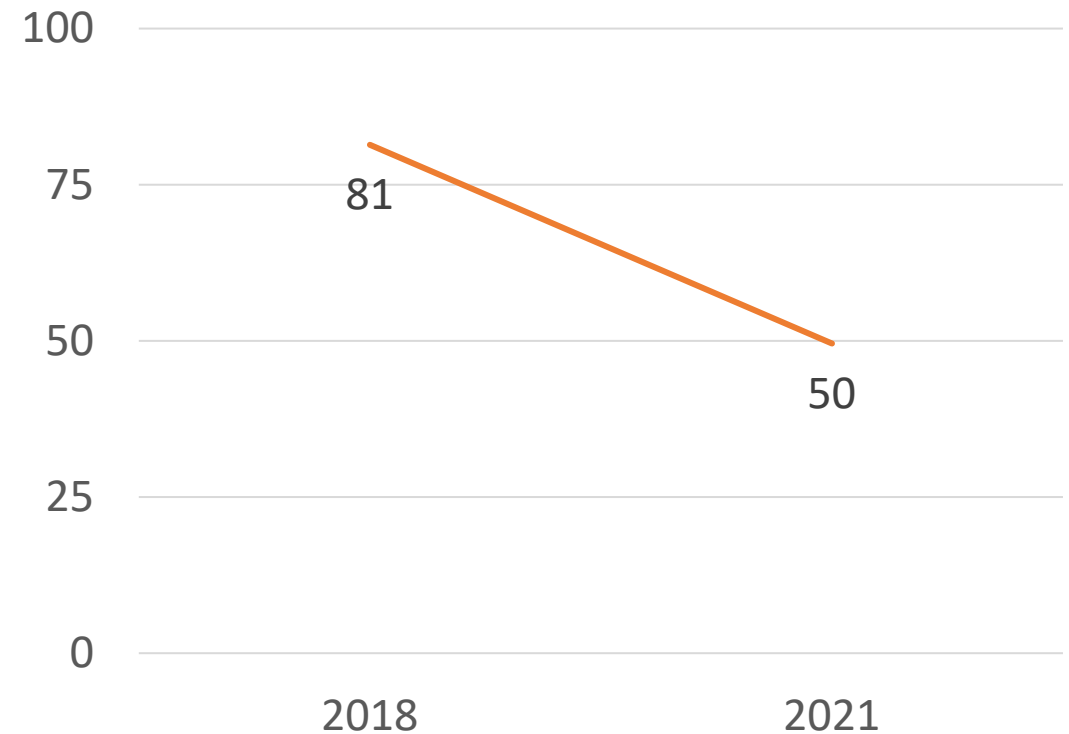
...as well as in Southeast Asia

General Aptitude Test (GAT) average scores in Thailand



Source: <https://schoolhug.com/news/77/>

Share of Grades 2–3 students in Riau, Indonesia who can read and comprehend



Source: <https://www.thejakartapost.com/adv/2022/05/18/tackling-learningloss-improving-literacy.html>.

Many countries delayed exams during the pandemic

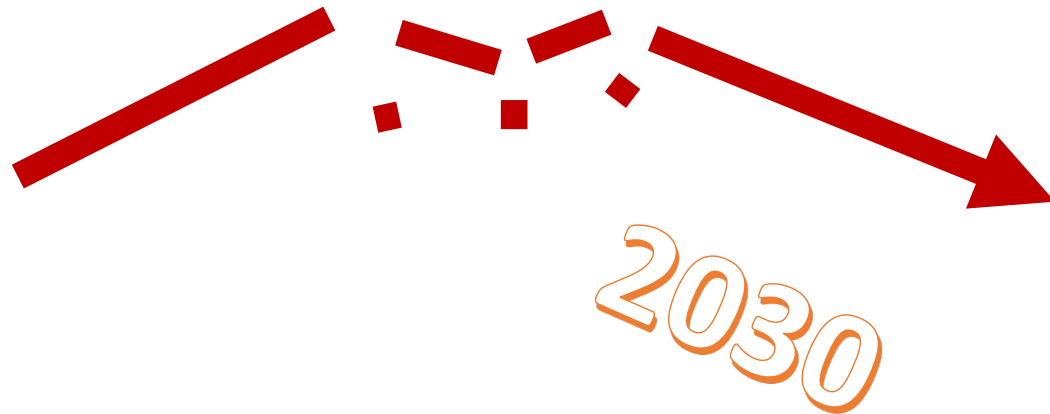
Country approaches to examinations after learning disruption

Strategies	Countries
Maintaining exams	Kazakhstan, New Zealand, Thailand
Cancelled	Indonesia, Japan
Postponement/delayed	Bangladesh, China, Fiji, India, Indonesia, Iran, Malaysia, Mongolia, Nepal, Pakistan (Khyber Pakhtunkhwa), Palau, Philippines, Republic of Korea, Samoa, Singapore, Sri Lanka, Thailand, Tonga, Uzbekistan, Viet Nam
Online test	Cambodia, Myanmar, Pakistan (Khyber Pakhtunkhwa)
Introducing alternative approaches	India, Indonesia, Micronesia, Mongolia, Myanmar, Palau, Thailand, Tonga, Uzbekistan, Viet Nam
Reducing number of exams	Japan, Viet Nam

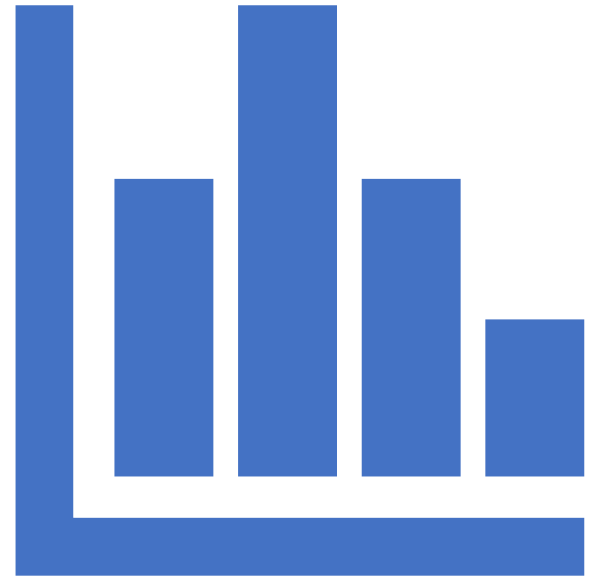
Source: UNESCO Institute for Statistics. 2021. [School Closures and Regional Policies to Mitigate Learning Loss due to COVID-19: A Focus on the Asia-Pacific](#). Quebec.

