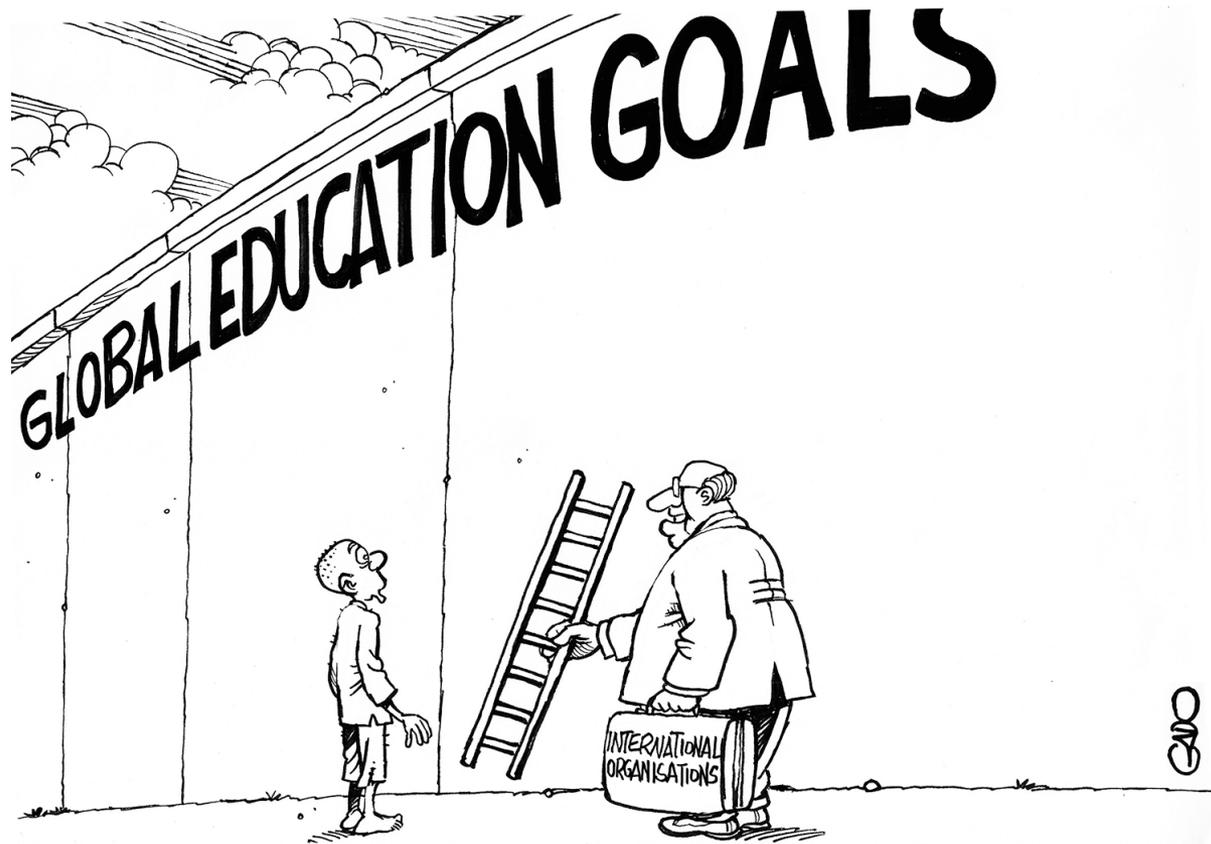




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How can IEA make a difference in measuring and monitoring learning in the 2030 agenda for sustainable development?



Aaron Benavot

Professor, University
at Albany-SUNY
&
Former Director,
UNESCO's Global
Education
Monitoring Report

Presentation at the IEA's 8th bi-annual **International Research Conference**
in Copenhagen, Denmark, June 25-28, 2019

I: The GEM Report: mandated to monitor progress in global education commitments

II: The 2030 Agenda for Sustainable Development and the emergence of a new accountability framework

III: Current efforts to monitoring progress in learning based on select SDG 4 targets and ways the IEA could possibly contribute to these efforts

IV: Concluding remarks

Part I

The GEM Report: mandated to monitor
progress in global education
commitments

What is the Global Education Monitoring (GEM) Report?

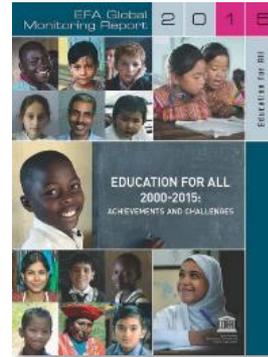
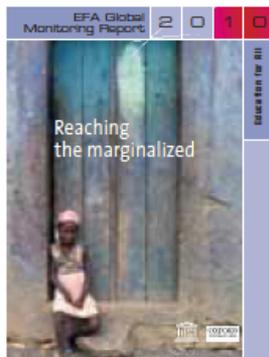
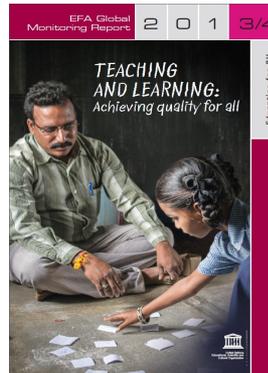
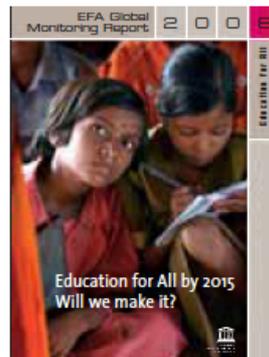
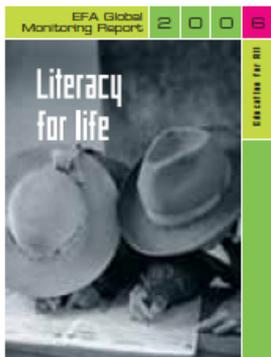
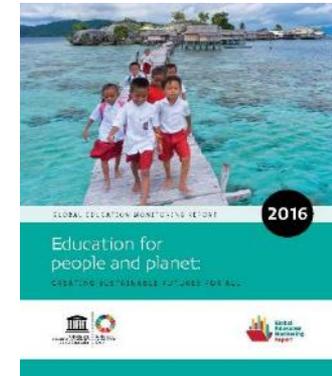
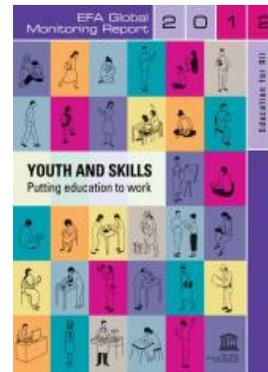
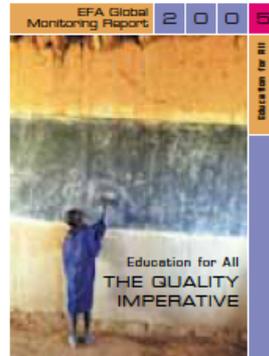
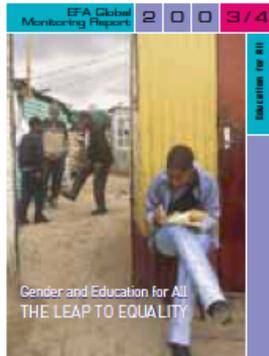
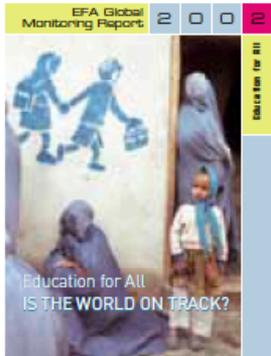
- An editorially independent, authoritative and evidence-based annual report on global state of education published by UNESCO.
- Previously mandated to monitor progress of the 6 Education for All Goals (2000-2015); now monitors education targets in the 2030 Agenda for Sustainable Development, especially those under the global goal on education, SDG 4.
- Draws on latest available data and evidence and commissions research from leading experts around the world, to analyze national, regional and global progress in education.
- Publishes a full report, executive summary, gender review and series of policy papers each year.
- Annually launched in 70-80 countries and at the UN, often attended by high-level ministerial officials, representatives of civil society, academia and int'l organizations
- Focuses on education inequalities, including learning, both among & within countries through World Inequality Database on Education (WIDE). www.education-inequalities.org/



UNESCO global monitoring reports in education

2002-2015: 12 Education for All Global Monitoring Reports (GMR)

2016-2019: 3 Global Education Monitoring (GEM) Reports



Future reports
 2020: Inclusion & education
 2021: The role of non-state actors in education
 2022: ICT and education

Other GEM Report materials: A wealth of knowledge

Full Report and Summary in all UN languages

Summary in other languages:

- Farsi
- German
- Hindi
- Indonesian
- Japanese
- Korean
- Lao
- Nepali
- Portuguese
- Swahili
- Thai
- Urdu
- Vietnamese
- Khmer

