

BILL & MELINDA
GATES *foundation*

Global education overview

June 2023

Agenda

1

Measure Early



2

Measure Comparably



3

This is the year to get it right



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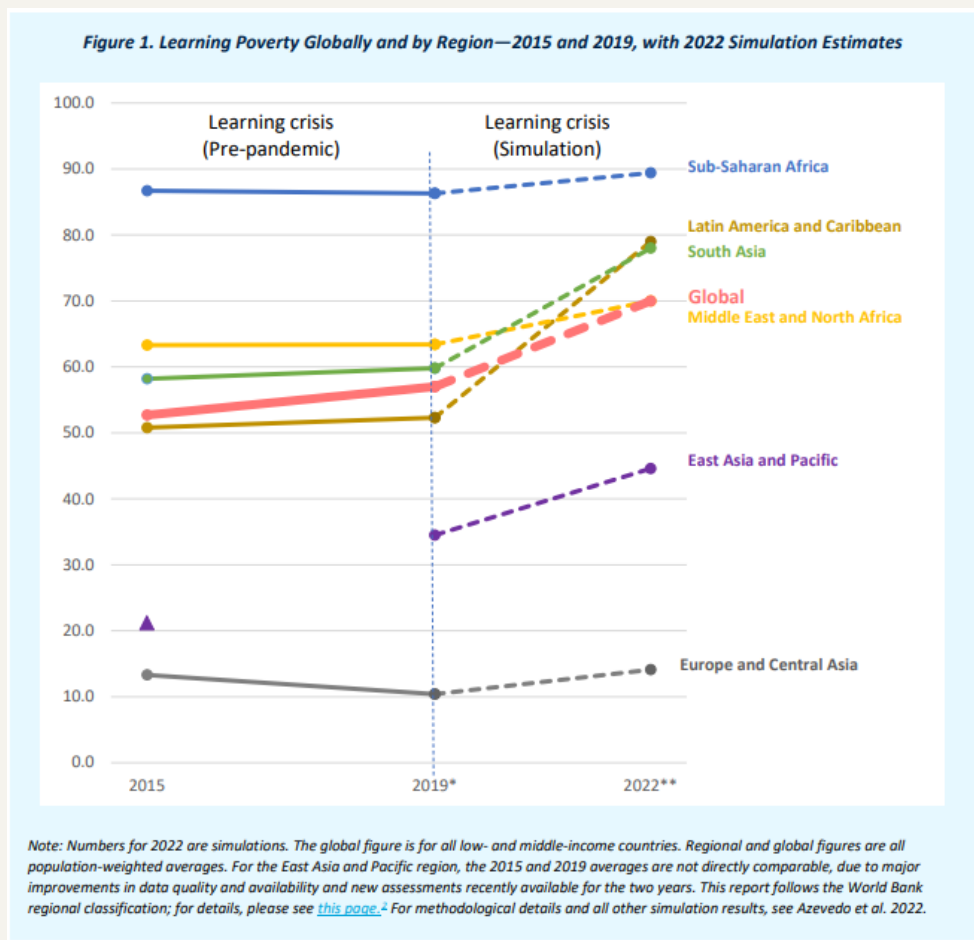


3

This is the year to get it right



Foundational learning outcomes are dire for 10 year olds in sub-Saharan Africa and likely worse post covid