Progress to SDG 4 at risk due to COVID-19

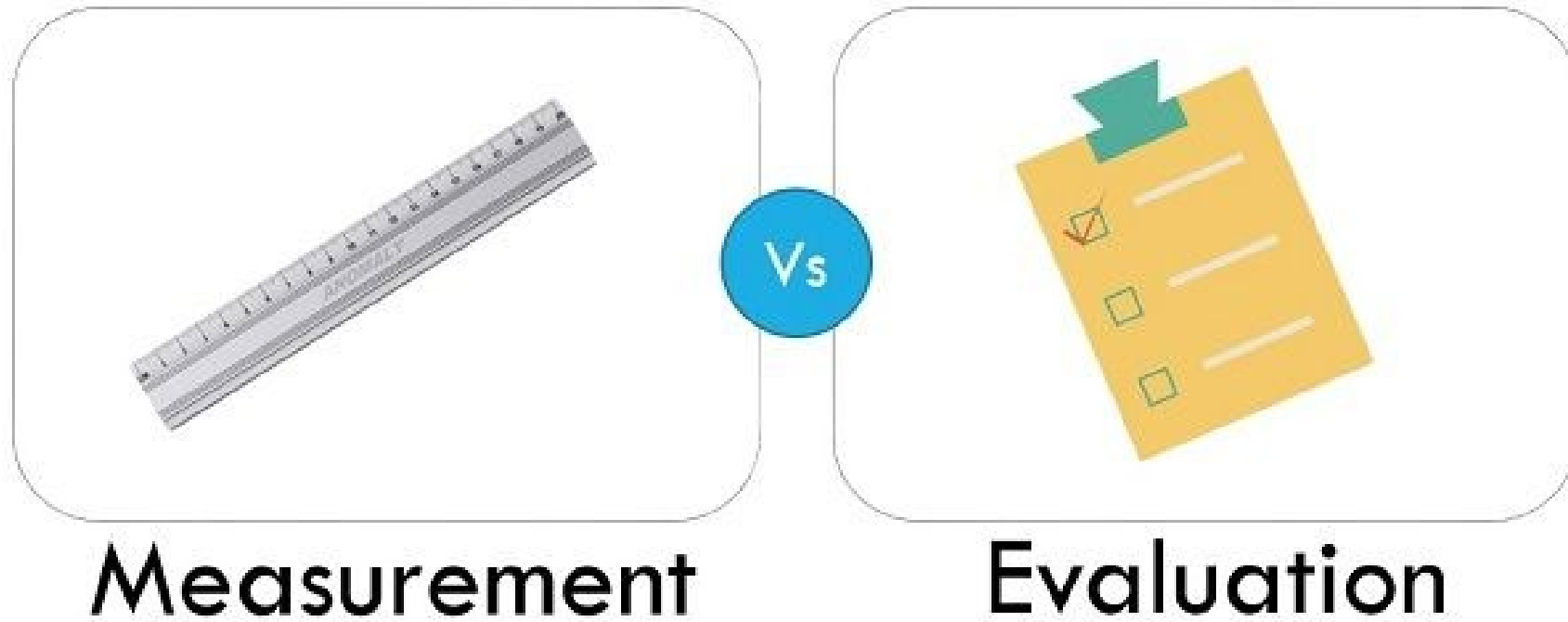
- Estimated learning loss: ~1.2 years
- School dropouts increased: 4%
- Drop in PISA reading scores: 25-35 points



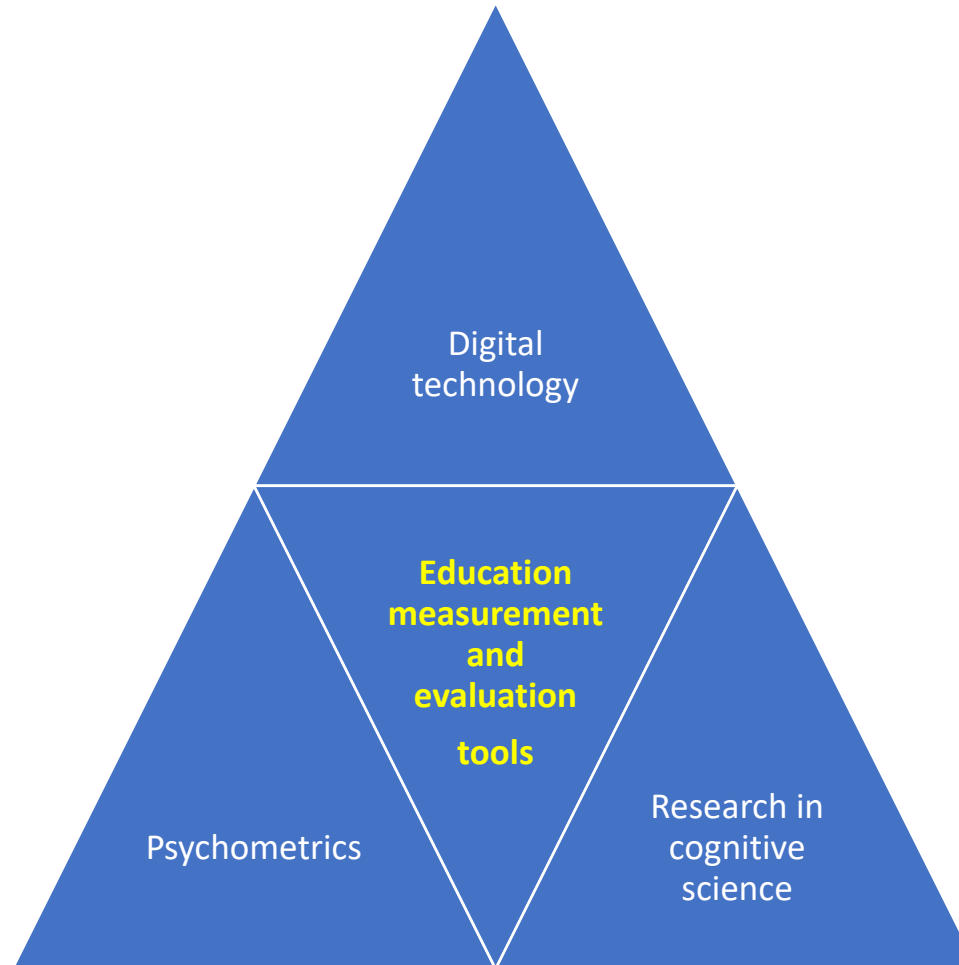
How to measure and evaluate learning?



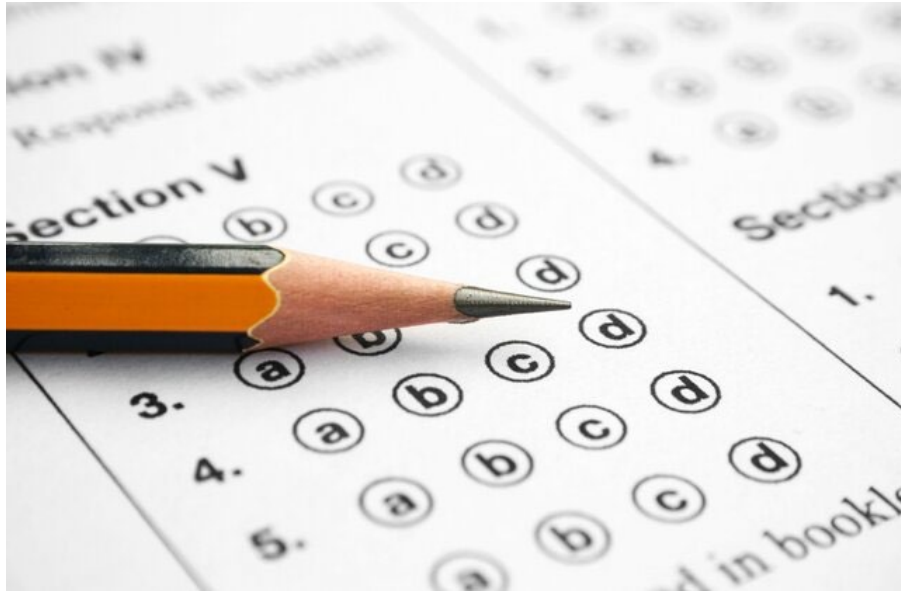
Standardized education measurement and evaluation



Evolution of education measurement and evaluation



Education measurement tools



Standardized Tests

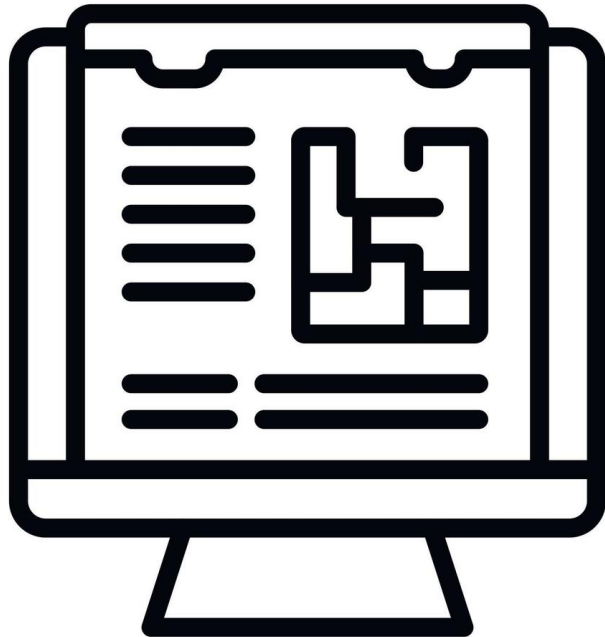
- widely used to measure student achievement and compare performance but have limitations.
- focus on rote memorization inability to assess higher-order thinking skills.
- inability to assess higher-order thinking skills.