Annual **Gender Review and Youth Report**



An **online and mobile-phone version** of the Summary is available



A **social media pack** is available in all UN languages

en.unesco.org/gem-report/

Blog: gemreportunesco.wordpress.com

Hundreds of background papers

Videos with key messages

Powerpoint presentations and posters in English, French and Spanish

A **fold out flyer** with the key messages

Policy briefs containing key recommendations for policy makers

Part II

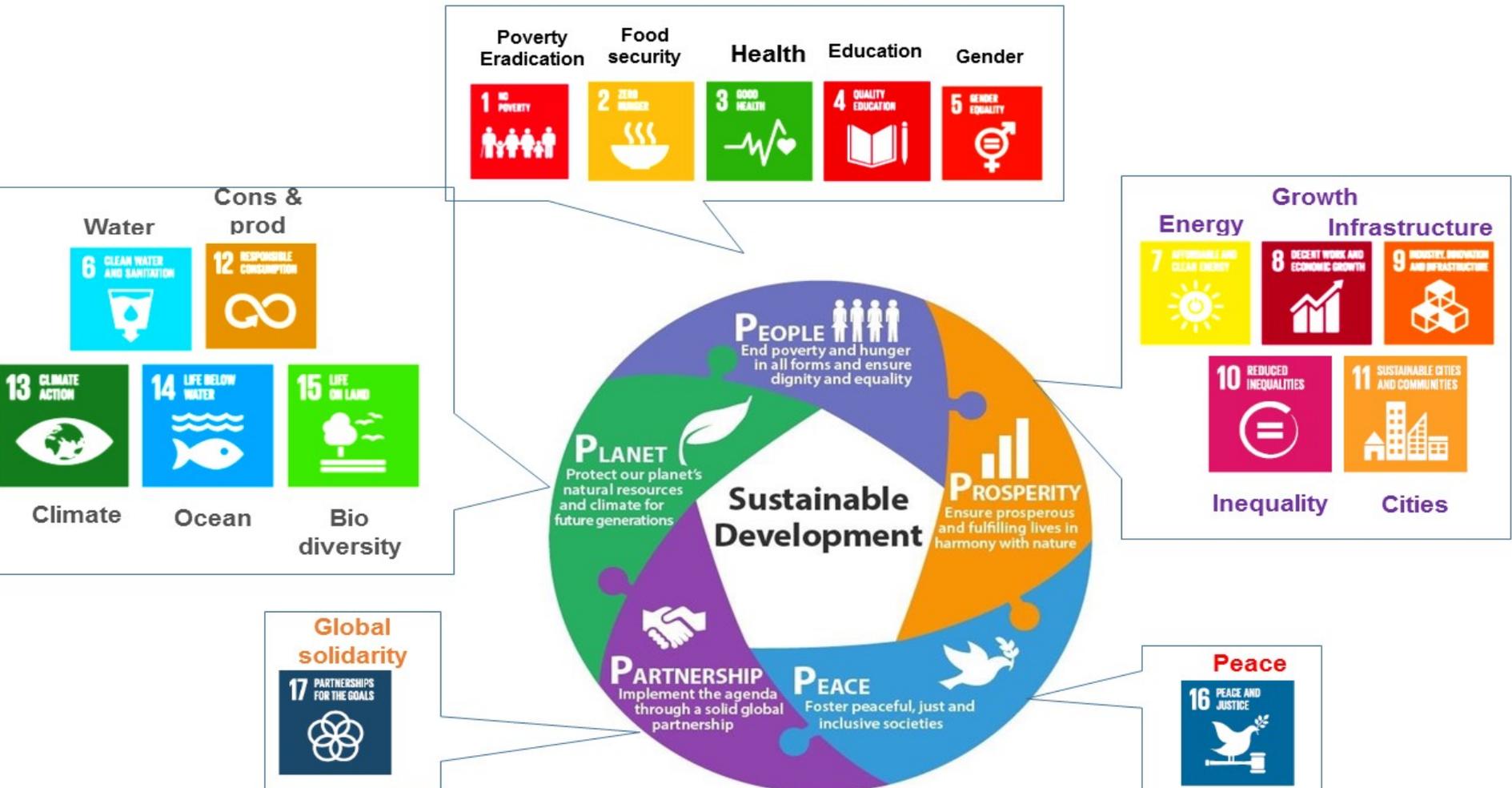
The 2030 Agenda for Sustainable Development
(and 17 SDGs) and the emergence of a new
global accountability framework

How did we get here? Merging the development, sustainability and education agendas into one universal agenda

- **Merging of development (Millennium Development Goals) and environment agendas: Earth Summit 1992 (Rio), World Summit on SD, 2002 (J-berg), UN Conference of Sustainable Development, 2012 (Rio +20)**
- In 2013 UN establishes country-led Open Working Group (OWG) to negotiate merged post-2015 agenda
- UN conducts *World We Want* survey: almost 10 million people participate
- **Merging post-2015 education and development agendas: Education for All (EFA) process concludes at Global Education Meeting in Muscat Oman, May 2014, when reps of int'l educ community decide to commit to post-2015 sustainability agenda**
- OWG agrees to **separate** Education Goal (SDG 4) together with 7 Targets and 3 Means of Implementation in July 2014. Proposed education goal reflects most, though not all, priorities of international education community
- UN SG synthesis report (Dec 2014) proposes 17 SDGs & 169 targets
- **World Education Forum: Incheon Declaration (May 2015): Ratifies work of OWG**
- UN adopts 2030 Agenda 2030 for Sustainable Development (September 2015) and final formulations of 17 goals and 169 targets
- **UNESCO member states adopt Education 2030 Framework for Action (Nov 2015)**

The 2030 for Sustainable Development Goals supporting Planet, People, Prosperity, Peace and Partnership

UN Member States adopted 17 SDGs and 169 targets in Sept. 2015 and, two years later, 230 global indicators to review country progress on the targets



Global Goal on Education (SDG4)



“Ensure inclusive and equitable quality education & promote lifelong learning opportunities for all”

Vision and Principles

Targets

- A single universal agenda: Education 2030 = SDG 4
- Education: Human right and public good
- Comprehensive, holistic, ambitious, aspirational and universal
- Transformative, equity oriented ‘leaving no one behind’
- Lifelong learning approach focusing on skills for work and life
- Focus on quality and learning outcomes
- Addresses unfinished EFA/MDG agenda and current and future challenges
- Represents an EFA+ agenda

- 4.1 Quality primary & secondary education
- 4.2 Early childhood & pre-primary education
- 4.3 Equal access to TVET & higher education
- 4.4 Relevant skills for work
- 4.5 Gender equality & equal access for all
- 4.6 Youth and adult literacy
- 4.7 Education for Sustainable Development and Global Citizenship Education
- 4.a Learning environments
- 4.b Scholarships for higher education
- 4.c Teachers

What is distinctive about SDG4 and its 10 targets, relative to earlier int'l education policy agendas?

- Part of a **universal** agenda, applicable to all countries and not just those in the Global South
- More **ambitious**: seeks to expand and transform education systems (eg, universal primary **and** secondary education) in ways that are without historical precedent, especially in the time frame allotted (2030)
- More **comprehensive** set of targets: includes formal and non-formal education; early childhood development and pre-primary education, 12 years of basic schooling, TVET, higher education, adult education and lifelong learning opportunities
- More **outcome** oriented: relevant and effective learning outcomes in primary and secondary education; literacy and numeracy among youth and adults; non-cognitive skills for employment & decent work; knowledge and skills for environmental sustainability and global citizenship
- Focuses on the **aims** (sustainability, dignity, inclusion) and **contents** of schooling and not just universal access to, or completion of, primary education
- Focuses on **equity** issues, disparities, and 'leaving no one behind'

In terms of learning, the SDG4 targets have significantly expanded the learning agenda

- SDG4 promotes a **broader learning agenda** in terms of: exposure to diverse curricular domains and school subjects; acquiring relevant skills and competencies for work and life; and importance of relevant values, attitudes and behaviour.
- SDG4 promotes **learning agenda that is lifelong and life-wide** (home, school, workplace, community)
- SDG4 promotes a **universal learning agenda** relevant to the Global South and the Global North

The SDG4 targets have also reinvigorated earlier debates the kinds of learning that can and should be measured and monitored at global level

Consider debates some 30 years ago (May 1990) during the **World Conference on Education for All (EFA)** in Jomtien, Thailand, where representatives from 150 governments and NGOs, established **the Education for All agenda - an 'expanded vision of basic education'**. This agenda committed national governments, international agencies and NGOs to meet the **basic learning needs** of **all children, youth and adults** by the year 2000. Beyond universal access to primary education, the Jomtien meeting agreed:

- To increase the focus on **learning** in general (knowledge, skills, values) and **learning outcomes** in particular
- To broaden **the means and the scope of basic education**: '**Learning begins at birth**', provision of education should be diversified; more non-formal education
- To enhance the **environment for learning**: nutrition, health care, physical and emotional supportive environment

Final document at World EFA conference in Jomtien captures well the debates around learning

“The focus of basic education must be on **actual acquisition and outcomes**, rather than exclusively upon enrolment, continued participation in organized programmes and completion of certification requirements...”

“Emphasis ought to be on the access to and achievement of **learning that is relevant to the needs of the individual and his or her community**.”

“One key issue...is the **minimum common level of learning** that must be achieved by . . . learners. A difficult aspect...will be **testing the learning level** or performance of individual learners . . . The **ultimate goal**...is that **children** are educated: that they **are literate and numerate, and** that they **have life skills**.”

Final document from World Conference on EFA (Jomtien Thailand) focuses on learning for what purposes

“While the emphasis on learning acquisition was welcomed, some interventions cautioned against **too utilitarian an approach** to defining ‘an acceptable level of learning’”

“The point about learning is that it is **a process** of growth, and not a product to be acquired: **learning is a journey, not a destination.**”

“The development of **the creative potential** of the individual, of imagination, of spiritual and aesthetic values, of community spirit, are justifiable in their own right, and **not easily measurable in the short term.**”

In short, the SDG4 targets have significantly expanded the learning agenda and also reinvigorated earlier debates on which kinds of learning can and should be measured and monitored at the global level. These issues continue to be debated today, a point I shall return to below

On the current debate, see, for example:

“What Is There Not to Like About a Global Learning Metric?” by William C. Smith & Aaron Benavot. NORRAG Blog, May 2019

Chapters on quality education and learning in forthcoming volume entitled ***Grading Goal Four: Tensions, Threats and Opportunities in the Sustainable Development Goal on Quality Education***. Leiden: Brill International.

Education & learning also in other SDG targets & indicators



Health and well-being

Target 3.7: By 2030, ensure universal access to sexual and reproductive health-care services, including for family planning, information and **education**, and the integration of reproductive health into national strategies and programmes



Gender equality

Global Indicator: Number of countries with laws and regulations that guarantee women aged 15-49 years access to sexual and reproductive health care, information and **education**



Decent work and economic growth

Target 8.6: By 2020 substantially reduce the proportion of youth not in employment, **education** or training (NEET)



Responsible consumption & production

Target 12.8: By 2030 ensure that people everywhere have the **relevant information and awareness for sustainable development and lifestyles** in harmony with nature



Climate action

Target 13.3: Improve **education**, awareness raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction, and early warning



Peace, Justice and Strong Institutions

Target 16.7: Ensure responsive, inclusive, participatory and representative decision-making at all levels

The 2030 Agenda also elaborated new accountability frameworks: How are countries meant to 'follow up and review' progress in relation to the 17 SDGs & 169 targets?

1) Through **Voluntary National Reviews**

2) Through an **elaborate indicator framework** with different indicators and measures

- **Global** indicators = at least one per target
- **Thematic** indicators = globally comparable indicators
- **Regional** indicators
- **National** indicators

*Source: *Synthesis Report of UN Secretary General* (December 2014)

"The 2030 Agenda is our roadmap and its goals and targets are tools to get there." - Secretary-General António Guterres

Country Follow up and Review of the SDGs: Voluntary National Reviews

“Conduct regular and inclusive reviews of progress at the national and sub-national levels, which are country led and country driven...” (para 79 of 2030 Agenda for SD)

UN provides common reporting guidelines for Voluntary National Reviews

Until now, 158 VNRs have been conducted: 22 in 2016, 43 in 2017, 46 in 2018, 47 in 2019. More than 140 countries have submitted VNRs, some twice.

VNRs are an important source for reviewing country progress on the SDGs, including SDG4.

Main accountability framework to review SDG 4 progress



Global Goal on Education:

“Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”

7 Targets and **3 Means of Implementation**
(10 targets)

11 Global Indicators and **32 Thematic Indicators**

Global indicators are discussed and finalized by InterAgency Expert Group-SDGs, which uses a 3 tier classification system to characterize each indicator

Thematic indicators finalized by Technical Cooperation Group – UIS Secretariat

Different **measures** are proposed and used for the same **global or thematic indicator**

Participation in global SDG indicator framework is country-led and not required, which is surprising given its importance for reviewing global progress

When UN member states adopted the global indicator framework in July 2017 (after 2 years of negotiation) the document stated:

The UN “adopts the global indicator framework...as a **voluntary** and **country led** instrument”

“**official [national] statistics constitute the basis**...for the global indicator framework, while recommending that **national systems explore ways to integrate new data sources**...”

