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Investment case for expanding coverage and comparability for Global Indicator 4.1.1 (September 2017)

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GAML4/8





The vision (what and why)

The United Nations' Sustainable Development Goals (SDGs) aim to end poverty, protect the planet and ensure prosperity for all. SDG 4 calls to “ensure inclusive and equitable quality education and promote lifelong learning opportunities for all”. Specifically, Target 4.1 states that “by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.” A consensus was reached to use SDG Indicator 4.1.1 (SDG 4.1.1) to measure this target: “Proportion of children and young people: (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.”

The vision of the Global Alliance to Monitor Learning (GAML) is to enable a global monitoring system of learning that can be used to produce SDG 4.1.1 in a valid, reliable and timely way in all countries, while expanding the number of countries with data and helping them to produce and use the necessary information to achieve SDG 4.

GAML's approach is informed by the following principles:

- a fit-for-purpose approach to international monitoring must be achieved that supports consistency in reporting of outcomes, while being flexible enough to accommodate a variety of approaches;
- the approach must provide access to tools and methods informed by international technical expertise, to assist education systems in building capacity; and
- the approach must be driven by commitment to meaningful assessment of learning as a global public good, which is critical to the goal of quality education for all.

What is (are) the problem(s)?

The challenge is that no global and comparable information exists that can be used to compute SDG 4.1.1.

Coverage Issues

- Many countries do not have data on their children's and young people's proficiency levels in reading and mathematics.

Technical Issues

- Among the countries that do have national learning assessments, skills, tools and metrics measure different mathematics and readings skills at different grades/ages. This is because:
 - There is no global framework of content and skills that children need to know for each point of measurement;



- Associated to the former problem, there is no global common understanding of what “minimum proficiency level” means; and
 - Data are not necessarily aligned since the processes to collect data on learning outcomes are either unknown or weak in many countries, thus precluding valid inferences about learning.
- Results are not linked in the same scale. While cross-national learning assessments allow comparison of results among countries, comparison of results from one assessment programme to another is not possible.
 - Countries have different educational structures for Grades 2 and 3, the end of primary education and the end of lower secondary education. This makes it hard to target the same students across countries and to define common “minimum proficiency levels”.

National capacity issues

- Many countries do not have data on their children’s and young people’s proficiency levels in reading and mathematics because they do not have either the financial capacity and/or the technical capacity to administer national learning assessments or join cross-national learning assessments; and
- The great majority of countries without high-quality learning assessments are either low-income or lower-middle income countries.

What do we need?

We need to enable a global monitoring system of learning that enables producing SDG 4.1.1 in a valid, reliable and timely way in all countries. This system should build (and expand) on existing efforts in cross-national and national learning assessments. Additional coordination and harmonisation is needed to support the expansion in coverage and comparability:

Technical responses through a set of tools to conceptually align assessments:

- Global Framework for Reference: to define the skills/competencies and contents associated to each point of measurement;
- Global standards of data alignment for methodological and operational procedures to ensure that the data-generating process is comparable; and
- A set of tools and standards to compare and define benchmarks:
 - Global scale linking cross-national (and national) learning assessments so that their results can be comparable and fit for purpose to inform SDG 4.1.1. This could be done by first linking cross-national learning assessments that measure similar mathematics or reading skills at similar grades or education levels; and
 - Agreement on “minimum proficiency levels” that are challenging but reachable, especially in the context of developing countries.

Funding responses through a set of strategies to expand coverage:



- Funding options to expand coverage of the next round of cross-national learning assessments so that more countries can have data on learning assessments that serve to produce SDG 4.1.1; and
- Cross-national assessment expansion to fill the gap for the regions that do not have any regional assessments with special focus given to primary education.

Capacity development through a set of strategies to improve data alignment

- Capacity development strategies (and funding) to support countries to build national learning assessments that meet technical standards.

What are the benefits?

