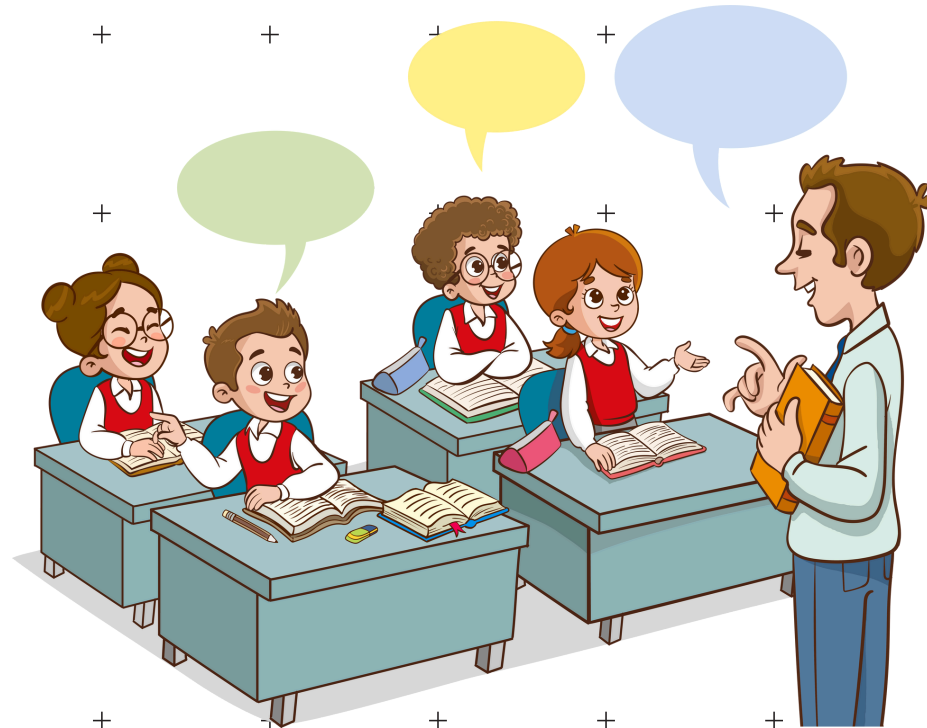


QUANTIFYING POST-PANDEMIC MATH LEARNING LOSS

BEFORE

AFTER

COVID-19





1.6 billion learners affected

UNESCO's global report (2020)

- Global education disrupted
- Math hit hardest
- Gaps wider in low- & middle-income countries

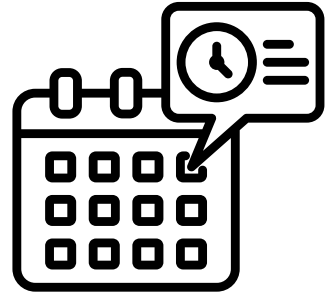


Our Research Question!



How did math proficiency change during the pandemic, and what support can close the gap?

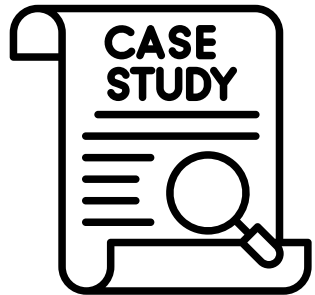
Our Project Scope



Focused on 2019 (pre-pandemic) vs. 2023 (post-pandemic)



Grouped countries by World Bank income levels



Separate dataset from one school in Bangladesh (450 students, grades 7)



UNESCO UIS - as the benchmark for math/education indicators.