“**International organizations shall consult...countries to produce and validate...estimates before publication**...”

Learning is central to SDG 4 targets & global indicators

SDG4 Target

4.1 By 2030, ensure that all girls and boys **complete free, equitable and quality primary and secondary education** leading to **relevant and effective learning outcomes**

4.2 By 2030, ensure that **all** girls and boys have **access to quality early childhood development, care and pre-primary education** so that they are **ready for primary education**

4.3 By 2030, ensure **equal access for all** women and men **to affordable and quality technical, vocational and tertiary education**, including university

4.4 By 2030, substantially increase the number of youth and adults who have **relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship**

Global indicator(s)

- **Percentage of children/young people at the end of each level of education achieving at least a minimum proficiency level in (a) reading and (b) mathematics**
- **Percentage of children under 5 who are developmentally on track** in health, learning and psychosocial well-being
- **Participation rate in organized learning** (one year before official primary entry age)
- **Participation rate of youth and adults in formal and non-formal education** and training in the last 12 months, by sex
- **Proportion of youth and adults with information and communications technology (ICT) skills**, by type of skill

Learning is central to SDG 4 targets & global indicators

SDG Target

4.5 By 2030, eliminate **gender disparities in education** and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

4.6 By 2030, ensure that **all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy**

4.7 By 2030, ensure that **all learners acquire the knowledge and skills needed to promote sustainable development**, including, among others, **through education for sustainable development** and sustainable lifestyles, human rights, gender equality, promotion of **a culture of peace** and non-violence, **global citizenship** and appreciation of **cultural diversity** and of culture's contribution to sustainable development

Global indicator for each target

- **Parity indices** (female/male, urban/rural, bottom/top wealth quintile and others) **for all indicators** that can be disaggregated
- **Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex**
- **Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment**

Learning in the SDG 4 targets & global indicators

Targets

4.a Build and upgrade education **facilities** that are child, disability and gender sensitive and provide safe, non-violent, **inclusive and effective learning environments** for all

4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programs, in developed countries and other developing countries

4.c By 2030, substantially **increase the supply of qualified teachers**, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States

Global indicators

- **Percentage of schools with access to (i) electricity; (ii) internet for pedagogical purposes (iii) basic drinking water and (iv) basic sanitation facilities; and (v) basic handwashing facilities**
- Volume of ODA flows for scholarships by sector and type of study / Total net ODA for scholarships and student costs in donor countries (types of aid E01 and E02)
- **Percentage of teachers in (i) pre-primary (ii) primary, (iii) lower secondary and (iv) upper secondary education who have received at least the minimum organized teacher training (i.e. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country**

Thematic Indicators of Learning in SDG 4

Thematic Framework

4.4.2. Percentage of youth/adults who **have achieved at least a minimum level of proficiency in digital literacy skills**

4.7.4. Percentage of students of a given age group (or education level) showing **adequate understanding of issues relating to global citizenship and sustainability**

4.7.5. Percentage of 15-year-old students showing **proficiency in knowledge of environmental science and geoscience**

Overall Framework for measuring and monitoring SDG 4 progress

Policy commitment → 2030 Agenda for Sustainable Development (with its 17 SDGs)

Goal and targets → SDG 4 consisting of 10 targets (other SDGs with other relevant targets)

SDG4 Indicators → 11 Global indicators and 32 thematic indicators

Measures → Specific measures of indicators at country, regional or international level, not all of which need to be comparable

Key questions:

What then are the challenges countries face in making good on their commitments to SDG4 and to improving learning environments and learning outcomes?

How might the IEA help in addressing those challenges?

Initial list of country challenges, not all of which are directly related to IEA support

- More important education priorities (e.g., expansion, retention, inclusion, and completion) than a focus on learning
- **Weak consensus around a shared set of learning aims and learning domains in basic education (a contested curriculum)**
- Lack of political will to systematically measure and assess learning and to use evidence to inform policy formation
- **Insufficient capacity and/or expertise to robustly measure and monitor learning levels**
- Donor preferences around learning measurement differ from national or international commitments
- **Are national efforts to measure and monitor learning fit for purpose? (whose purpose?)**
- **Can and should national learning data be aligned with global indicators and measures?**

Part III

Current efforts to monitoring progress in learning based on select SDG 4 targets and ways the IEA could possibly contribute to these efforts

Targets 4.6, 4.7, 4.a, 4.1

TARGET 4.6:

Literacy and numeracy

Target 4.6 By 2030, ensure that **all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy**

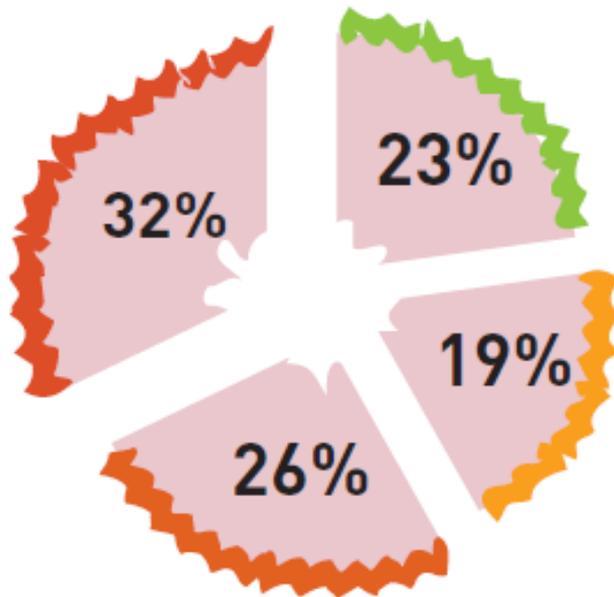
Global Indicator (4.6.1):

Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex

From 2000 to 2015 focus on EFA Goal 4: “Achieve a 50 percent improvement in levels of adult literacy by 2015, especially for women, and equitable access to basic and continuing education for all adults”

Worldwide the global youth literacy rate increased from 87% to 91% between 2000 & 2015; the adult literacy rate increased from 81% to 85% in this period

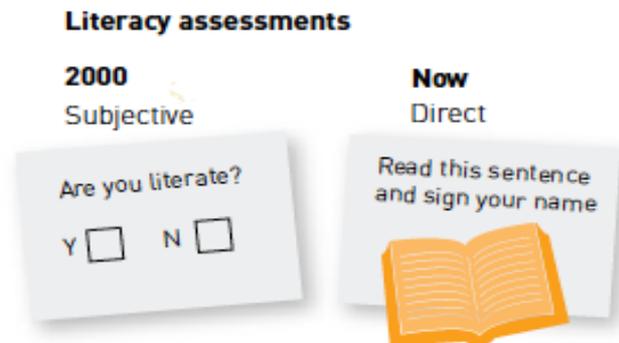
Thus the adult illiteracy rate fell by only 23% between 2000 and 2015, far short of the 50% target.



At the country level only a quarter of countries reduced their adult illiteracy rates by 50%; a further 19% were close to the target. The rest of the countries were far from the target.

Conventional literacy data over-report adult literacy levels

- Conventional literacy data are mainly derived from indirect or self assessments, mainly in censuses schedules
- Such assessments **inflate** literacy levels as they are based on reports by household heads or the adults themselves.
- **We know this from comparing indirect with direct assessments of literacy in the same country.**
- **These comparisons shows that indirect assessments overestimate literacy levels by about 8 percentage points, and thus understate the number of adults with low literacy skills.**
- Interestingly, more countries are conducting direct literacy assessments: during 1995-2004 period the literacy rate of only 1 country was assessed directly as compared to 22 countries in the period 2005-12.

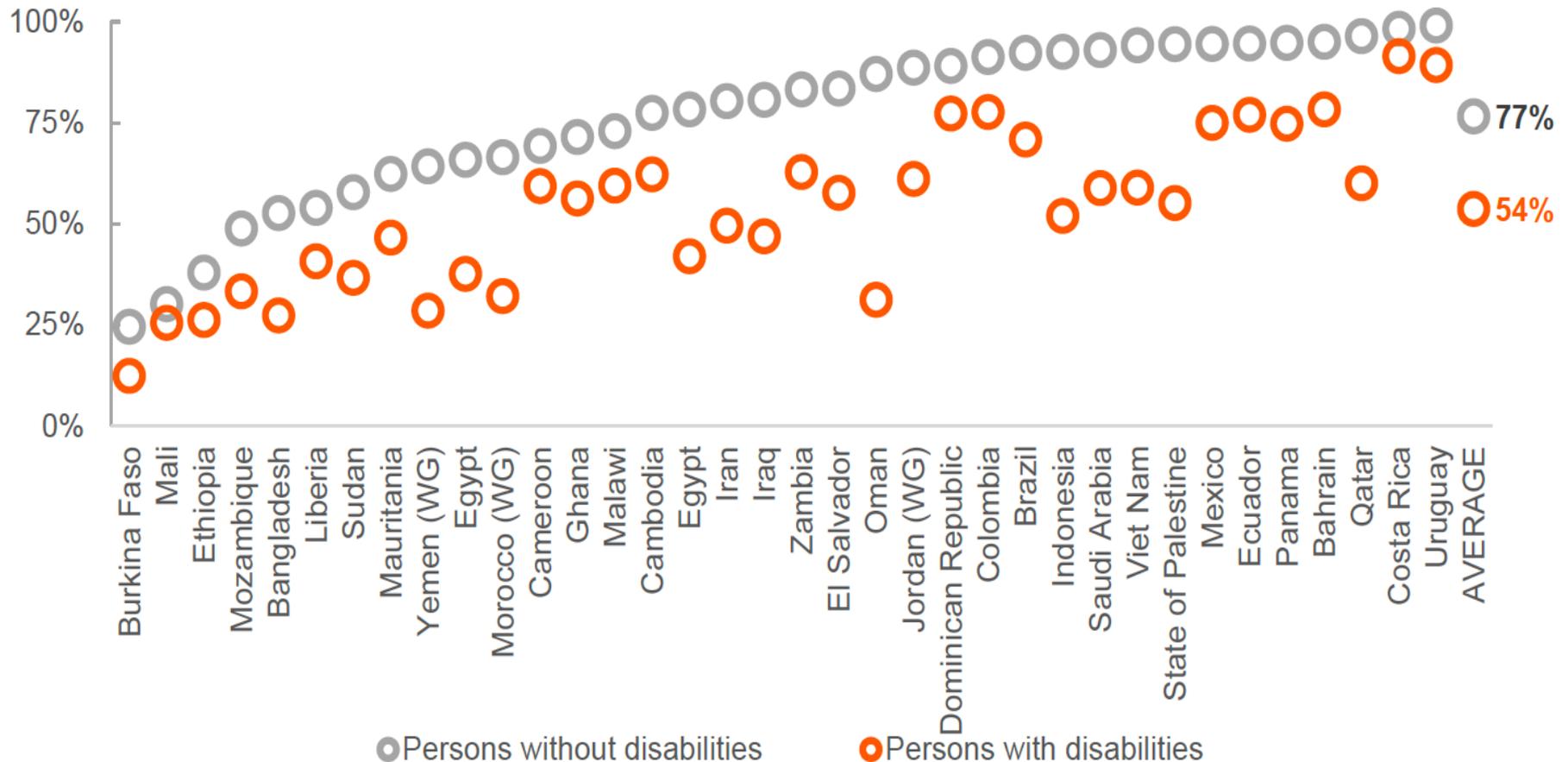


		2005-2012			
		Household declaration	Self declaration	Literacy test	Total
1995-2004	Household declaration	27	24	11	62
	Self declaration	4	29	11	44
	Literacy test	0	1	0	1
Total		31	54	22	107

(Numbers refer to # of countries)

‘Leaving no one behind’: conventional literacy data can still be used to highlight inequalities

Figure II.33. Adult literacy rate for population 15 years and older, by disability status, in 36 countries, around 2010.