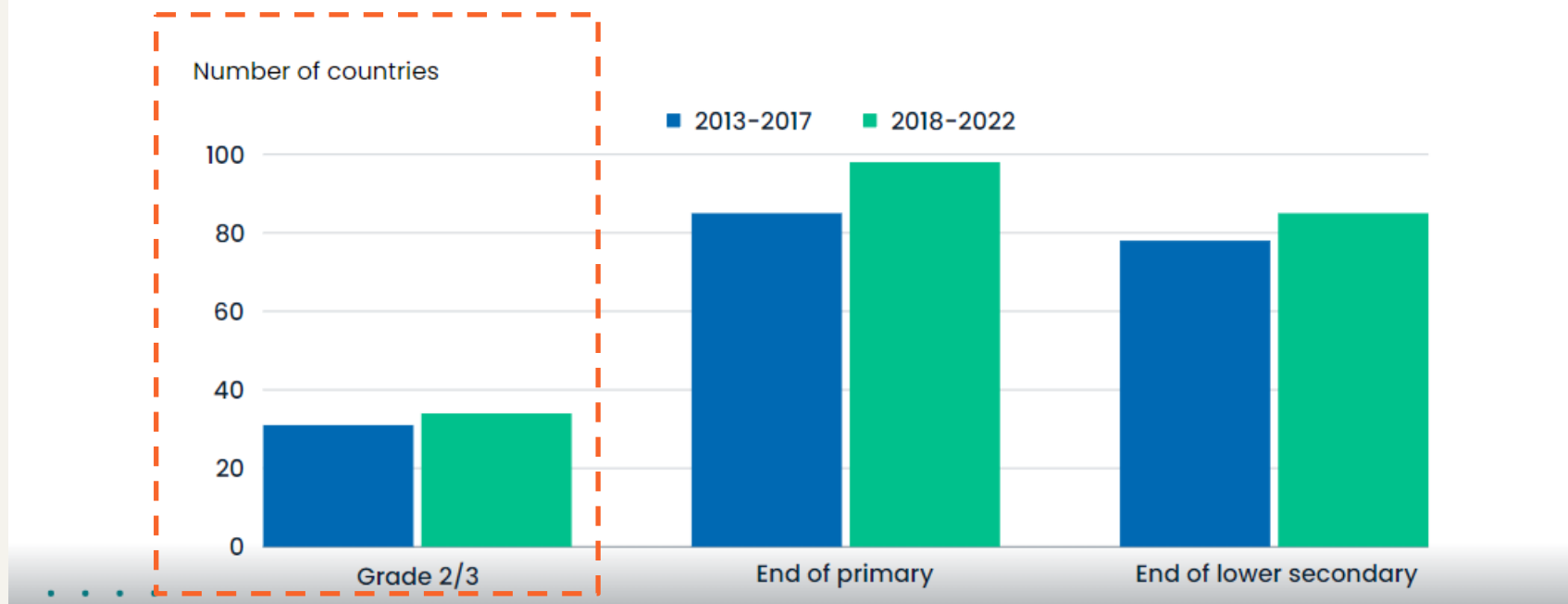
9 in 10 children in high-income countries **can** read by age 10