International standardized tests

PISA



Education measurement tools



Computer-Based Assessments

- adapt to the individual's skill level
- provide immediate feedback
- collect data efficiently
- interactive and engaging

Education evaluation methods



Formative Assessments

- focus on providing ongoing feedback to improve learning.
- Examples: *classroom observations, questioning techniques, self-assessment*

Education evaluation methods



Performance-Based Assessments

- measure students' ability to apply knowledge and skills in real-world contexts.
- involve *projects, portfolios, and presentations* that showcase students' application of knowledge and skills.
- *more authentic and relevant to real-world expectations.*

Education evaluation methods



Data-Driven Decision Making

- using data to inform decision-making at various levels, from the classroom to system-wide improvements.
- leveraging data analytics to identify trends, monitor student progress, and adjust instruction accordingly.
- supports targeted interventions and personalized learning experiences.

Education M&E trends



Education evaluation now assesses skills like critical thinking and creativity, not just academic knowledge.



Emphasis is on holistic development and lifelong learning in education systems.



Focus on equity and inclusivity with culturally sensitive, unbiased assessments for diverse learners.



Technology enables efficient data collection, analysis, and personalized learning through online platforms and adaptive assessments.



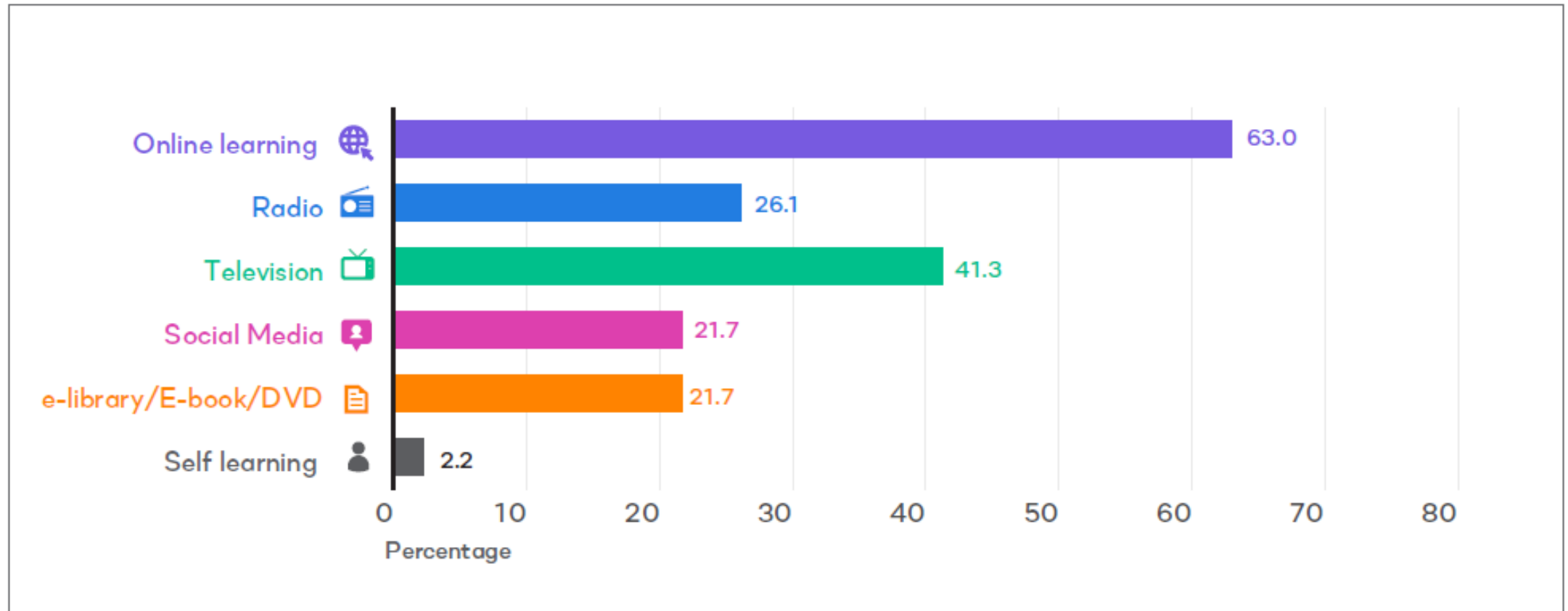
Global education prioritizes holistic, inclusive approaches, diverse assessments, real-world skills, data-driven decisions, and tech integration.



What are the
examples of
practices?

Online learning was most widely used

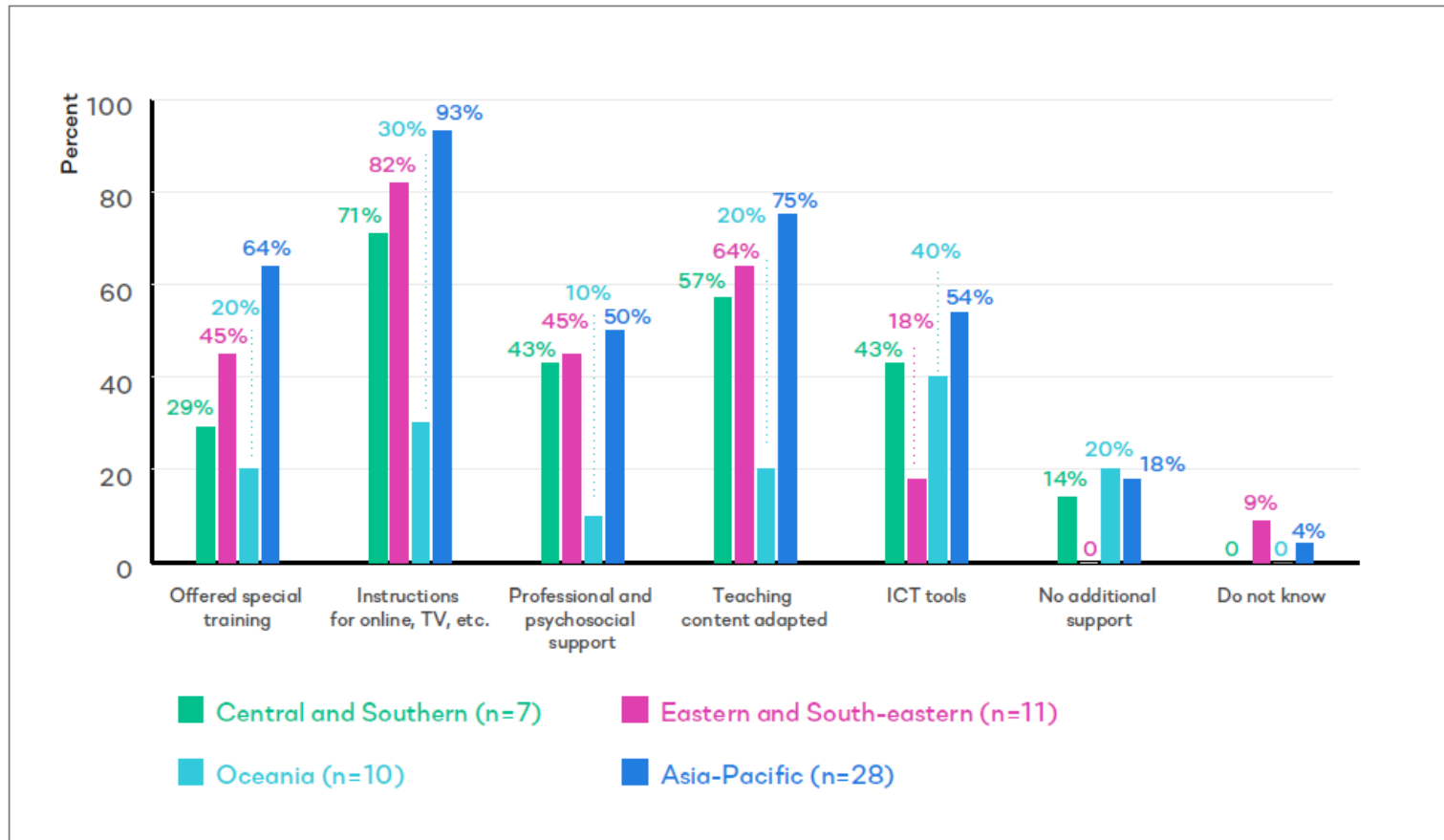
Percentage of countries using remote education delivery methods during school closures (N=46)