More countries are moving from measuring literacy/illiteracy to looking at different levels of functional literacy

Literacy is best understood as a continuum of functional literacy skills and not as an either/or (literacy/ illiteracy) dichotomy

Working definition of **functional literacy** for global indicator 4.6.1:

“**Literacy is the ability to identify, understand, interpret, communicate and compute, using printed and written materials associated with varying contexts. It involves a continuum of learning in enabling individuals to achieve their goals, to develop their knowledge and potential, and to participate fully in their community and wider society**” (UNESCO, 2005)

Three surveys (OECD PIAAC, UIS LAMP, WB STEP) assess literacy skills on a continuum and paint an important picture: even in high income countries (traditionally assumed to have achieved universal adult literacy) **one in seven adults are functionally illiterate**: either they never become proficient readers while in school or have lost their reading skills.

Efforts to create a global metric of functional literacy

A scheme for determining a fixed level of functional literacy (4.6.1)

Level	Description/difficulty level	Comments	Viet Nam (STEP)	Singapore (PIAAC)
F	Higher levels			0.4
E	Adequate Literacy Level Skills related to PIAAC lower Level 3 (276–325 score range)		2.5	9.7
D	Full Functional Literacy Level Skills related to PIAAC Level 2 (226–275 score range)		29.9	32.3
C	Early Functional Literacy Level Skills related to PIAAC Level 1 (176–225 score range)	Minimal ("Fixed") level for reporting for high- and upper-middle-income countries	34.7	30.5
B	Sentence Literacy Level (126–175 score range)	Minimal ("Fixed") level for reporting for low-income countries	20.3	16.0
A	Pre-Literacy Level (75–125 score range)		12.7	10.1

Source: **Monitoring adult literacy for Indicator 4.6.1.**

Literacy Core Group tentative recommendations for the Global Alliance to Monitor Learning (GAML5), 10 October 2018, UNESCO Institute for Lifelong Learning

Avenues of IEA Support?

- **Consider how conceptual and analytical strategies developed for PIRLS/TIMSS can be applied to measuring functional literacy and numeracy among adults**
- **Work with experts at UIL, UIS and the GAML (Global Alliance to Monitor Learning) taskforce involved in improving the measurement of SDG 4.6.1**
- **Work with IEA country members who are developing new (or innovative) measurement strategies of adult literacy and numeracy**
- **Support research of outcomes of adult literacy programs and adult non-formal basic education**
- **Collaborate with ILO initiatives examining the outcomes of workplace learning and training**

TARGET 4.7:

Sustainable development and global citizenship

Target 4.7 “By 2030, ensure all learners acquire knowledge and skills needed to promote sustainable development, including among others through **education for sustainable development** and sustainable lifestyles, **human rights, gender equality**, promotion of a **culture of peace** and non-violence, **global citizenship**, and appreciation of **cultural diversity** and of culture’s contribution to sustainable development.

Global indicator 4.7.1:

Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment

Why is Target 4.7 important?

- Target 4.7 touches upon **social, humanistic and moral purposes** of education. Refers to priorities set out in the Universal Declaration of Human Rights
- It explicitly **links the education goal (SDG4) to other SDGs** and captures the transformative aspirations of Agenda 2030
- Target 4.7 refers to **all learners and all education levels**: Strong lifelong learning perspective.
- The knowledge and skills learners are meant to acquire in target 4.7 are **reflected in broad umbrella concepts, education for sustainable development and global citizenship education.**

For further discussion of Target 4.7 hear my FreshEd podcast:

<http://www.freshedpodcast.com/>

However.....

- **Concepts in Target 4.7 have different ideological/political histories, and understandings,** even in international documents.
- **Difficult to define a consensual analytic framework** of the concepts embedded in Target 4.7, even among experts
- **Few large-scale international surveys of the knowledge and skills** in areas such as sustainability, climate change and global citizenship have been undertaken.
- **Existing surveys** of 4.7 knowledge and skills (eg. Sulitest) **have many limitations:** weak concept construction, limited country coverage and data comparability, focus on higher education students.
- **Some emerging attempts to measure the global indicator 4.7.1:** See below and 2016 GEM Report as well as new report on GCED and ESD learning being launched in Hanoi next week “ESD and GCED Up Close”



Monitoring Global indicator 4.7.1: 1974 recommendation reporting

Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed in (a) *national education policies* (b) *curricula* (c) *teacher education* and (d) *student assessment*.

- Existing reporting mechanism on the ***UNESCO Recommendation concerning Education for International Understanding, Co-operation and Peace and Education relating to Human Rights and Fundamental Freedoms*** (adopted in 1974 by the 18th UNESCO General Conference).
 - Compatible with the concepts contained in Target 4.7.
 - Member States have the obligation to report every four years.
 - UNESCO Commissioned a review of past country reports on the implementation of the 1974 Recommendation for the reporting cycles for which data are available (cycles 3-5).
 - 94 reports were analyzed (35 from 2005-2008 and 57 from 2009-2016)
 - The data obtained will also be used for Target 12.8 on sustainable consumption, may inform Target 13.3 on climate change education.
- ➔ 6th Consultation ended in January 2017. 83 countries have submitted a national report. Report to be submitted to UNESCO's General Conference in November 2017.
- Focal point: UNESCO ESG

Dashboard of five measures of indicator 4.7.1

1) National education policy, 2) Teacher education, 3) Student assessment, and two for Curricula: 4) Curricula content and 5) Curricula resources

National education policies is a combined indicator of 3 items (n=77)

- IV.1 - To what extent are the guiding principles of the 1974 Recommendation reflected in your constitution or domestic legislation?
- IV.2 - To what extent are the principles of the 1974 Recommendation reflected in your country's current education policy/ies and frameworks?
- IV.25 - How would the current overall implementation of the principles 1974 Recommendation be rated?

Teacher Education is a combined indicator of 3 items (n=69)

- IV.12 - Which of the following, or similar, principles and topics are taught in your formal educational system as part of the curriculum?
- IV.13 - Teachers for which level of education received training that reflects the principles and topics mentioned earlier?
- IV.14 - Please indicate the overall percentage of teachers estimated to have been trained on these principles and topics through in-service training and teacher professional development.

Student Assessment is a combined indicator of 3 items: (n=64)

- IV.15(a) - Are the principles and topics mentioned earlier included generally in student assessments/ examinations?
- IV.15(b) - If yes, please indicate which of the following dimensions of learning were included in the last student assessments/examination.
- IV.16 - Which of the following dimensions of learning is your country planning to reinforce in student assessment/examinations in the next five years, in relation to the principles and topics mentioned earlier?

Curricula Content is a combined indicator of two items (n=80)

- IV.7 - Which of the following, or similar, principles and topics are taught in your formal educational system as part of the curriculum?
- IV.23 - What opportunities are provided at school level for students to participate in decision-making processes that concern them?

Curricula Resources is a combined indicator of two items (n=74)

- IV.11 - Overall, are the number of teaching hours for the principles and topics mentioned earlier estimated to be sufficient?
- IV.18 - To what extent are there adequate teaching and resource materials (including ICTs and audio-visual materials) to teach/deliver the principles below and engage learners?

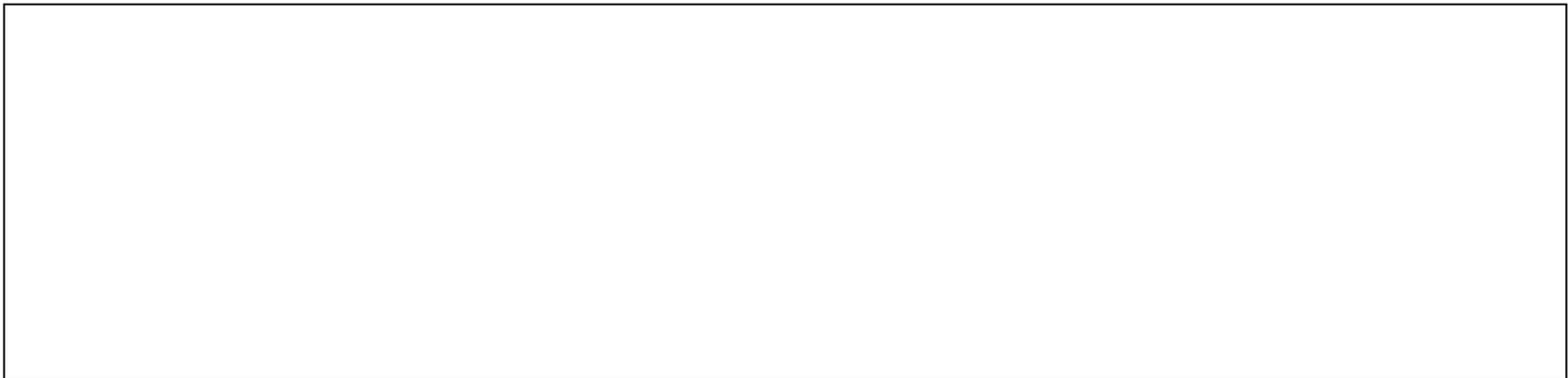
Member State	National Education Policies	Curricula: Content	Curricula: Resources	Teacher Education	Student Assessment
Albania	83.33	61.11	34.72	27.78	44.44
Andorra	50	77.78	65.28	16.67	66.67
Argentina	M	66.67	100	83.33	66.67
Armenia	75	100	76.39	36.11	100
Austria	58.33	83.33	63.89	83.33	M
Bangladesh	33.33	38.89	31.94	22.22	55.56
Belgium	58.33	83.33	52.78	30.56	77.78
Bolivia	M	77.78	83.33	91.67	M
Bosnia	58.33	72.22	73.61	75	M
Bulgaria	91.67	100	44.44	38.89	44.44
Burundi	66.67	50	38.89	M	55.56
Cambodia	91.67	100	79.17	75	100
Cameroon	50	77.78	63.89	75	100
Canada	M	M	76.39	M	100
Central African Republic	83.33	55.56	M	63.89	77.78
Chad	33.33	72.22	41.67	41.67	100
Chile	41.67	44.44	62.5	M	M
Colombia	83.33	16.67	59.72	19.44	33.33
Cook Islands	66.67	50	65.28	M	55.56
Cote D'Ivoire	50	94.44	41.67	75	100
Czechia	100	66.67	100	33.33	M
Democratic Republic of Congo	25	66.67	48.61	41.67	55.56
Denmark	58.33	83.33	73.61	91.67	66.67
Ecuador	91.67	33.33	M	M	88.89
Egypt	33.33	94.44	61.11	M	77.78
El Salvador	25	55.56	25	47.22	33.33