- Countries will have access to assessments in a comprehensive and sustainable way;
- Country engagement through political commitment and participation of training centers;
- Capacity-development efforts concentrated around those with the most experience in the field while granting progress towards global comparability;
- Regional organizations will receive support for their operations and both regional and international organizations expand their coverage; and
- A number of countries will have comparable learning data to report on SDG 4.

How much does it cost?

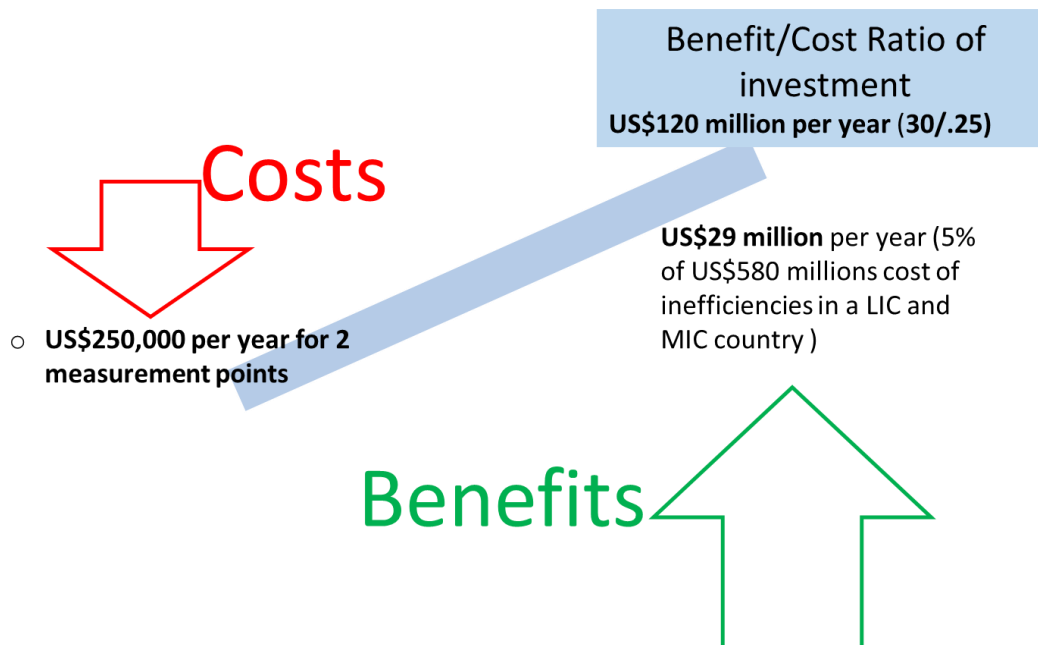
Learning assessment survey costs each on average US\$ 500,000 including data collection and technical assistance, with variations based on regional differences in labour costs and the size and complexity of the survey. Approximately 100 countries do not participate in any cross-national assessment initiatives. If these countries were to participate in assessments for two measurement points (for example, end of primary and lower secondary), it would cost around US\$1 million every four years, or an annual average of \$US 250,000 per country.

When comparing the “costs” of the large scale assessment and we compare to the cost of running an education system for an ‘average’ country we realize **large-scale assessments is an investment**. According to the **UIS database**, the average cost for low- and middle-income countries to run their **pre-primary to secondary education system is about US\$5.8 billion per year**. If we assume (as studies have shown) that education systems have at least 10% inefficiency, the **average cost of inefficiencies in a country would be around US\$580 million per year**.

If 5% of this inefficiency, in a conservative scenario, is address by having and properly using Learning Assessment data, then the **benefit is about US\$30 million** per year in an average country.



With the estimated annual cost of **US\$250,000 for two assessments every 4 years, the benefit/cost ratio would be $30/0.25=US\$120$ million per year**. The value of this exercise at the global level would produce stunning numbers. If we talk about a 100 countries, which could benefit, the math is clear ($100 * 120$ million U.S. dollars per year). And with the remark costs do not include some intangibles such as frustration of students or parents, effect on their lifetime income profile and health outcomes.