9 in 10 girls and boys in Sub-Saharan Africa **cannot** read by age 10

Despite majority completing 4 years of primary school

Yet, Only 34 countries report on foundational literacy and numeracy

Coverage of learning assessments, by level of education



This is a paradox for two reasons (1/2): Matthew effect

Learning Trajectories over 5-years for 1 Cohort

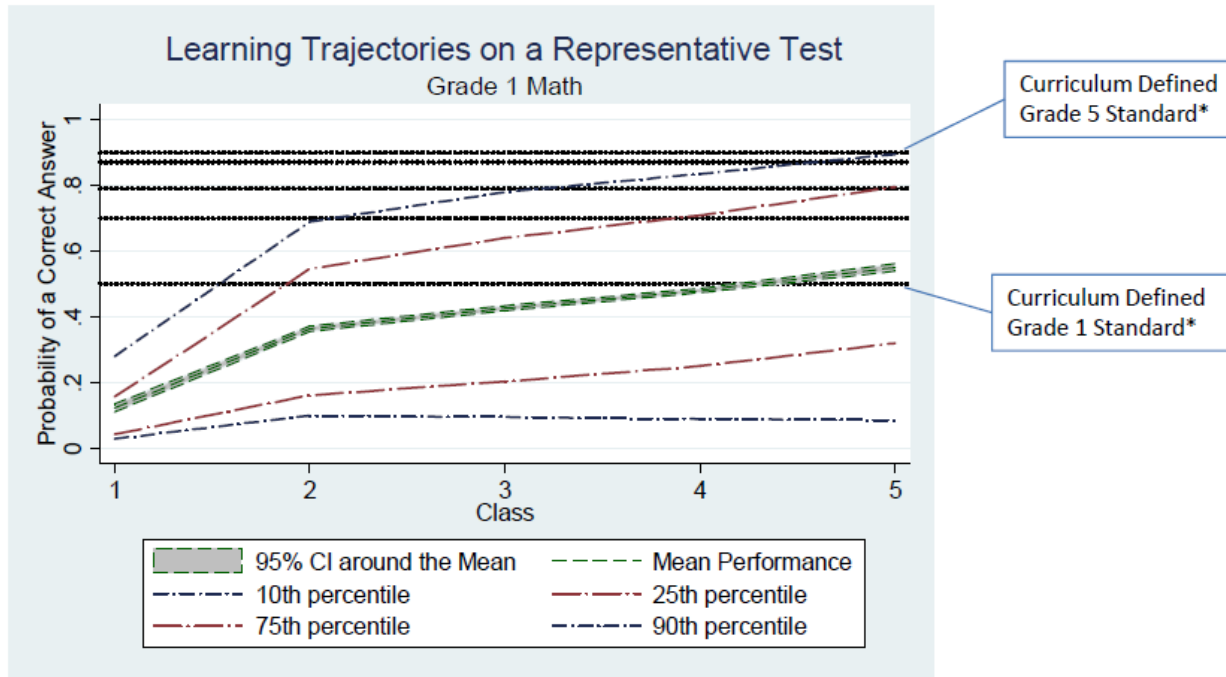
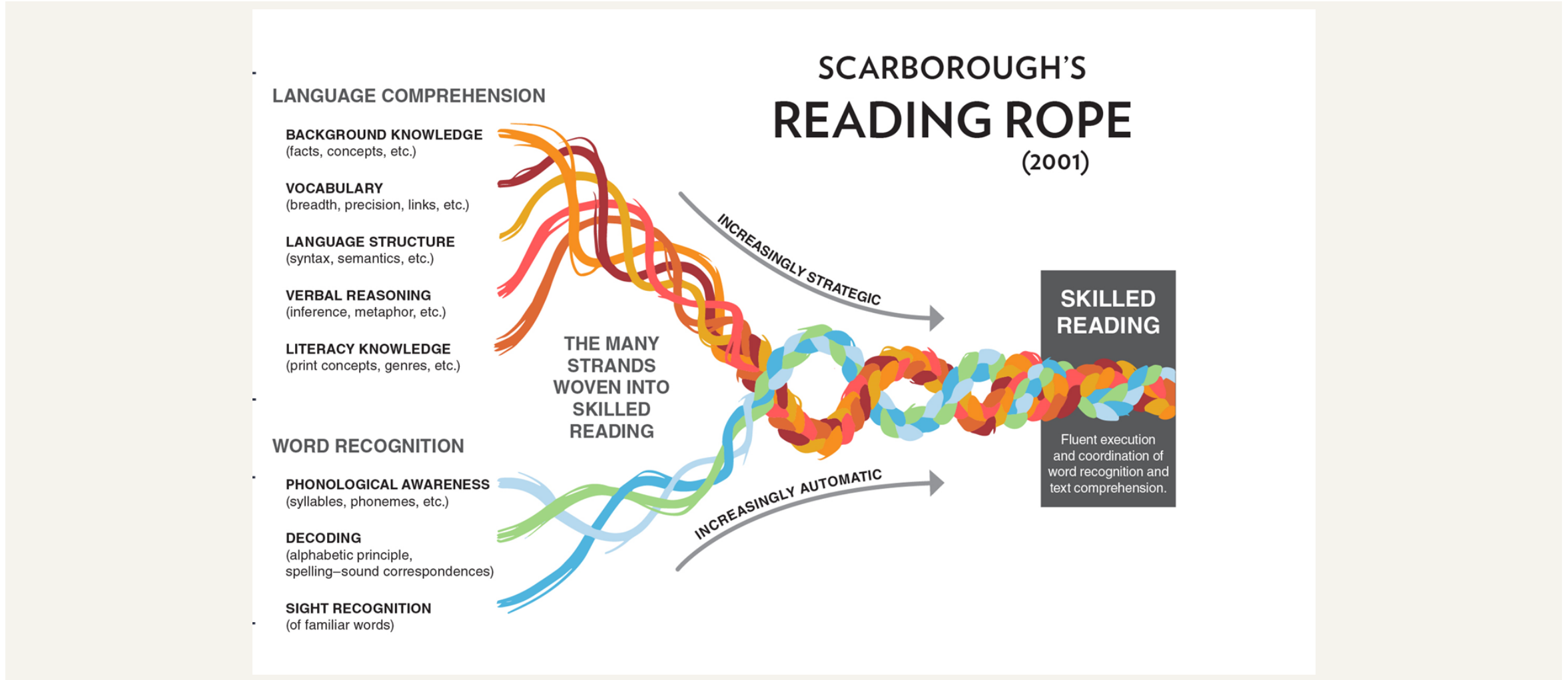


Figure 6. Learning Trajectories for Grade 1 Appropriate Material, Cohort 5 fractional polynomial fit