Cook Islands	66.67	50	65.28	M	55.56
Cote D'Ivoire	50	94.44	41.67	75	100
Czechia	100	66.67	100	33.33	M
Democratic Republic of Congo	25	66.67	48.61	41.67	55.56
Denmark	58.33	83.33	73.61	91.67	66.67
Ecuador	91.67	33.33	M	M	88.89
Egypt	33.33	94.44	61.11	M	77.78
El Salvador	25	55.56	25	47.22	33.33
Estonia	66.67	44.44	62.5	66.67	77.78
Ethiopia	75	100	68.06	72.22	66.67
Finland	75	94.44	87.5	M	M
France	83.33	72.22	100	M	100
Georgia	91.67	100	52.78	58.33	77.78
Germany	100	100	100	100	77.78
Greece	75	66.67	63.89	72.22	44.44
Guatemala	91.67	50	70.83	66.67	M
Haiti	75	83.33	58.33	M	55.56
Honduras	33.33	77.78	65.28	83.33	100
Hungary	58.33	83.33	65.28	44.44	55.56

Many observers have raised questions about the validity, reliability and relevance of this measurement approach to Target 4.7

UNESCO is revising its survey to monitor 4.7.1 in 2020- Example

“Please describe the specific current national or sub-national education policies or frameworks in which the principles and topics of global citizenship education (GCED) and education for sustainable development (ESD) have been mainstreamed. Indicate whether the policies apply to the country as a whole or whether different policies apply in different regions or states. Indicate the main principles and topics of GCED and ESD that are covered.”

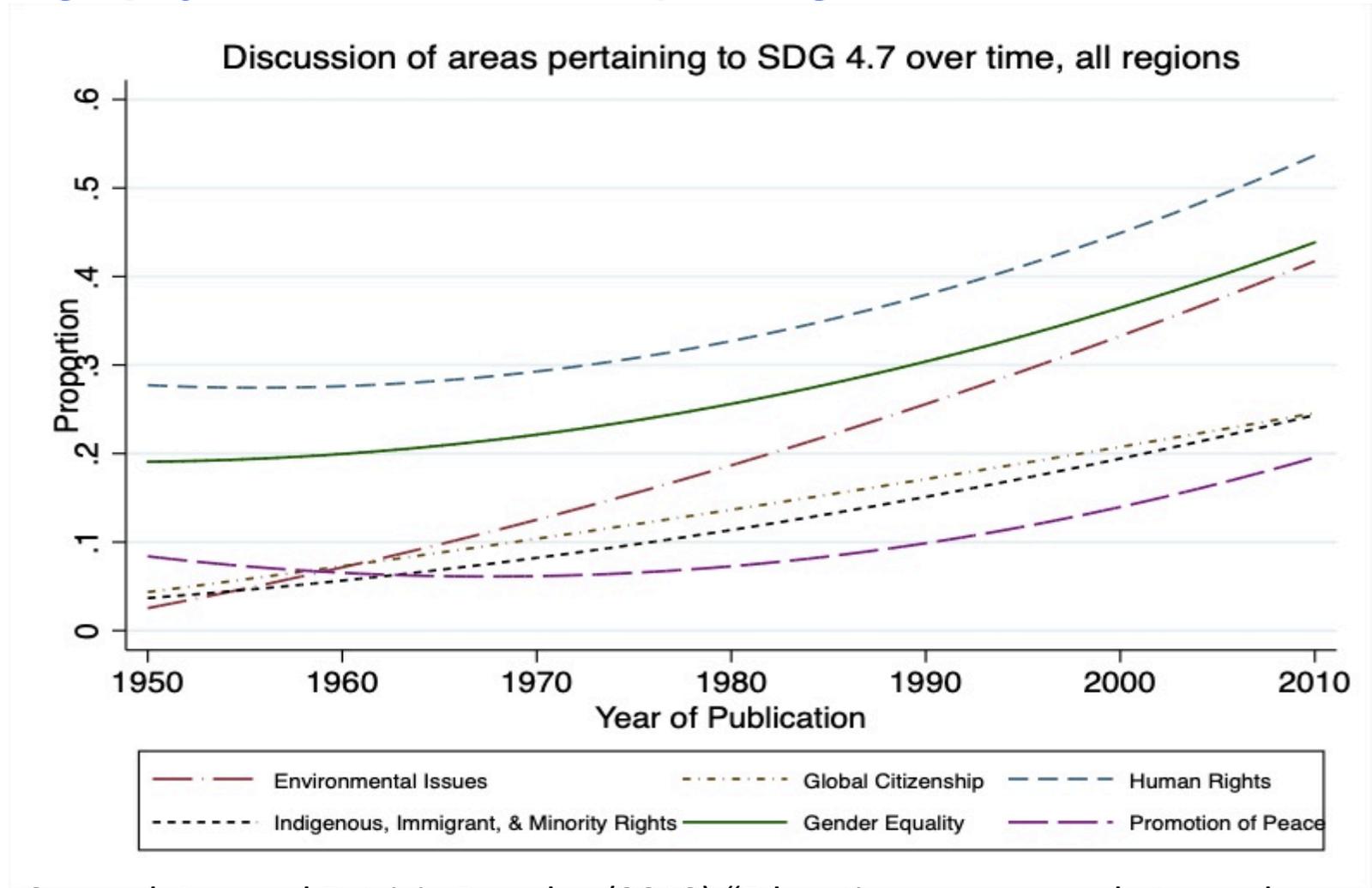


Please indicate which sub-themes of GCED and ESD are covered in national or sub-national education policies or frameworks affecting each level of education by entering the appropriate number in each white cell.

KEY: 0 = not applicable, 1 = no, 2 = yes, 5 = unknown

	Formal education				Non-formal education	Other (please specify)
	Pre-primary	Primary	Secondary	Tertiary		
Global citizenship education						
Cultural diversity and tolerance:						
Peace and non-violence:						
Human rights and gender equality:						
Of which, human rights:						
Equality, inclusion and non-discrimination						
Justice and fairness						
Caring for those in need, treating others with respect and dignity and sharing equitably						
Of which, gender equality:						
Promoting gender equality and justice						
Gender roles, rights and responsibilities						
Education for sustainable development						
Environmental						

Figure: Discussions of SDG 4.7 topics in over 600 secondary school textbooks in history, civics and citizenship education, social studies and geography from 78 countries, spanning 1950 to 2011



Source: Seungah Lee and Patricia Bromley (2019) "Educating young people towards sustainable development and a more inclusive, global society? Trends in textbooks" NISSEM Global Brief

Avenues of IEA Support?

- **Consider how conceptual and analytical strategies developed for ICCS (Int'l. Civic and Citizenship Education Study) can be applied to Target 4.7 concepts- eg global citizenship, human rights, cultural diversity and sustainability**
- **Work with IEA country members and regional associations (e.g., NEQMAP Network on Education Quality Monitoring in the Asia-Pacific) who are developing new (or innovative) measurement strategies of Target 4.7 concepts in national or regional learning assessments**
- **Help develop frameworks (and possible platforms) to compare relevant 4.7 curricular content across different education systems**
- **Apply IEA expertise in compiling and comparing subject syllabi and textbooks and classifying intended topics and sub-topics relevant to global indicator 4.7.1**
- **Explore ways to determine whether and in what ways 4.7 concepts have been *mainstreamed* in (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment.**

TARGET 4.A:

Learning environments

Target 4.a "Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all."

Global indicator

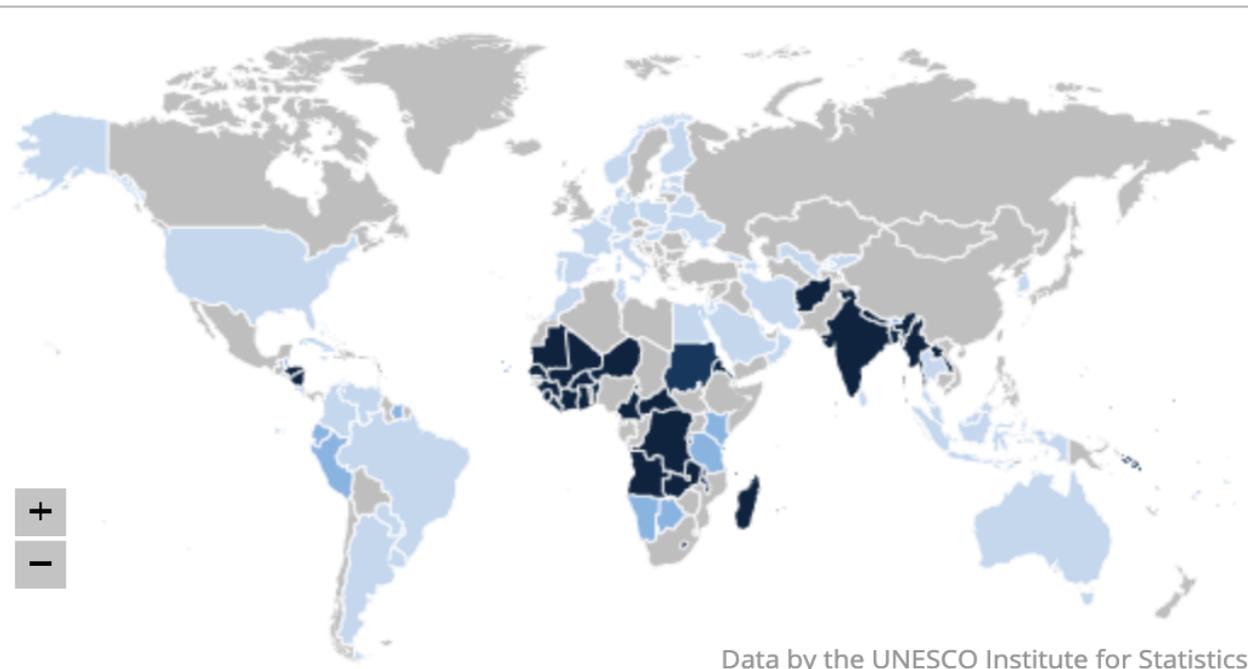
Percentage of schools with access to (i) electricity; (ii) internet for pedagogical purposes (iii) basic drinking water and (iv) basic sanitation facilities; and (v) basic handwashing facilities

In Feb 2019 UIS published new data on school conditions

See blog by UIS Director “What Makes a Good Classroom? New UIS Data on School Conditions”

Proportion of schools with access to: (a) electricity; (b) the Internet; (c) computers for pedagogical purposes