Our Research Journey: Barriers & Adaptations



Data

Limited data



Language

Bangladesh
datasets were
not in English



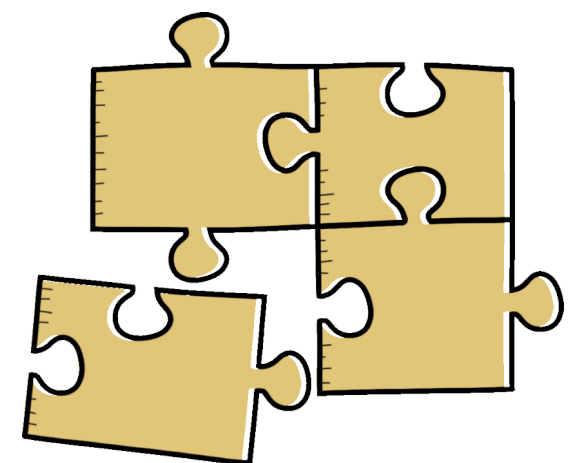
Communication

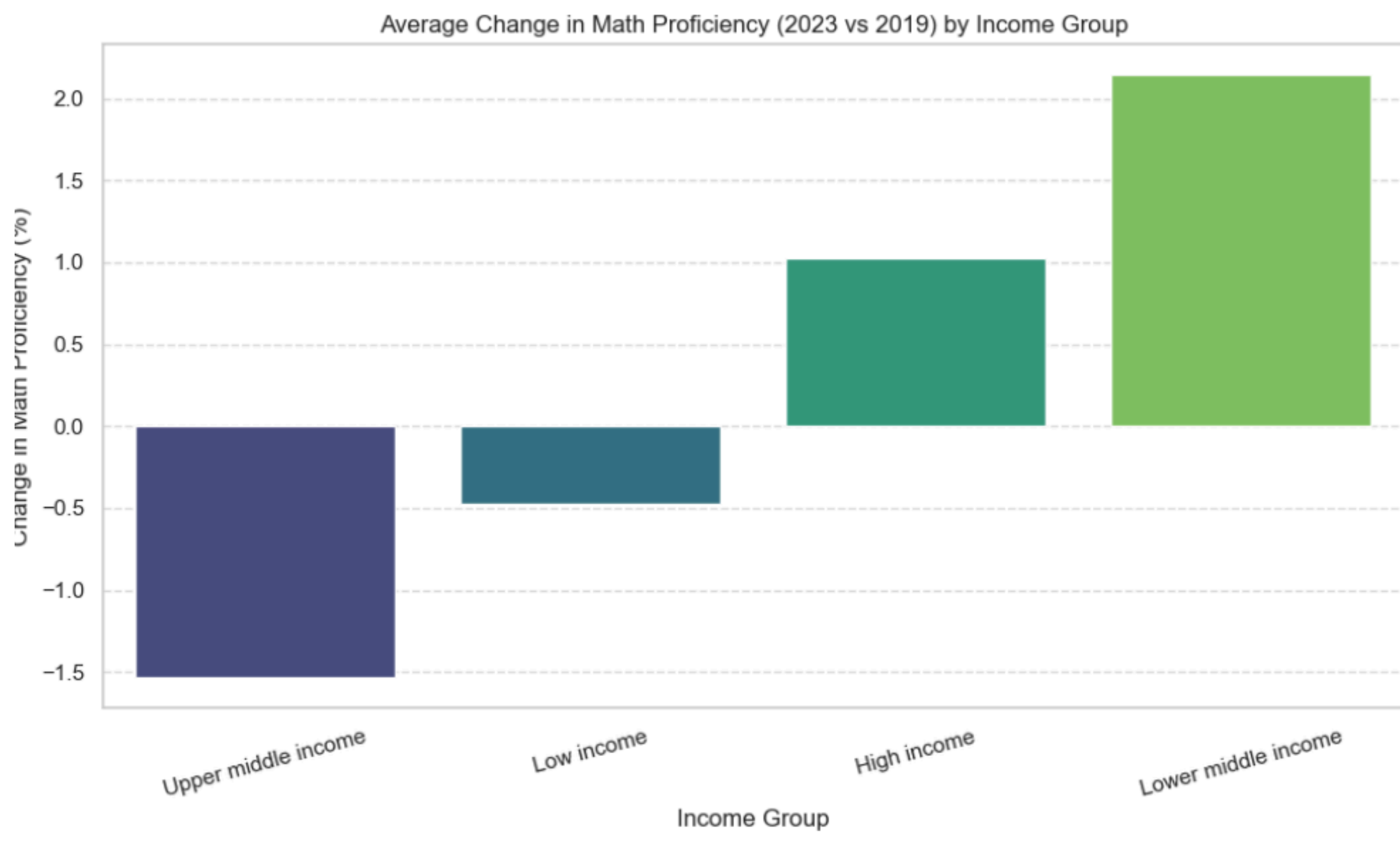
Difficulty
reaching NGO