* Standard defined as the probability of a correct answer given the lowest ability level required to receive an average score of 50% in the universe of grade specific questions

- Clearly increasing variance of student performance over time
- Most of the learning happens in grades 1 and 2; the learning trajectories a lot flatter in grades 3, 4 and 5
 - Instruction probably better matched in early grades (large ‘access’ effects)
 - **Grade 3 is a key inflection point of when the textbooks expect you to “read to learn”, and this is where kids who have not made it essentially get left behind**
- The system essentially caters only to the top 10% of students (who are the only ones progressing at the rate of syllabus)
- Students at the bottom 10% of the distribution appear to learn nothing from spending many years in school

This is a paradox (1/2): We know what works



This is a paradox (2/2): We know what works

Both categorized as “great buys” and highly cost-effective: Median of 3.4 additional learning-adjusted years of schooling for \$100/student for SP and 1.9 additional learning-adjusted years of schooling for \$100/student for TaRL. (GEEAP, 2023)

Structured Pedagogy (SP) for literacy

SP is a coherent package of components that work together to improve classroom teaching & learning



Learning at Scale: 6 of the 8 most effective large-scale programs used structured pedagogy: Tusome (Kenya), SERI (India), Ghana Learning, LPT (Senegal) produced at least **0.5 sd** reading gains at large or national scale

Structured Pedagogy how-to guides and consultancy made available to the sector via RTI

Teaching-at-the-Right-Level (TaRL)

Assessment-informed-instruction approach for children that need extra support



TaRL tutor-led and 20-day camps (India) → **0.62-0.7 sd** increase in test scores

TaRL tutor-led remedial instruction 2 hours per day during school year (India) → **0.6 sd** improvement in second year

Remediation to respond to pandemic related learning losses

Assessment-informed-instruction to remediate learning losses. Key components include:



UNICEF created the RAPID framework for remediation, providing helpful policy structure

Remediation how-to guides recently published

Source: Science of Teaching, RTI Learning at Scale Interim Report, 2021; RTI, Structured Pedagogy how-to guides; TeachingattheRightLevel.org; Banerjee et al., Main-streaming an effective intervention: Evidence from randomized evaluations of “Teaching at the Right Level” in India, 2016; UNICEF, UNESCO, WB, Where are we on education recovery? 2022.

Three key points can help guide us forward

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An incredible amount of work – led by UIS- has happened in the last few years to create evidence-based standards for the measurement of learning (1/2)