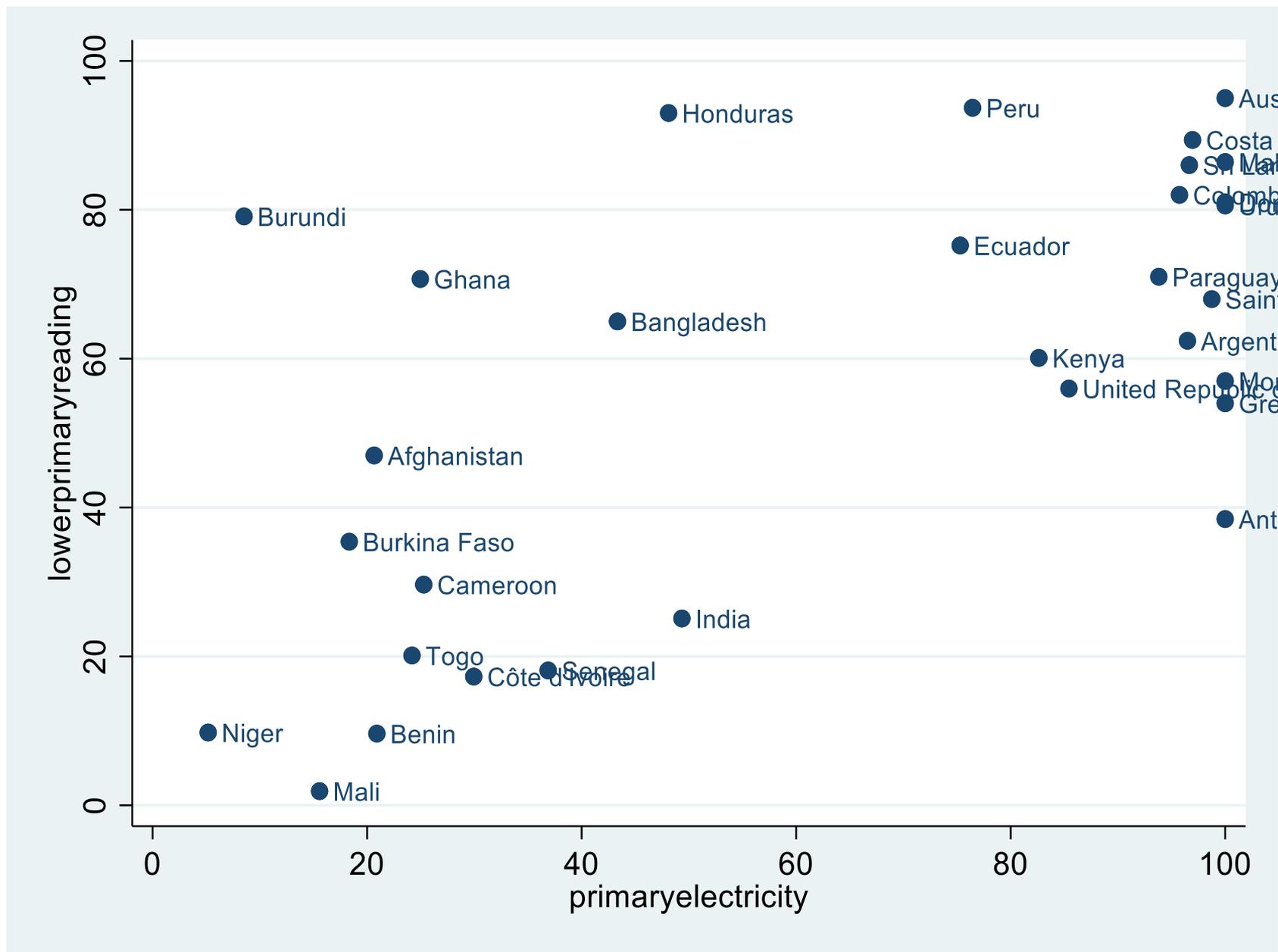
Proportion of schools with access to electricity
Primary schools



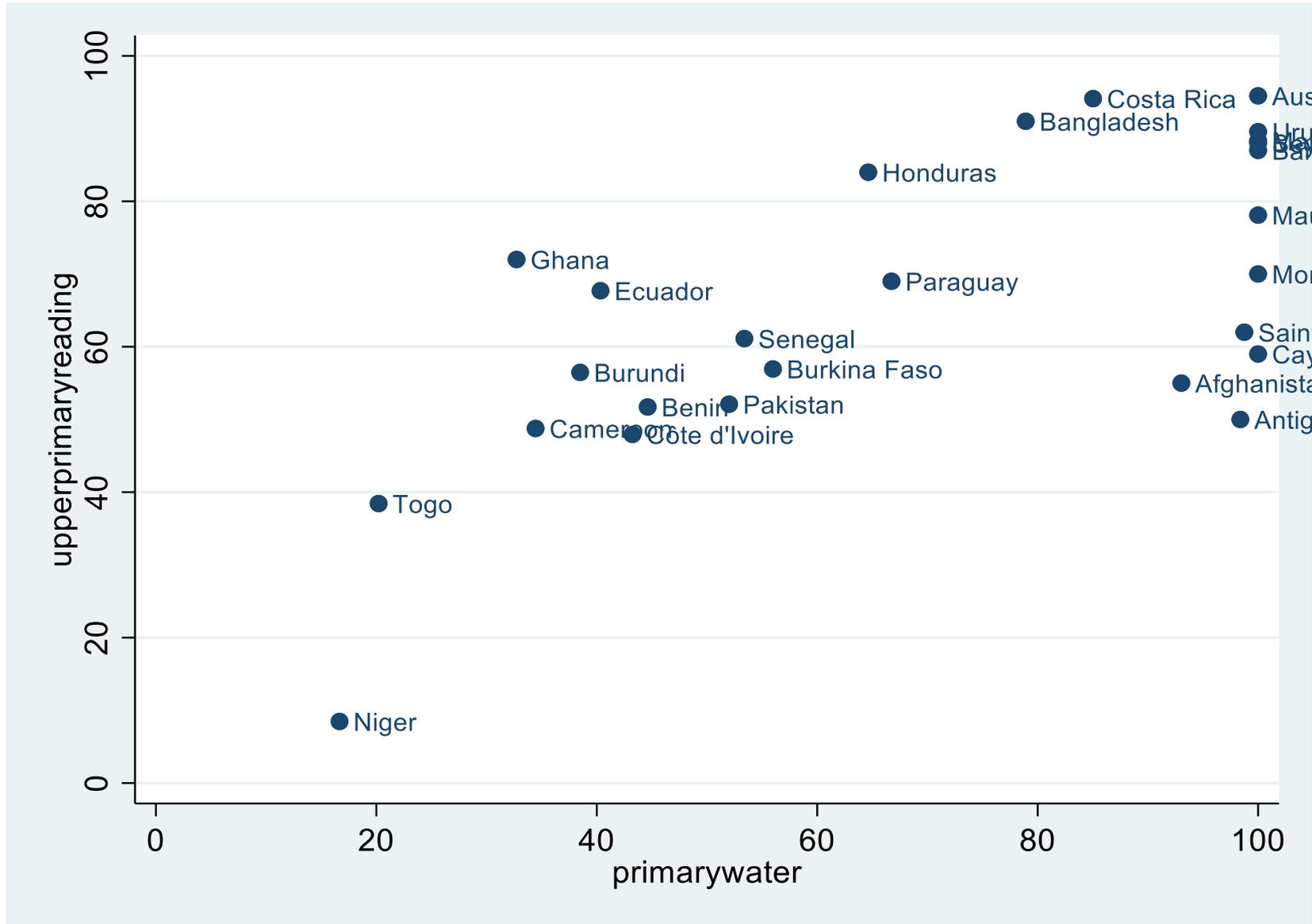
90% or more 70% - <90% 60% - <70% 50% - <60%
Less than 50% No data

2018

Primary electricity, lower primary reading - correlation coefficient: 0.6371, N = 31



Primary water, upper primary reading - correlation coefficient:
0.6563, N = 26



Avenues of IEA Support?

- Consider ways to improve the alignment between the wording and intent of Target 4.a and the global indicator
- Recalling that the Target refers to “*education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all*”
- Can IEA draw upon its own studies, especially information about school climate and effective schools, to address the intent of the target directly and not the global indicator?
- What are the advantages or disadvantages of developing indices of inclusive and effective learning environment for all, rather than isolating key constructs and measuring those?

TARGET 4.1:

Primary and secondary education

Target 4.1

By 2030, ensure that all girls and boys **complete free, equitable and quality primary and secondary education** leading to **relevant and effective learning outcomes**

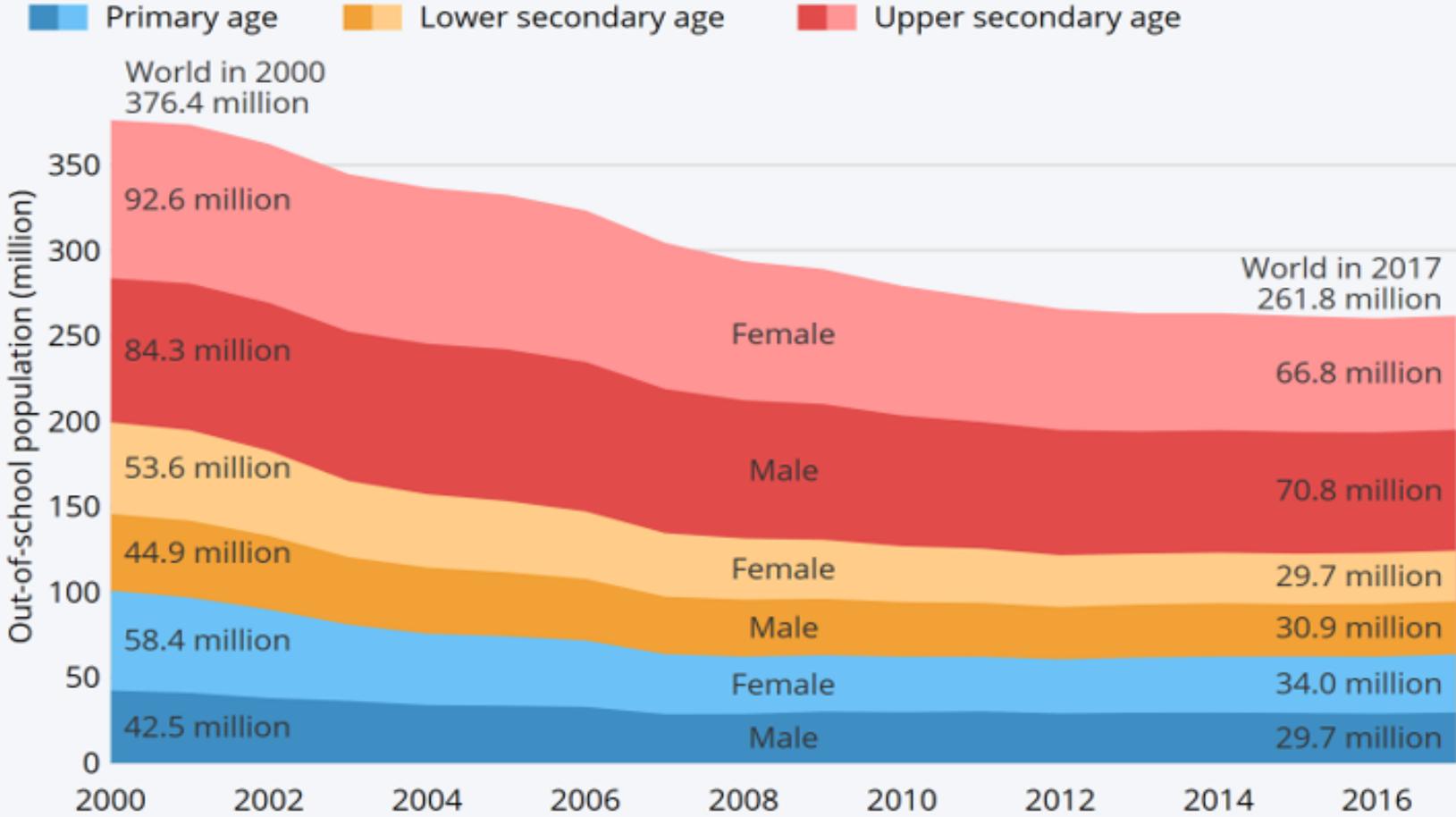
Global indicator 4.7.1

Percentage of children/young people at the end of each level of education achieving at least a minimum proficiency level in (a) reading and (b) mathematics

Monitoring Target 4.1: Globally, how many are not enrolled in primary and secondary education?