contacts

Data ➡ Analysis ➡ Insights

UNESCO + Bangladesh
School Data

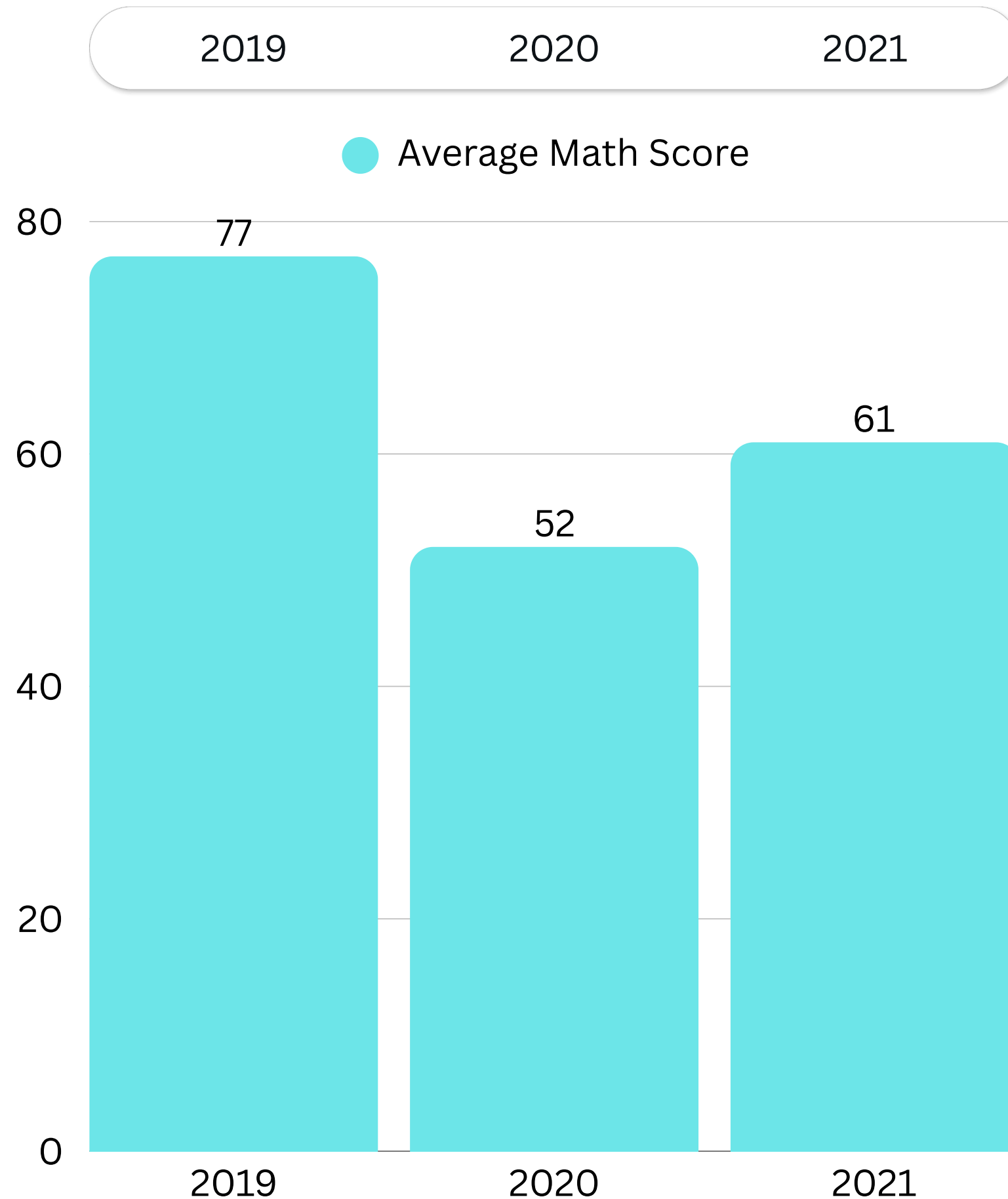
- Compared math scores (2019 vs. 2023)
- Analyzed school closures, teacher access, digital gaps
- Case study: Bangladesh