Global proficiency framework for reading

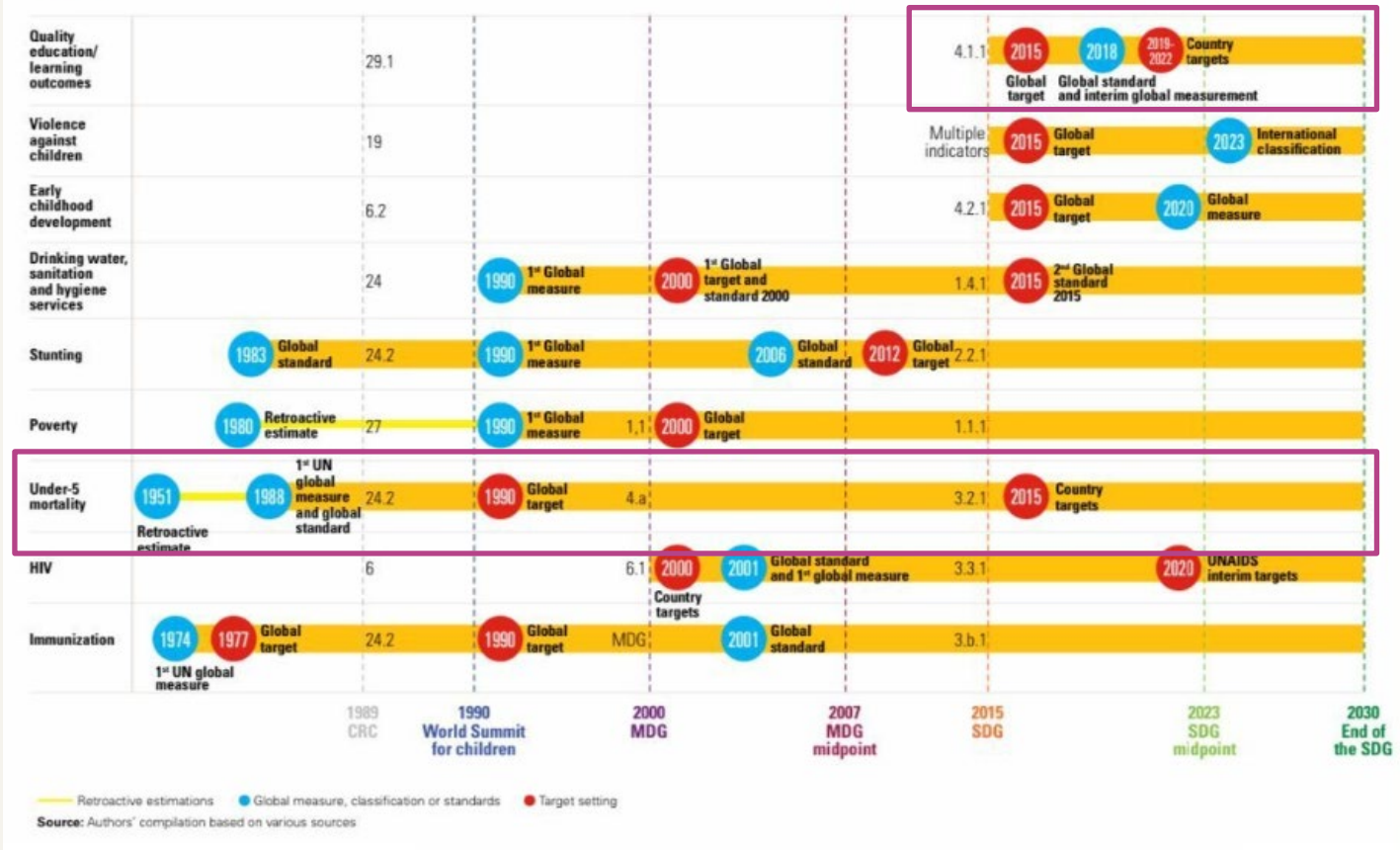
Domain	Construct	Subconstruct	Grade								
			1	2	3	4	5	6	7	8	9
C Comprehension of spoken or signed language	C1 Retrieve information at word level	C1.1 Comprehend spoken and signed language at the word or phrase level	x	x							
		C1.2 Recognize the meaning of <u>common grade-level words</u> in a short, <u>grade-level continuous text</u> read to or signed for the learner	x	x							
	C2 Retrieve information at sentence or text level	C2.1 Retrieve <u>explicit information</u> in a short <u>grade-level continuous text</u> read to or signed for the learner	x	x	x						
	C3 Interpret information at sentence or text level	C3.1 Interpret information in a short <u>grade-level continuous text</u> read to or signed for the learner		x	x						
D Decoding	D1 Precision	D1.1 Identify symbol-sound/fingerspelling and/or symbol-morpheme correspondences	x	x	x	x	x	x	x	x	x
		D1.2 Decode isolated words	x	x	x	x	x	x	x	x	x
	D2 Fluency	D2.1 Say or sign a <u>grade-level continuous text</u> at pace and with accuracy		x	x	x	x	x	x	x	x
R Reading comprehension	R1 Retrieve information	R1.1 Recognize the meaning of <u>common grade-level words</u>	x	x	x	x	x	x	x	x	x
		R1.2 Retrieve explicit information in a grade-level text by direct- or close-word matching		x	x	x	x	x	x	x	x
		R1.3 Retrieve explicit information in a grade-level text by synonymous word matching			x	x	x	x	x	x	x
	R2 Interpret information	R2.1 Identify the meaning of unknown words and expressions in a grade-level text			x	x	x	x	x	x	x
		R2.2 Make inferences in a grade-level text			x	x	x	x	x	x	x
		R2.3 Identify the main and secondary ideas in a <u>grade-level text</u>			x	x	x	x	x	x	x
	R3 Reflect on information	R3.1 Identify the <u>purpose</u> and audience of a text				x	x	x	x	x	x
		R3.2 Evaluate a text with justification				x	x	x	x	x	x
		R3.3 Evaluate the status of claims made in a text					x	x	x	x	x
		R3.4 Evaluate the effectiveness of a text							x	x	x