FIGURE 1

Global number of out-of-school children, adolescents and youth, 2000-2017

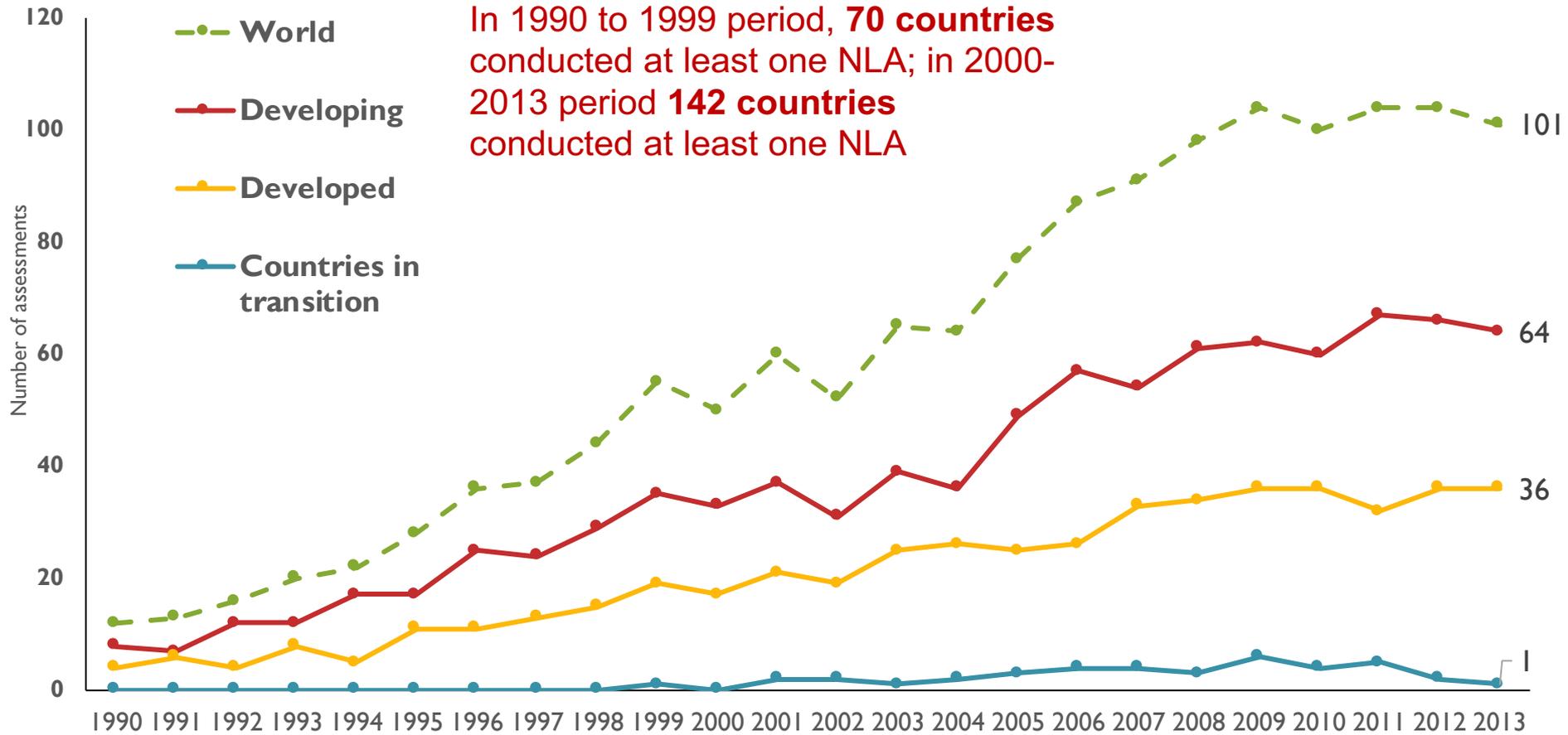


Source: UNESCO Institute for Statistics database.

The means needed to construct a global metric of learning (GLM): draw upon rapidly expanding International and regional learning assessments

- The number and frequency of international and regional assessments have increased in recent years, especially since 1995
- The number of countries participating in recent international surveys (e.g., TIMSS, PIRLS, ICCS, PISA) has also increased
- In Latin America and sub-Saharan Africa and the Pacific, many countries participate in regional assessments. There is no **regional** learning assessment in most of Asia or the Middle East

Possibly draw on rapidly increasing number of National Learning Assessments (NLAs), 1990-2013



Sources: EFA Global Monitoring Report 2015; Benavot and Köseleci 2015

Five Types of Learning Assessments

- **International:** IEA-sponsored assessments ie, TIMSS, PIRLS, ICCS (others in the past) and OECD-sponsored assessments ie, PISA, PISA-D
- **Regional:**
 1. **SACMEQ:** Southern African Consortium for Monitoring Education Quality (sponsored by UNESCO)
 2. **PASEC:** Programme d'analyse des systèmes éducatifs de la CONFEMEN conducted in 10 SSA and SA countries in 2014
 3. **LLECE:** Latin American Laboratory for the Assessment of the Quality of Education—SERCE, TERCE, YERCE (UNESCO sponsored)
 4. **PILNA** (Pacific Islands Literacy and Numeracy Assessment): administered in 14 Pacific Island countries in 2012
- **National:** in over 150 countries since 2000. e.g., in USA, *National Assessment of Educational Progress* (NAEP); in Japan, *National Assessment of Academic Ability* carried out by National Institute for Educational Policy and Research, Min of Ed,
- **Citizen-led assessments:** Pratham-ASER India (2005-), Pakistan (2008-), Kenya, Uganda and the UR Tanzania (2009-), Mali (2011-), Senegal (2012-), and soon Nigeria and Mexico. **Together, Citizen led assessments have reached more than a million children in 2012**
- **Early learning assessments:** National Early Grade Reading Assessments (EGRA) or Early Grade Math Assessments (EGMA) conducted in grades 2 or 3 in 13 mostly developing countries. EGRA and EGMA have been carried out in other countries; most are not based on nationally representative samples.

The challenges of constructing a GLM from existing learning assessments

Significant ways learning assessments vary:

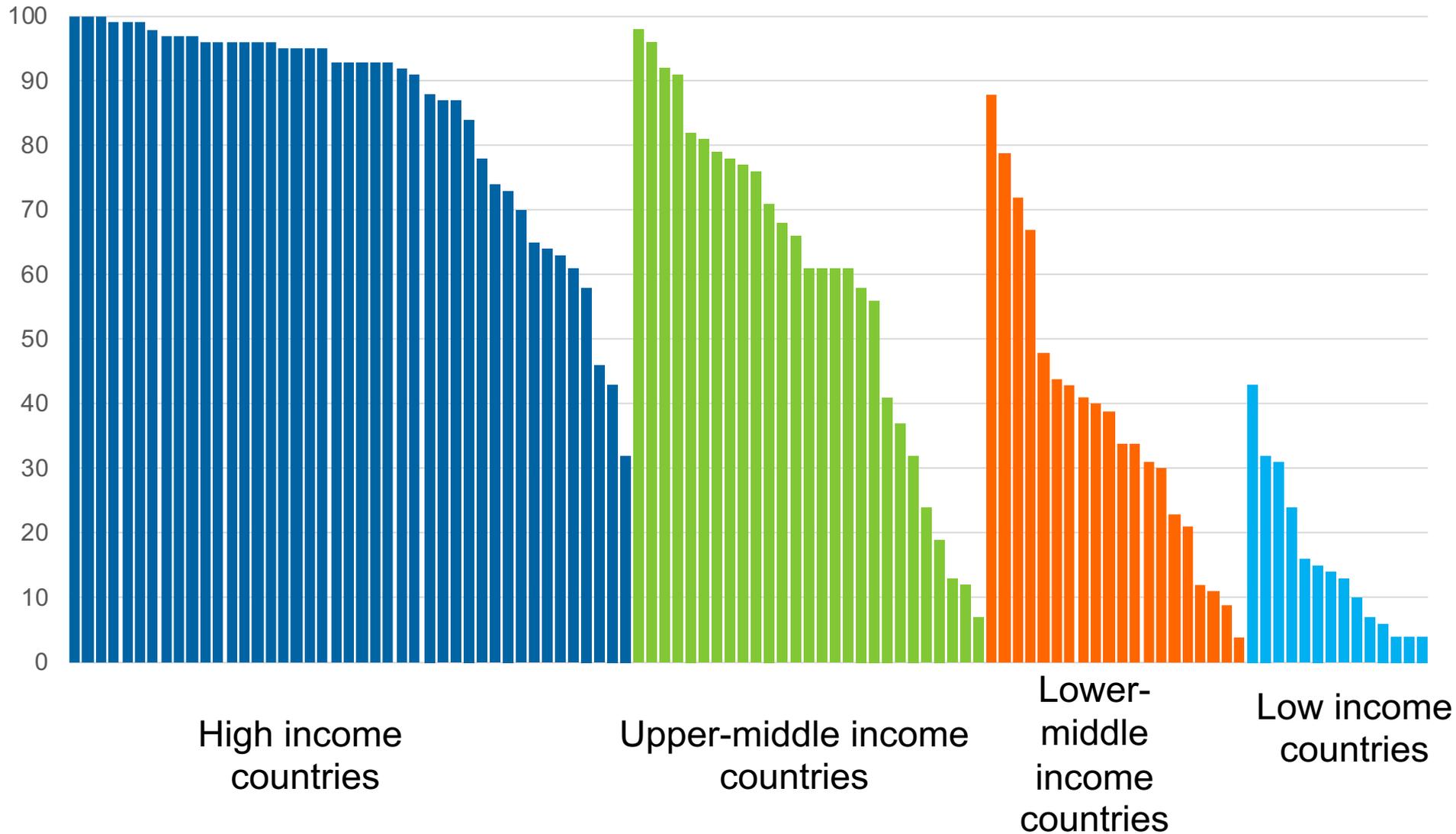
- Vary in construct and content learning domain coverage
- Vary in test design, item format
- Vary in operational and implementation that might affect quality
- Differ in scaling methodology that affects reporting metric
- Vary in quality assurance undertaken in country
- Differ in data analysis undertaken that might affect outcomes

Additionally, defining a valid cut off point across assessment platforms and national contexts is difficult. Without this, it is hard to determine a minimum levels of proficiency.