Source: UNESCO Institute for Statistics. 2021. [School Closures and Regional Policies to Mitigate Learning Loss due to COVID-19: A Focus on the Asia-Pacific](#). Quebec.

Varying levels of support were given to teachers

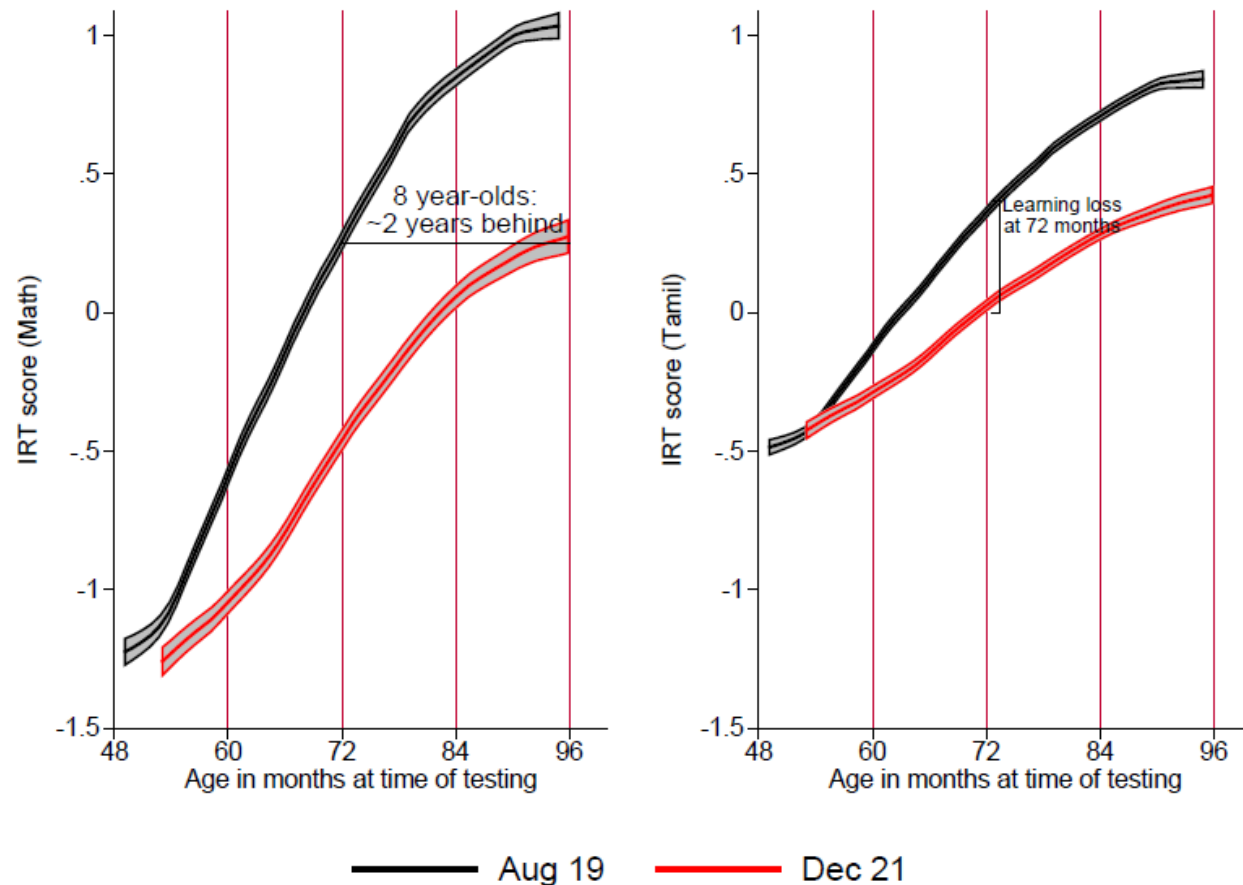
Support provided to teachers for remote teaching (N=28)



Source: UNESCO Institute for Statistics. 2021. [School Closures and Regional Policies to Mitigate Learning Loss due to COVID-19: A Focus on the Asia-Pacific](#). Quebec.