Global proficiency framework for mathematics

Domain	Construct	Subconstruct	Grade								
			1	2	3	4	5	6	7	8	9
N Number and operations	N1 Whole numbers	N1.1 Identify and count in whole numbers, and identify their relative magnitude	x	x	x	x	x	x	a	a	a
		N1.2 Represent whole numbers in equivalent ways	x	x	x	x	x	x	a	a	a
		N1.3 Solve operations using whole numbers	x	x	x	x	x	x	see integers		
		N1.4 Solve real-world problems involving whole numbers	x	x	x	x	x	x	see integers		
	N2 Fractions	N2.1 Identify and represent fractions using objects, pictures, and symbols, and identify relative magnitude			x	x	x	x	x	a	a
		N2.2 Solve operations using fractions				x	x	x	x	a	a
		N2.3 Solve real-world problems involving fractions				x	x	x	x	a	a
	N3 Decimals	N3.1 Identify and represent decimals using objects, pictures, and symbols, and identify relative magnitude					x	x	x	a	a
		N3.2 Represent decimals in equivalent ways (including fractions and percentages)					x	x	x	x	a
		N3.3 Solve operations using decimals					x	x	x	x	a
		N3.4 Solve real-world problems involving decimals					x	x	x	x	a
	N4 Integers	N4.1 Identify and represent <u>integers</u> using objects, pictures, or symbols, and identify relative magnitude								x	a
		N4.2 Solve operations using <u>integers</u>								x	x
		N4.3 Solve real-world problems involving <u>integers</u>								x	x
N5 Exponents and roots	N5.1 Identify and represent quantities using exponents and roots, and identify the relative magnitude								x	x	
	N5.2 Solve operations involving exponents and roots								x	x	
N6 Operations across number	N6.1 Solve operations involving <u>integers</u> , fractions, decimals, percentages, and exponents									x	
										x	
M Measurement	M1 Length, weight, capacity, volume, area, and perimeter	M1.1 Use non-standard and standard units to measure, compare, and order	x	x	x	x	x	x	x	x	a
		M1.2 Solve problems involving measurement				x	x	x	x	x	x
	M2 Time	M2.1 Tell time	x	x	x	x	x	a	a	a	a
		M2.2 Solve problems involving time	x	x	x	x	x	x	x	x	x
M3 Currency	M3.1 Use different currency units to create amounts	x	x	x	a	a	a	a	a	a	
G Geometry	G1 Properties of shapes and figures	G1.1 Recognize and describe shapes and figures	x	x	x	x	x	x	x	x	x
	G2 Spatial visualizations	G2.1 Compose and decompose shapes and figures	x	x	x	x	x	x	x	x	x
	G3 Position and direction	G3.1 Describe the position and direction of objects in space	x	x	x	x	x	x	x	x	x
S Statistics and probability	S1 Data management	S1.1 Retrieve and interpret data presented in displays	x	x	x	x	x	x	x	x	x
	S2 Chance and probability	S2.1 Calculate and interpret central tendency							x	x	x
		S2.2 Describe the likelihood of events in different ways						x	x	x	
A Algebra	A1 Patterns	A1.1 Recognize, describe, extend, and generate patterns	x	x	x	x	x	x	x	a	a
		A1.2 Evaluate, model, and compute with expressions								x	x
	A3 Relations and functions	A3.1 Solve problems involving variation (ratio, proportion, and percentage)								x	x
		A3.2 Demonstrate an understanding of equivalency			x	x	x	x	x	a	a
		A3.3 Solve equations and inequalities								x	x
		A3.4 Interpret and evaluate <u>functions</u>									x

An incredible amount of work – led by UIS- has happened in the last few years to create evidence-based standards for the measurement of learning (2/2)

Figure 7. Development of monitoring tools across different child rights



Source: UNICEF 2023

Why should you measure comparably

1. Facts don't speak for themselves, they need to be mediated by standards and theory. UIS/ UNESCO have provided frameworks anchored in the science of reading and learning math;
2. Comparable learning assessments provide complementary information to national systems;