- Math proficiency ↓ globally
- Rural & poor students hit hardest
- Trained teachers & digital access = key protectors

Bangladesh Case Study



- Marks drop during closures
- Slow, incomplete recovery after reopening (2020–2021)
- Many students still behind”

 **Act now to close the post-COVID learning gap!**



- Targeted remedial math programs
- Invest in teacher training
- Expand affordable digital tools

Communication Strategy

Target Audience

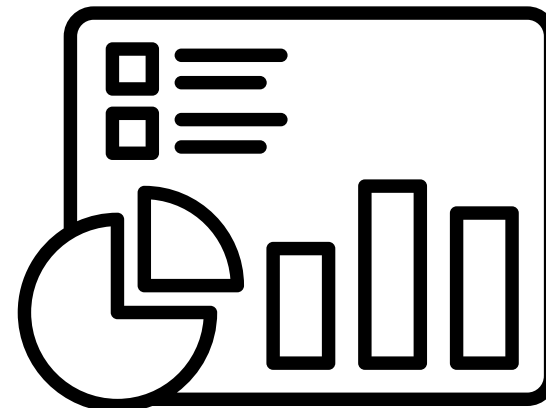
- 🎯 Primary: Education Ministers & Policy Advisors (LMICs)
- 🌐 Secondary: UNESCO, World Bank, Local Curriculum Developers

➡ Targeted math recovery programs can bridge **78%** of COVID learning gaps cost-effectively

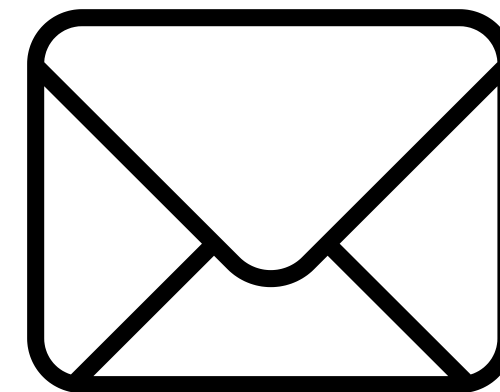
Artifacts



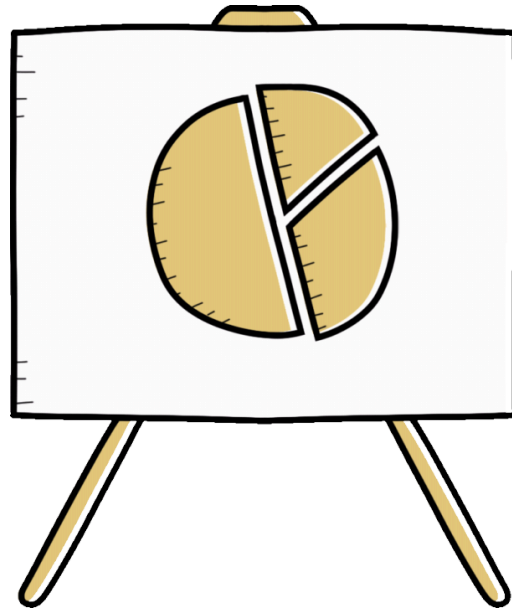
Policy Brief



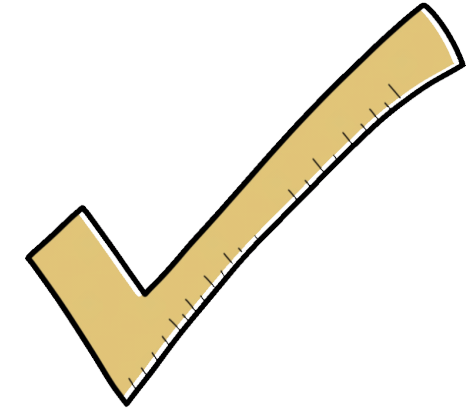
Interactive Dashboard



Outreach



THANK YOU



MIT Emerging Talent: Collaborative Data Science Project (CDSP)

Group 5 - Team **EduCatalysts**

Contributors: Alexandar, Jubayar, Heba, May Mon, Momtaz, Nada