The regions (where) and the timeline (when)

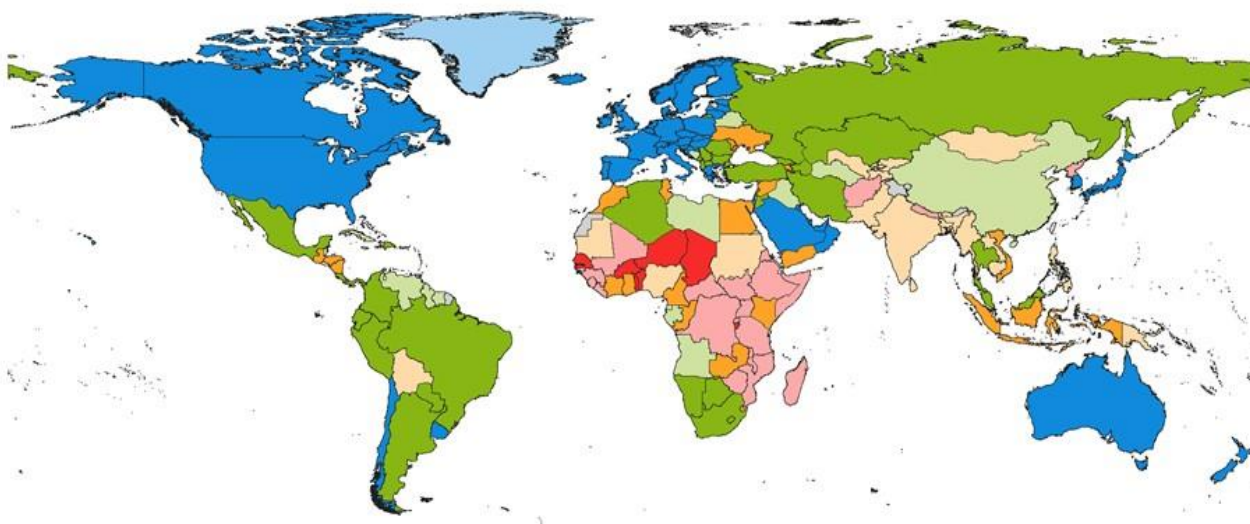
Most of the countries, which currently do not have data on learning outcomes, are low- and low-middle-income countries.

A realistic strategy maps out countries for participation in assessments, setting intermediate targets for expansion. For example, 30 countries or so could participate in the next wave of international assessments; another 30 countries could participate in the following cycle, costing around US\$2 million each cycle for coordination.



Countries participating in cross-national learning assessments, by income level

Low-income countries: ■ Assessment ■ No assessment
 Lower-middle-income countries: ■ Assessment ■ No assessment
 Upper-middle-income countries: ■ Assessment ■ No assessment
 High-income countries: ■ Assessment ■ No assessment



Note: The depiction and use of boundaries and related data shown on this map are not warranted to be error free nor do they necessarily imply official endorsement or acceptance by UNESCO.

A feasible model would include 100% financial support to cover the US\$500,000 cost in the first cycle, 50% of the cost in the second cycle and 0% in the third cycle when the administration of the assessments would be absorbed at the country level. Countries currently financing their own assessments or receiving a foreign subsidy through bilateral or multilateral agencies would not receive the subsidy, which would reduce costs. As the table below shows, for 98 countries not currently participating in cross-national assessments, the total financial support needed would add up to \$US 136 million over a 10 year period, covering three rounds of assessments at two measurement points.