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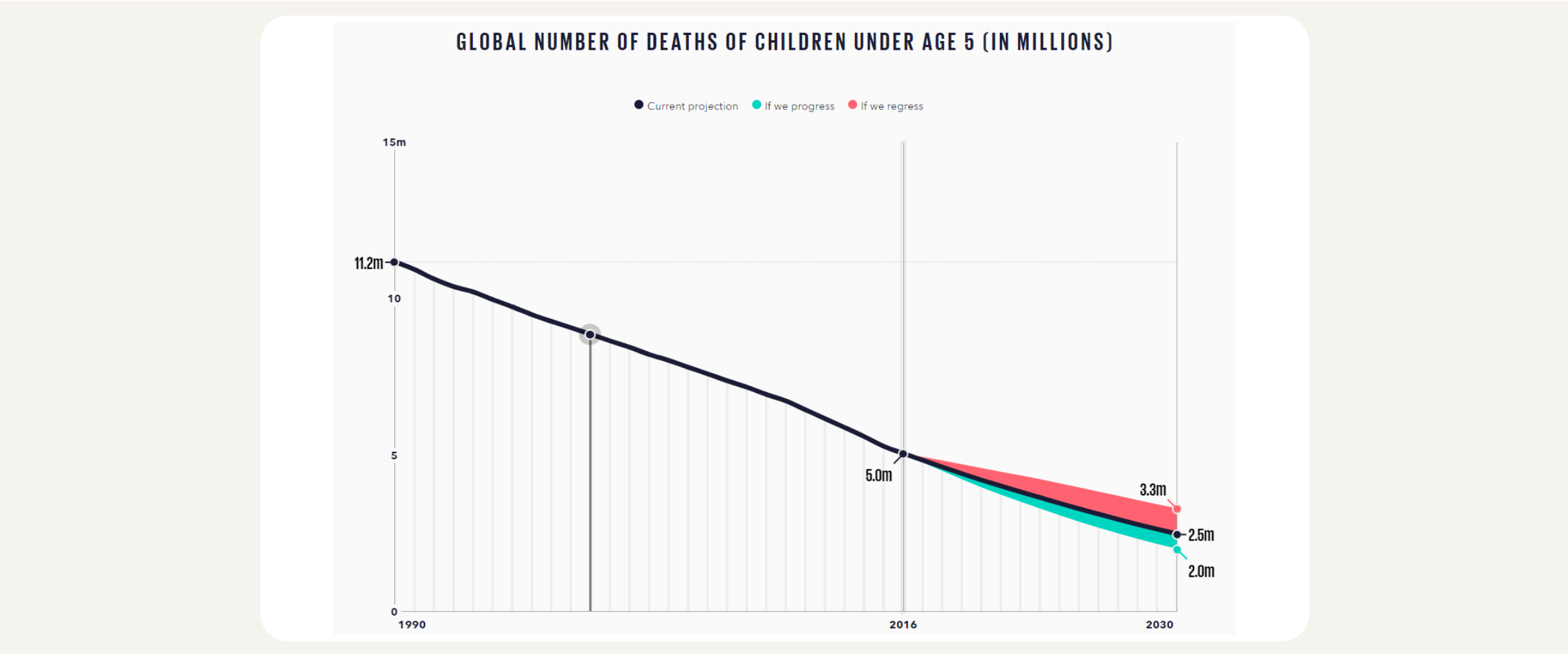


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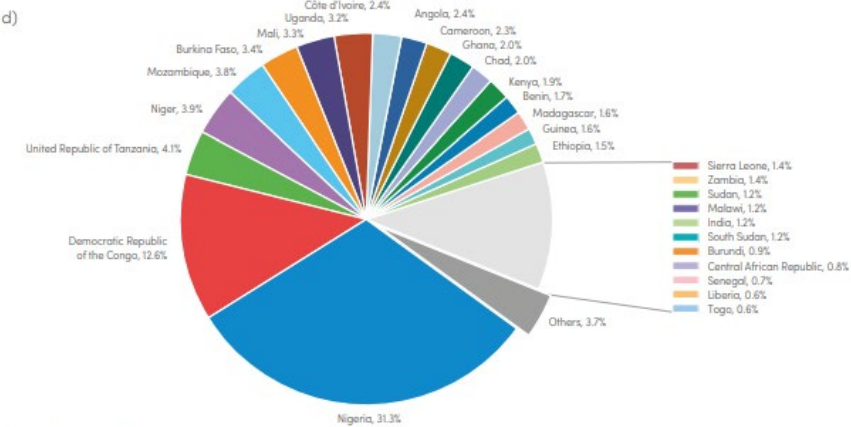
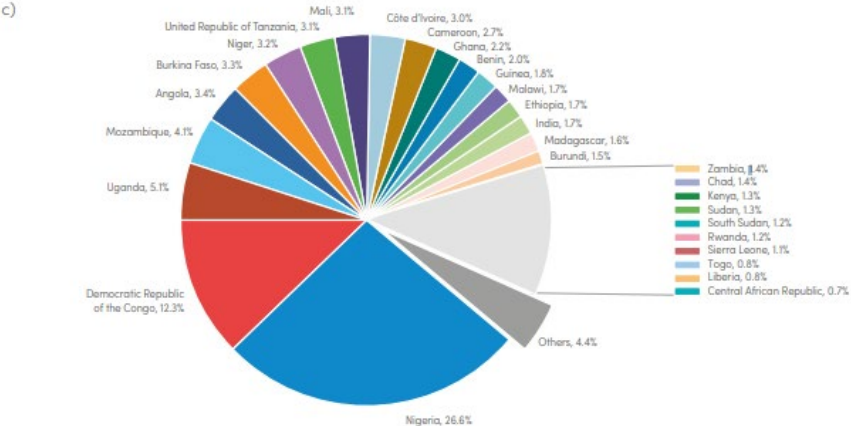