Case study in Tamil Nadu: Huge learning loss Dec 2021

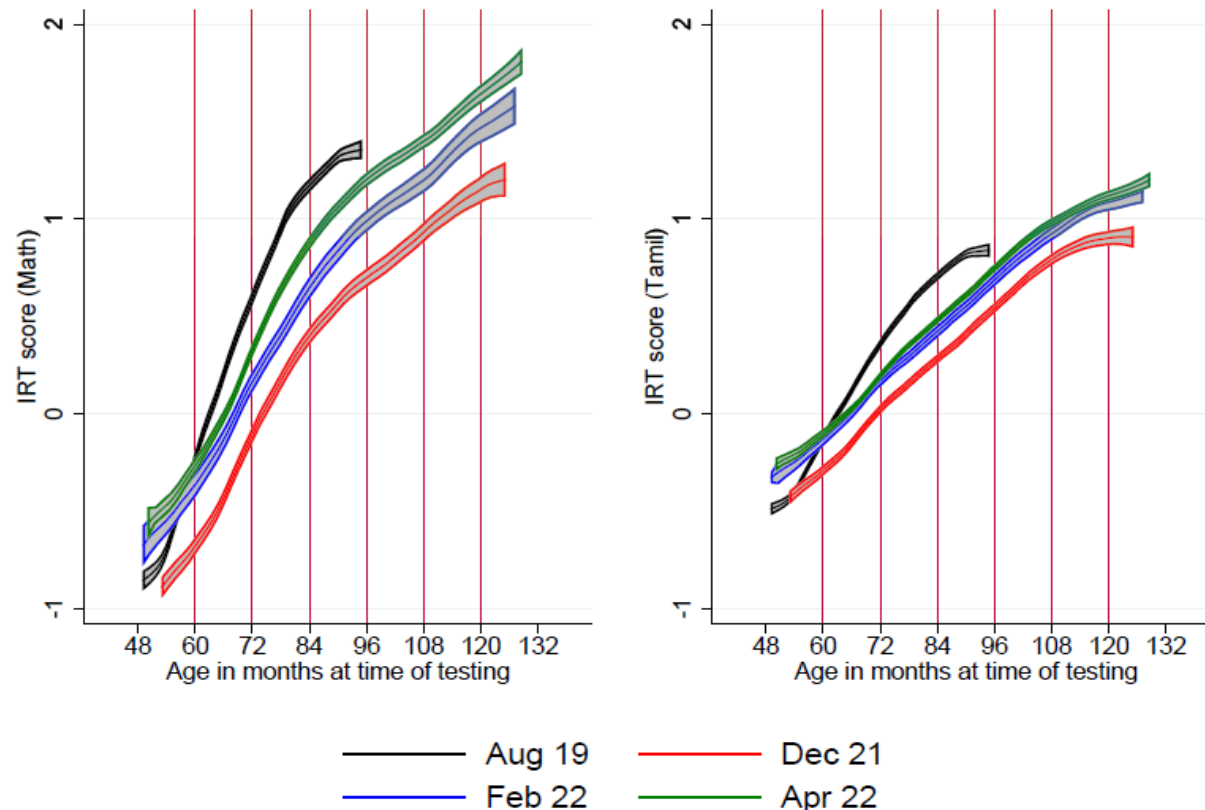
Learning loss in December 2021



- 18 months of school closures as of Dec 2021
- Students between 5–7 years were 0.7 SD behind in math and 0.34 SD behind in language, compared to same age students in the same villages in 2019
- This is equivalent to 1–2 years of schooling in this context
- *Estimate is comparable to our projected 1.04 LAYS losses for India*

Case study in Tamil Nadu : Partially recovered within 5 months

Recovery between December 2021 and May 2022



- Two-thirds of learning loss documented in Dec 2021 was recovered by May 2022
- Rapid catchup in learning within 4–5 months of school reopening, reflecting:
 - “Natural” catchup from schools reopening
 - Compensatory actions by teachers and schools
 - Flagship state-wide after-school remedial instruction program to mitigate learning loss

Source: [Singh, Romero, and Muralidharan \(2022\)](#).

A 3D rendering of a keyboard with a blue-to-white gradient background. The keys are rendered in a light blue color, and the background transitions from a bright white on the left to a dark blue on the right. The text "Way forward and recommendations" is overlaid on the left side of the image.

Way forward and recommendations

Transforming Education Summit – New York 2022



**United
Nations**



Transforming Education Summit

Equity

Relevance

Quality

Inclusion

How should the governments react?

01

Focus on addressing inequalities and disparities

02

Engage in genuine participation with youth at the centre of transformation

03

Strengthen and transform existing mechanisms

04

Link the global, the national and the local levels

05

Use evidence to inform policy and practice.

06

Galvanize a whole-of-government approach

Averting a long-term learning crisis requires a multi-sectoral approach



Cooperation among families, educators, civil society, business community, government



Learning recovery and acceleration is necessary

Assessment of learning to fill the vast data gaps

Clear targets for progress

Evidence-based plans



Need most cost-effective approaches to tackle learning poverty

How to design assessments that help reduce learning losses?

1

Create modern learning experiences

2

Use both off-line and on-line assessments

3

Accommodate learner diversity

4

Leverage digital assessments

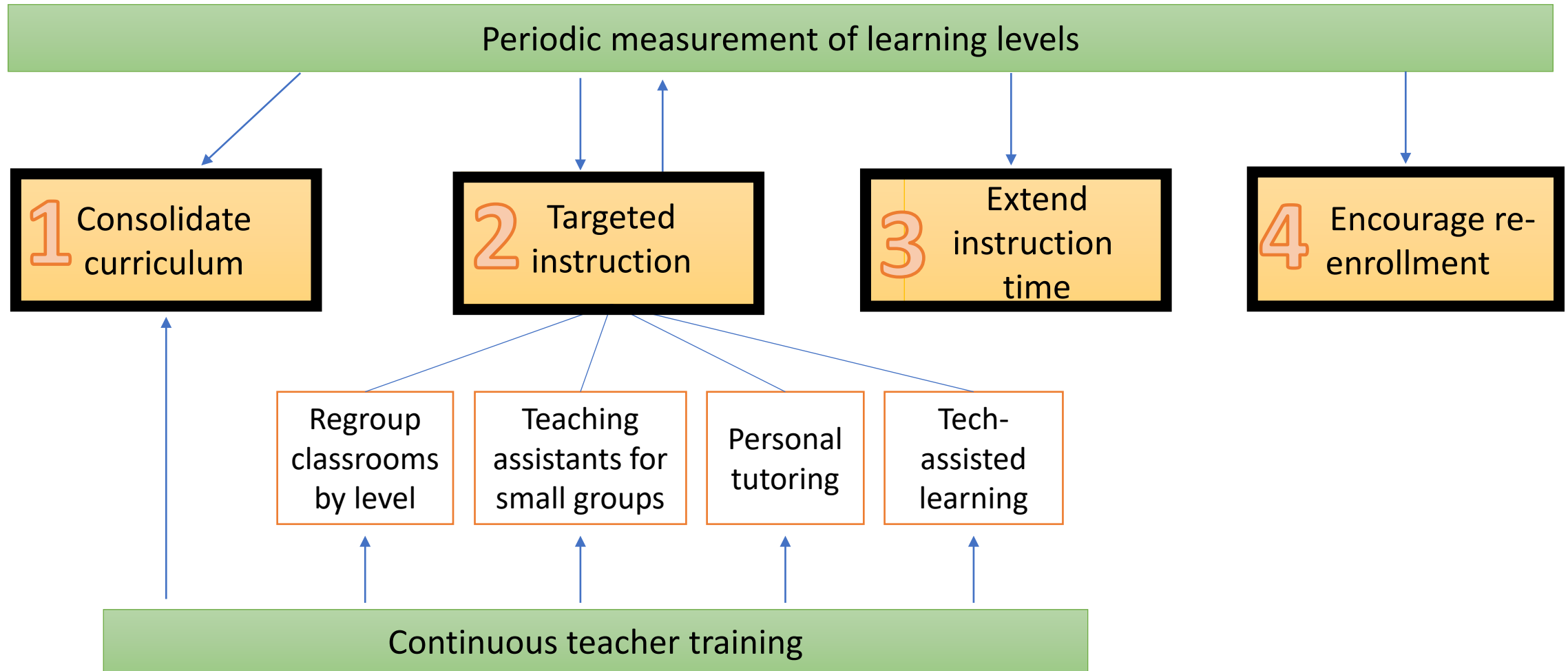
The image features the United Nations Sustainable Development Goal 4 icon. It consists of a large red circle containing a white graphic of an open book and a pencil. The number '4' is positioned to the left of the text 'QUALITY EDUCATION', which is written in white, uppercase letters. The background of the entire graphic is a blue circle with a ring of colorful, triangular segments in shades of green, yellow, orange, and red.