Indicator 4.1.1: Mapping specific benchmarks & a min. threshold

Harmonized proficiency levels	Original name of levels by assessment															
	PISA		TIMSS		PIRLS	PASEC				TERCE				SACMEQ		
	Grade and subject															
	8		4	8	4	2	2	6	6	3	3	6	6	6	6	
	Reading	Math	Math	Math	Reading	Reading	Math	Reading	Math	Reading	Math	Reading	Math	Reading	Math	
Level 8 (L8)	Level 6													Level 8	Level 8	
Level 7 (L7)	Level 5	Level 6													Level 7	Level 7
Level 6 (L6)	Level 4	Level 5													Level 6	Level 6
Level 5 (L5)	Level 3	Level 4	Advanced International Benchmark	Advanced International Benchmark	Advanced International Benchmark	Level 4		Level 4							Level 5	Level 5
Level 4 (L4)	Level 2	Level 3	High International Benchmark	High International Benchmark	High International Benchmark	Level 3	Level IV	Level IV	Level IV	Level IV	Level 4	Level 4				
Level 3 (L3)	Level 1a	Level 2	Intermediate International Benchmark	Intermediate International Benchmark	Intermediate International Benchmark	Level 2	Level III	Level III	Level III	Level III	Level 3	Level 3				
Level 2 (L2)	Level 1b	Level 1	Low International Benchmark	Low International Benchmark	Low International Benchmark	Level 1	Level II	Level II	Level II	Level II	Level 2	Level 2				
Level 1 (L1)	Below Level 1b	Below Level 1b	Below Low International Benchmark	Below Low International Benchmark	Below Low International Benchmark	Below Level 1	Level I	Level I	Level I	Level I	Level 1	Level 1				

Learning levels: Percent of end-of primary students who meet a minimum proficiency threshold for learning in mathematics?

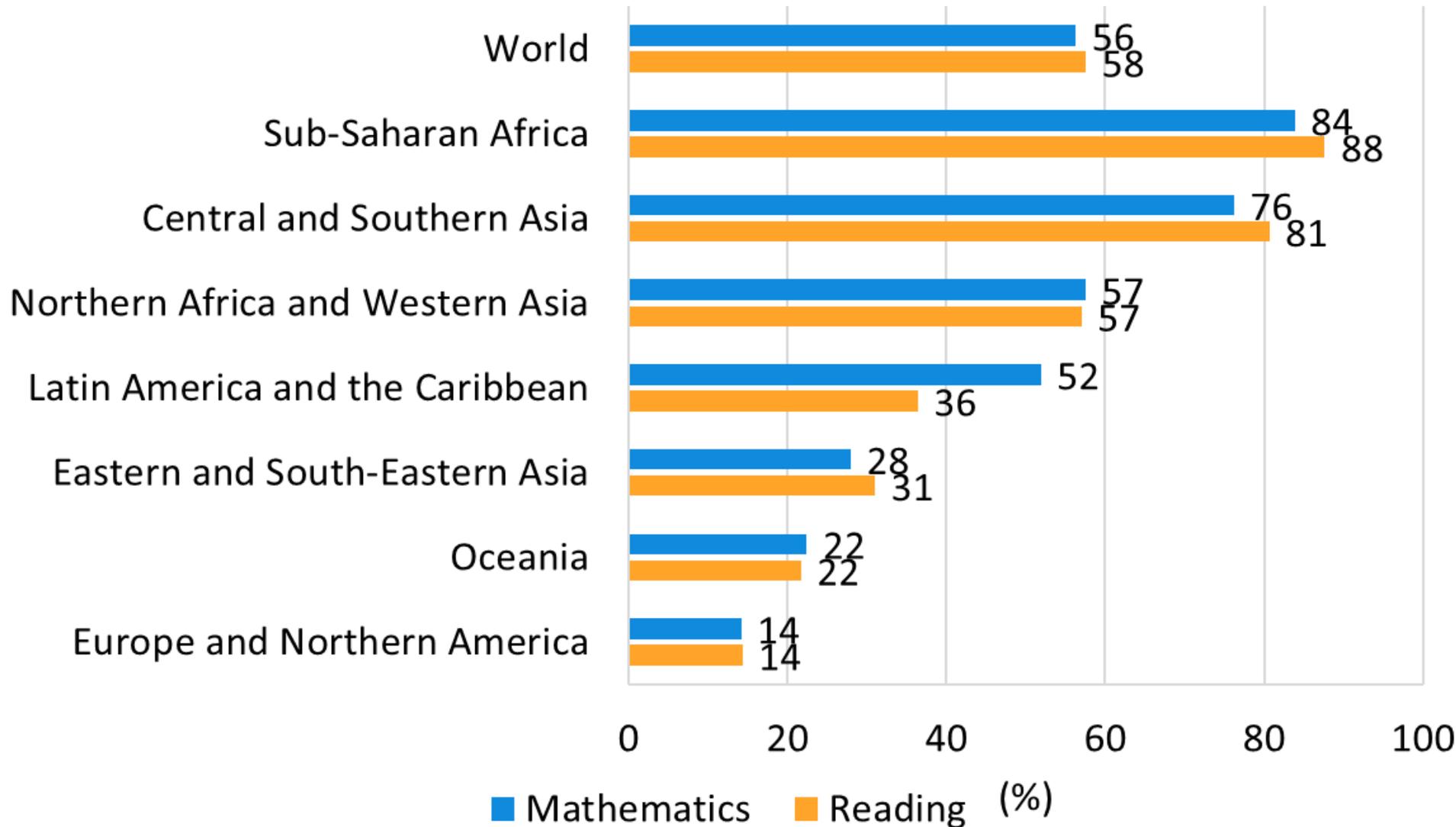


Worldwide, more than 600 million children and adolescents are not learning the basics

Based on current participation and progression rates, and on current learning assessment results:

- **617 million children and adolescents** (58% of the total population in this age group) **will not reach minimum proficiency level in reading**
 - 387 million children of primary school age (56%)
 - 230 million adolescents of lower secondary age (61%)
- **605 million children and adolescents** (56% of the total population in this age group) **will not reach minimum proficiency level in mathematics**
 - 384 million children of primary school age (55%)
 - 221 million adolescents of lower secondary age (58%)

Children and adolescents not learning by region (%)



Source: UNESCO Institute for Statistics

Avenues of IEA Support?

- **Target 4.1 represents the key area in which IEA has been contributing to the 2030 Agenda and to SDG4. It continues IEA's longstanding commitment to improve the quality, robustness and relevance of measuring and monitoring learning in different skill and subject domains.**
- **Since 2013 IEA has been involved at many levels and in many expert and policy meetings to prioritize measures of reading and mathematics proficiency and improve the measurement and monitoring of these skills.**
- **What additional roles could IEA play in improving a GLM for 4.7.1?**
 - **Help improve the overall quality and utilization of curriculum-based regional and national assessments: e.g., in terms of sampling design, item construction, assessment integrity and its value to policy makers, teacher trainers, curriculum developers, textbook writers**
 - **Support efforts for greater alignment across assessment platforms and with the global indicator 4.7.1**
 - **Support capacity building to ensure sustainability of assessment exercises over time**
 - **Others?**

Part IV

Concluding Reflections

Concluding reflections

Drawing on previous global commitments, quality education and learning have been prioritized in the 2030 Agenda for Sustainable Development.

A wide array of learning is invoked in the 10 SDG4 targets. Such learning varies by stage in the life course – from pre-primary and primary school age children to secondary school age adolescents in and out of school, and adults in different contexts.

Targets reflect **growing demand for lifelong learning** (eg, ICT skills, job training, professional development, self-directed learning, communication skills) is especially pronounced given changing technologies & growing competition for skilled labor in global economy.

Improvements in a broad array of learning outcomes are not only important to ensure progress in SGD4, but also for progress in other SDGs.

Thus, to achieve SDG4 targets, and to ensure that no one is left behind, **it is critical that countries build capacity to robustly measure and assess learning across a wide array of domains**, including but not limited to literacy and numeracy.

On-going concerns

- Huge efforts are apace to create global scales to measure learning levels across countries, systems and assessment platforms. Interim data on global and regional deficits in learning was published in 2017 by UIS.
- However, emergent global learning metrics (GLMs) reflect a limited set of SDG4 learning outcomes – mainly, cognitive proficiencies in reading and mathematics.
- GLMs in other subject domains or involving complex learning outcomes like sustainability, global citizenship, etc. are unlikely in the foreseeable future. This is likely to diminish and devalue learning in these other domains.
- Moreover, assessments often convey a deficit model of many learners, esp. those from poor, marginalized or indigenous backgrounds, and undervalue learning acquired outside of school, through non-formal education and informal learning.
- There is also growing evidence that GLMs are likely to result in unintended consequences: eg., unethical school practices to increase test scores; policies that undermine the autonomy and professionalism of teachers.

On-going concerns (2)

- In short, the measurement of learning is not simply a technical activity, to be done more or less elegantly, but also a political activity
- (recall several of the challenges facing countries I listed earlier)
- Learning assessments are typically not considered a public good with sustainable funding.
- And so, powerful actors (eg, World Bank, GPE, European donors, Education Commission, OECD) are supporting (financially and otherwise) the construction of specific GLMs for SDG4.
- Some private sector companies also have a monetary interest in creating GLMs and expanding their geographical coverage.
- Thus, the nature, validity, scope and use of learning metrics raises important questions for practitioners and researchers to consider and contemplate.

Key questions

- To what extent are GLMs fit for purpose? Do they serve the interests of governments and other educational stakeholders, seeking to make progress on SDG4?
- Do they serve the interests of educators and the learners themselves, who wish to improve learning levels?
- How will countries react to seeing their students' proficiencies placed on a GLM?
- How, if at all, will countries and other stakeholders use the information from a GLM?
- Will data from GLMs promote real improvements in the provision of quality education (eg, teacher preparation, curriculum development, classroom practices and pedagogy, ICT use)? If so, how?

Role of IEA

- IEA has a long and important history of involvement in measuring, monitoring and analyzing learning outcomes within competing analytical models.
- It has been and should continue to play a role in measuring and monitoring learning with the framework of SDG 4 (and other SDGs)
- It should, however, bring its wealth of knowledge and experience to critically bear upon the kinds of learning that are or are not being examined, and why, and with what consequences.
- It should support and help build capacities at the national and regional levels around the measurement and monitoring of learning.
- It should support efforts to explore innovative, non-traditional and possibly cross-curricular or inter-disciplinary learning outcomes.
- In short, the IEA should be an active participant in collective efforts to improve how learning is conceived, measured and monitored under the SDGs.

Thank you!

**For further info contact:
abenavot@albany.edu**

GEM Report website: en.unesco.org/gem-report