Example from health: the power of focusing on a simple metric



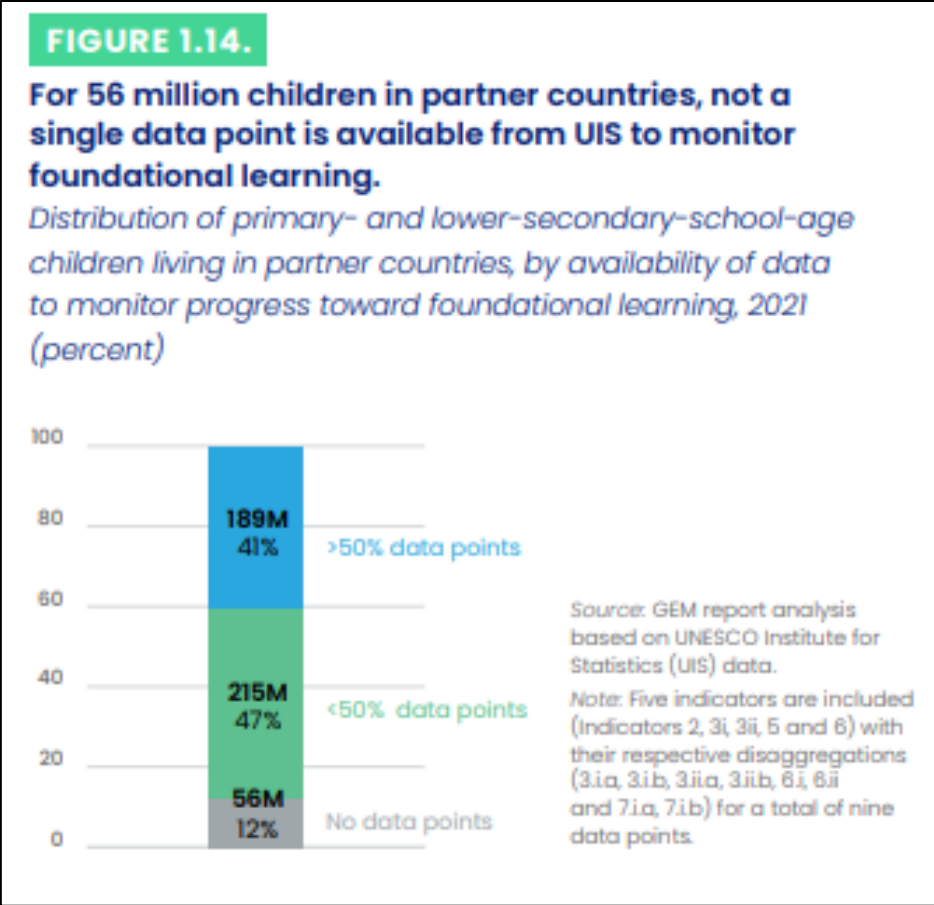
Malaria and education numbers

Latest WHO numbers on malaria cases (above) and death (below) -2022 : all countries report annually



WHO: World Health Organization.

In 2021: 56 million children in GPE partner countries did not have a single data points to monitor foundational learning



Excerpted from GPE 2023 Results Report

So what can be done?

So, what can be done?

1. Member-states are the decision-makers through the TCG and IAEG-SDG.
 - In terms of data collection : we should not let the perfect be the enemy of the good when it comes to measuring foundational literacy and numeracy and include as many data sources as possible
2. If your country is not currently reporting on SDG 4.1.1 a. There are resources that the International community can provide, in particular the Coalition for Foundational learning.
 - Resources available include the new AMPL tool and PASEC

Conclusion