4 QUALITY
EDUCATION

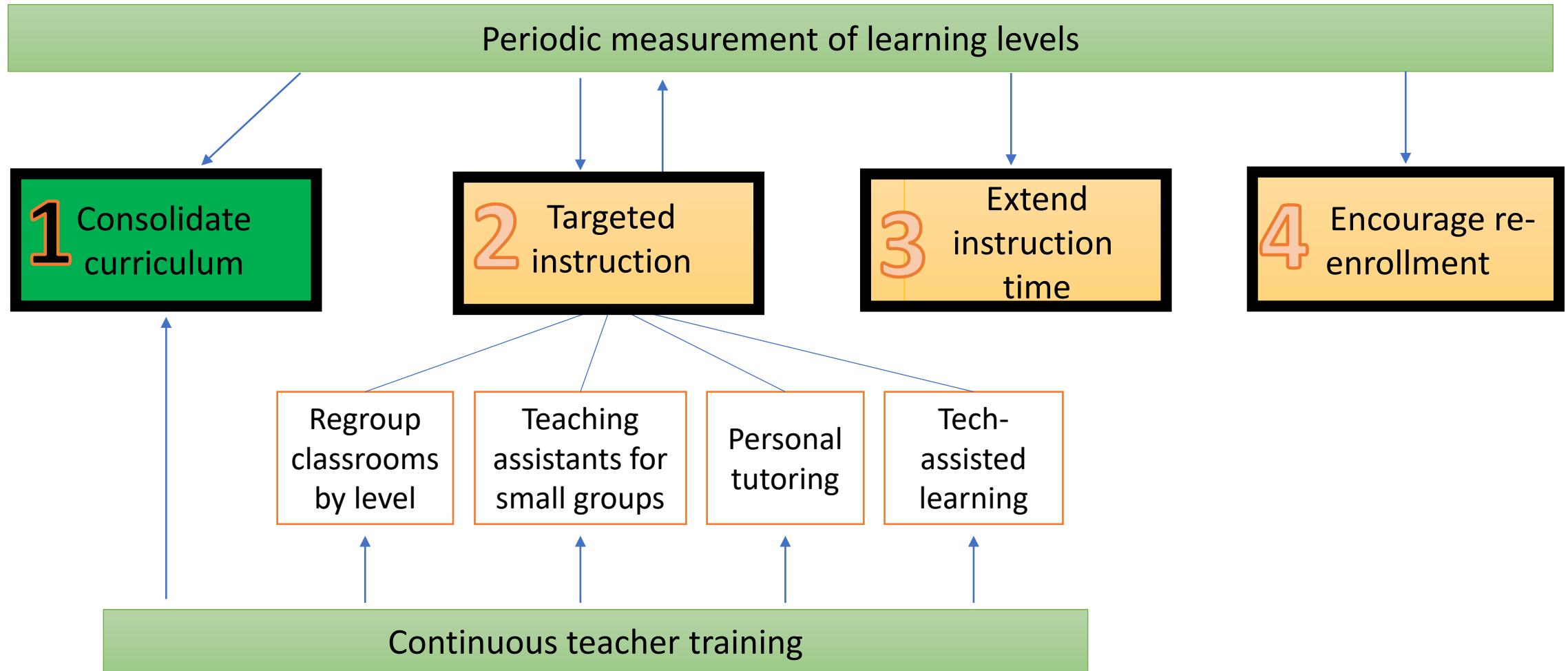


**Global best practices –
transforming education**

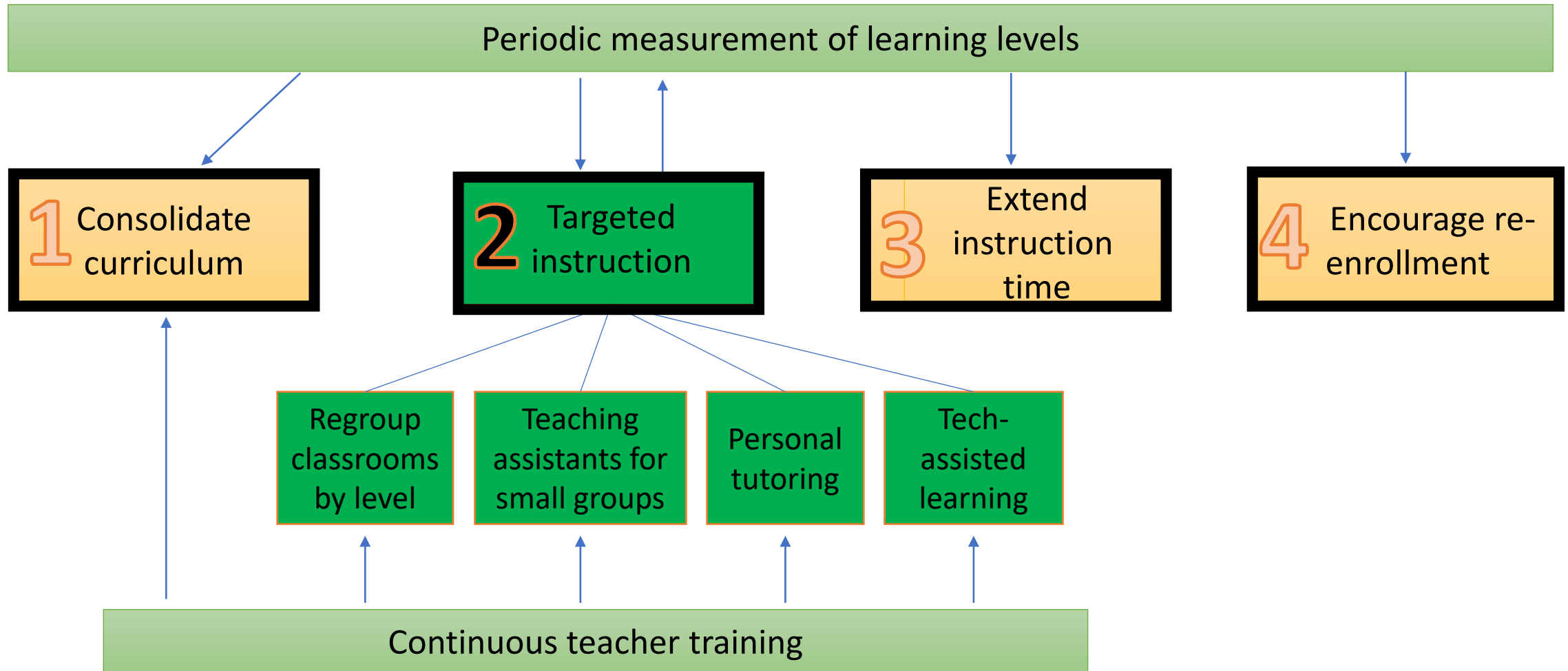
Best practices to remediate learning losses to prevent lasting impacts



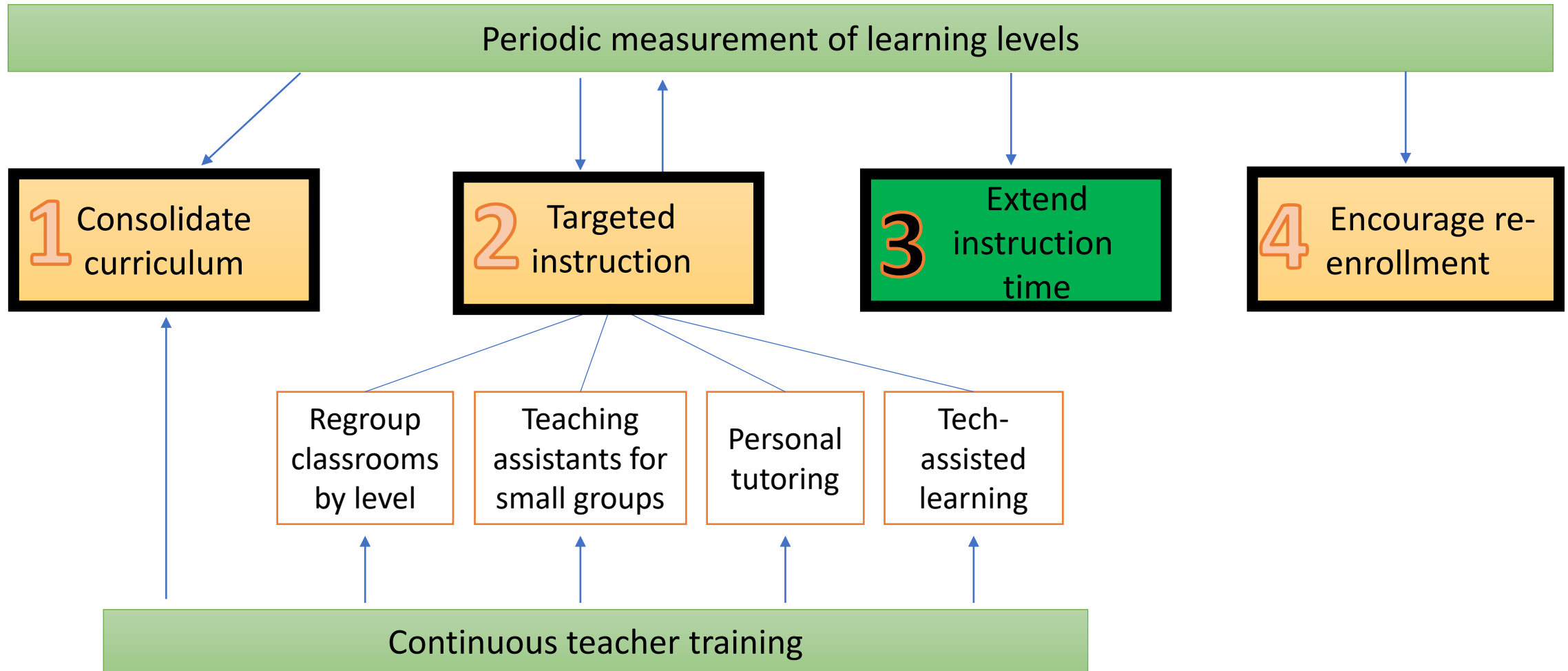
Best practices to remediate learning losses to prevent lasting impacts