Simulating the costs of expansion

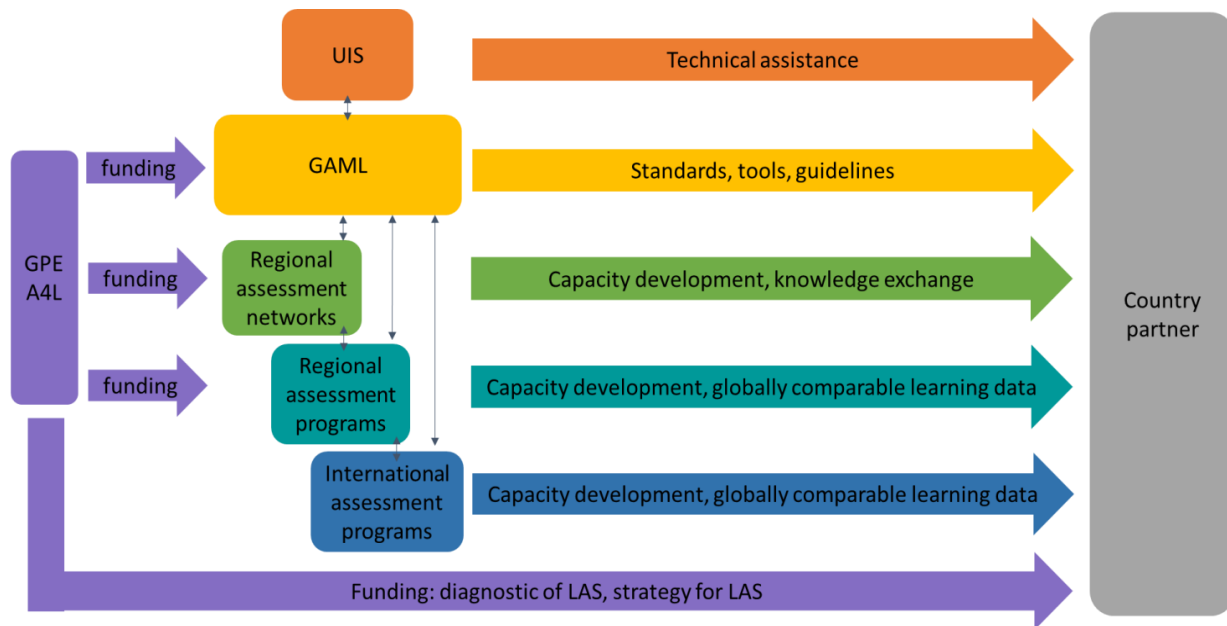
| Total number of countries participating | | Financial support needed, \$US millions* | | | |
|---|-----------|--|-----------|-----------|------------|
| | | 2018-2019 | 2022-2023 | 2026-2027 | Total |
| Africa | 31 | 31 | 16 | | 47 |
| LAC | 16 | | | 16 | 16 |
| Asia | 33 | | 33 | 17 | 50 |
| Europe | 14 | | | 14 | 14 |
| Oceania | 4 | | | 4 | 4 |
| Implementation, all countries | 98 | 31 | 49 | 51 | 130 |
| Coordination | | 2 | 2 | 2 | 6 |
| Total | | 33 | 51 | 53 | 136 |

*Per country: 1st cycle: 100% of 2 assessments*0.5 million, 2nd cycle: 50% of 2 assessments*0.5 million



How to collaborate to make expansion and comparability materialize?

The success of this approach hinges on a collaborative effort, including governments, focused on the common goal of better data on learning assessments and who will contribute financial and other resources to the overall expansion of cross-national assessments worldwide. The UIS will operate as a broker, enabling dialogue between the different partners, including regional and international assessment organizations, development partners and countries. Development partners will set up systems, which will incrementally drawdown donor funding, and increase national funding, resulting in a sustainable transition to the governments. Figure bellows describes one potential model.



For more information:

[http://uis.openplus.ca/gaml/;](http://uis.openplus.ca/gaml/)

<http://sdg4monitoring.uis.unesco.org/;>

<https://sustainabledevelopment.un.org/sdg4>