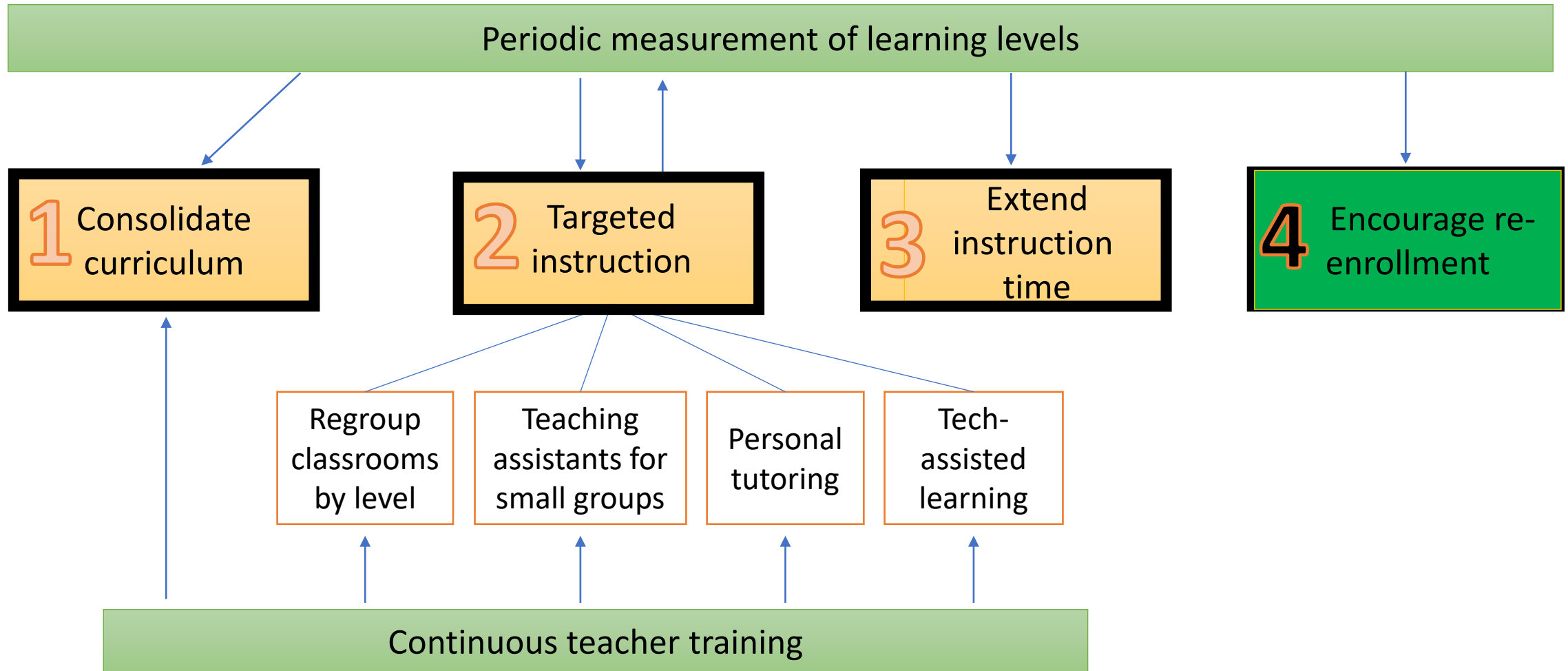
Best practices to remediate learning losses to prevent lasting impacts



Best practices to remediate learning losses to prevent lasting impacts

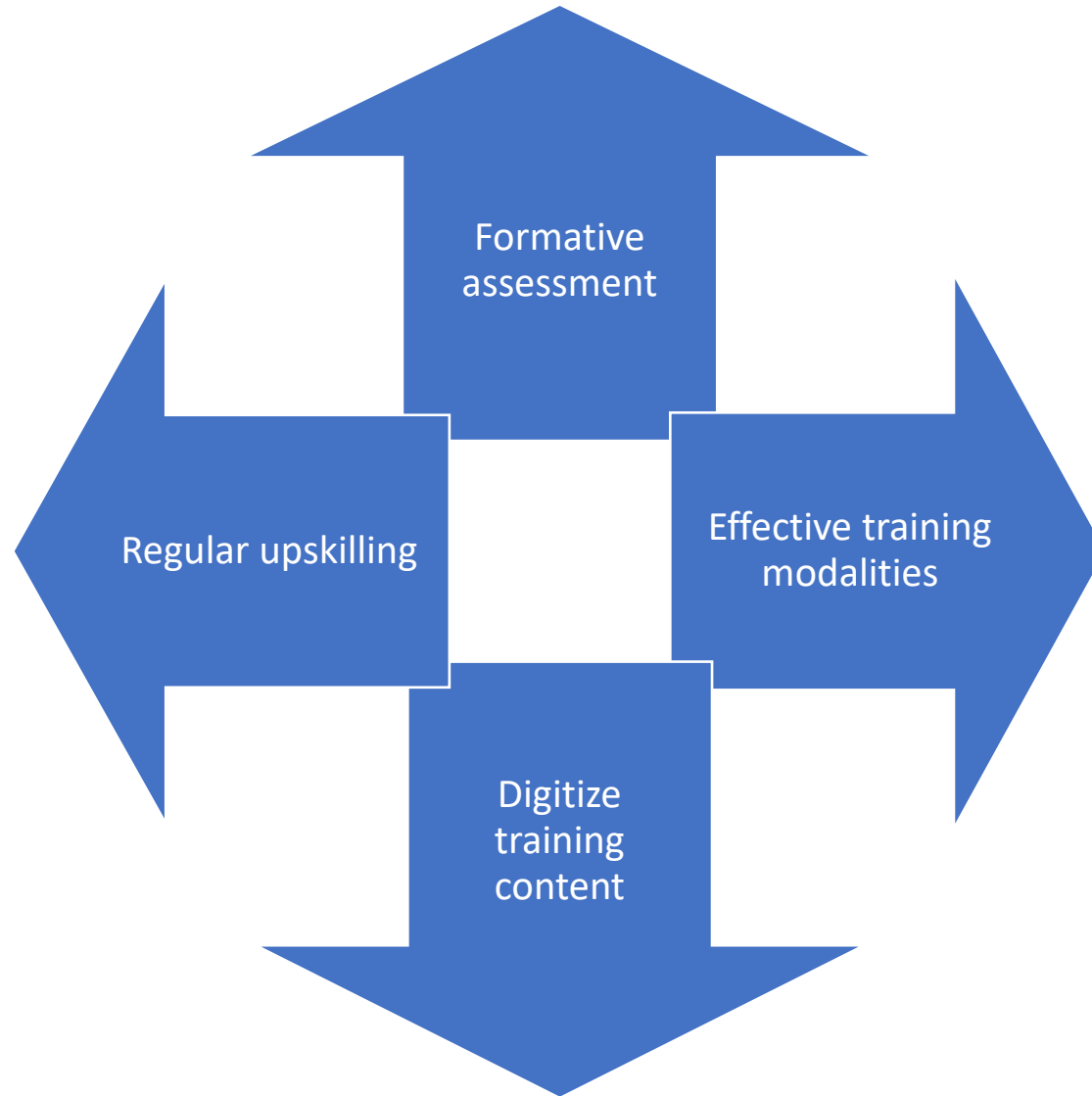


Best practices to remediate learning losses to prevent lasting impacts

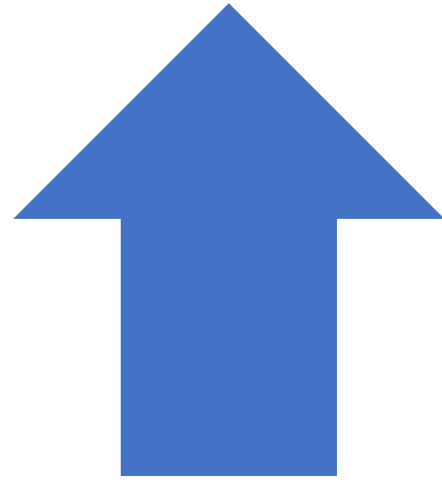


Study	Country	Intervention	Age	Impact
Banerjee et al. 2007	India	(1) Remedial education program hired young women ("Balsakhi") from the community to work on basic skills of children (grades 3 and 4), who are taken out of their regular classroom to work with the Balsakhi for two additional hours per day.	Grades 3-4	Increased average test scores in treatment schools by 0.14 SD in the first year, and 0.28 SD in the second year.
		(2) Computer assisted learning program that provided children in grade 4 two hours of shared computer time per week. The program consisted of computer games that involved solving math problems according to their difficulty level.	Grade 4	Increased math scores by 0.35 SD in the first year, and 0.47 SD the second year.
Duflo, Dupas, and Kremer 2011	Kenya	Students were assigned to sections based on initial achievement (tracked).	Grade 1	Test scores were 0.14 SD higher in tracking schools than in nontracking schools. Students in the top half of the preassignment distribution gained 0.19 SD, and those in the bottom half gained 0.16 SD.
Duflo, Kiessel, and Lucas 2021	Ghana	(1) Remedial pull-out program with a teaching assistant	Grades 1-3	Increased test scores by 0.14 SD
		(2) Remedial after-school program with a teaching assistant		Increased student test scores by 0.15 SD
		(3) Assistant teaching half the students in a classroom on grade-level content		Increased test scores by 0.08 SD
		(4) Training teachers on differentiated instruction		

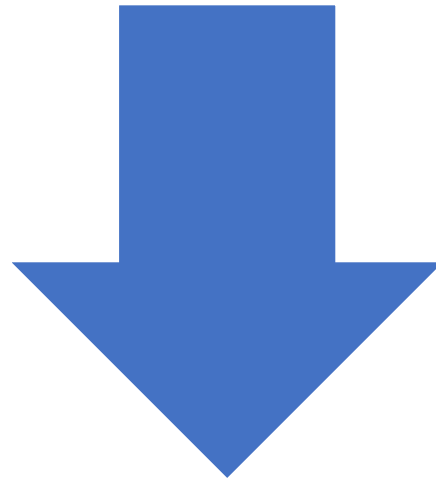
Training teachers for learning recovery



Best practices to remediate learning losses to prevent lasting impacts

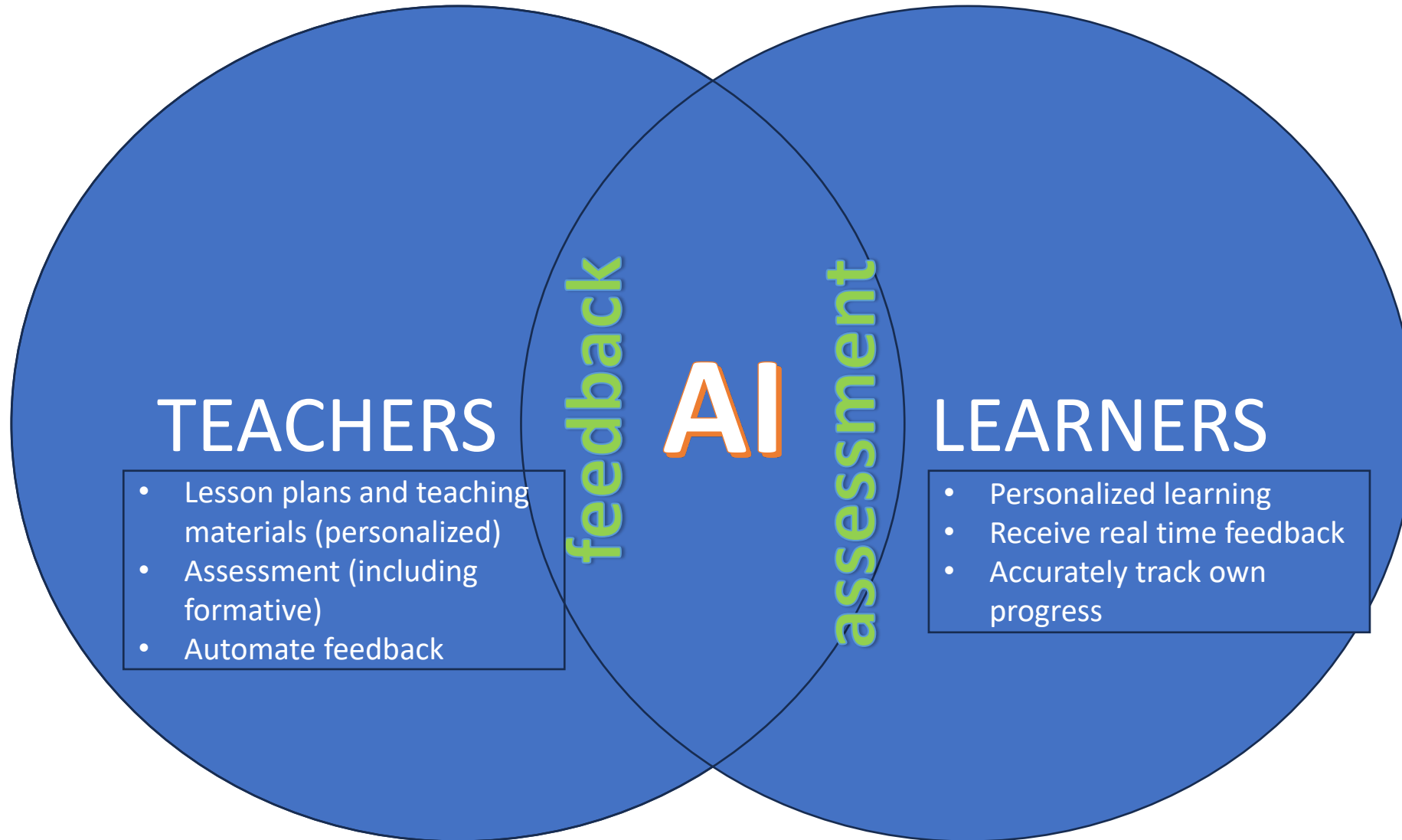


What should
policymakers
do?



What should
schools do?

AI is a game-changer for the future of assessment



**Thank you for your
attention.**

sungsupra@adb.org