

THE IMPACT OF LARGE-SCALE LEARNING ASSESSMENTS



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Introduction

There is a substantial body of literature on the value of education and its benefits to an individual and society. Empirical research from around the world demonstrates the critical role of education in helping people to lift themselves out of poverty, improve their quality of life, strengthen their health and that of their family while increasing their employment opportunities and contributing to the economic development of their country. As a result, the international community has been striving to set educational goals and overcome the challenges in reaching them, particularly in low- and middle-income countries.

The Sustainable Development Goal for education (SDG 4) call for an increased focus on learning outcomes, with five of the ten targets highlighting learning skills and outcomes of children and adults. However, it is extremely difficult to monitor these educational developments and meet the targets because not all countries conduct national assessments or participate in regional and cross-national assessments of learning. This poses a significant challenge in providing initial information for SDG 4 monitoring and reporting.

In addition, many low-income countries are not or might not be interested in participating in cross-national assessments, which they feel are too difficult for their children and therefore do not provide relevant information on the learning conditions in their countries. At the same time, the donor community does not have relevant information and quality data to inform their decisions on how best to support low-income countries improve the learning outcomes of their children. It is therefore essential to provide the information needed by the international community to understand the value of advocating for and helping countries to develop and conduct national and cross-national assessments.

This synthesis explains: how countries use data from cross-national assessments in their educational practice and policy; the implications on investment in education resources; and the challenges they faced. The goal is to show countries and donors the impact of investing in large-scale assessments.

This paper is part of the ongoing efforts of the UNESCO Institute for Statistics (UIS) to help countries secure greater and better investment in data in their quest to achieve SDG 4. It builds on the UIS [Investment Case for SDG 4 Data](#), which compares the resources needed to produce the global and thematic indicators in relation to the costs of doing business as usual.

Method

This synthesis is based on the UIS discussion paper entitled, *Review of the Use of Cross-national Assessment Data in Educational Practice and Policy*. The paper presents a literature review that primarily focused on papers, reports and studies on the use of cross-national assessments in educational policy and practice published since 2000 in order to present a relevant and timely synopsis of results without replicating key findings.

The synthesis addresses three key questions:

- a) How do countries participating in cross-national (regional and international) assessments use their data for policy development?
- b) What resources have countries invested based on the outcomes of a cross-national assessment?
- c) What are the factors that prevent or hinder these countries from using the assessment information to improve educational policies and outcomes?

The benefits of using large-scale assessment data

From a policy point of view, the results from the review identify significant benefits arising from the use of cross-national assessment data. They include the use of data for: comparative and benchmarking purposes; improving country's overall educational system through directive policy; enhancing access and equity; improving teaching and learning practice; curriculum reforms; and utilizing strategies and indicators to monitor and evaluate educational processes.

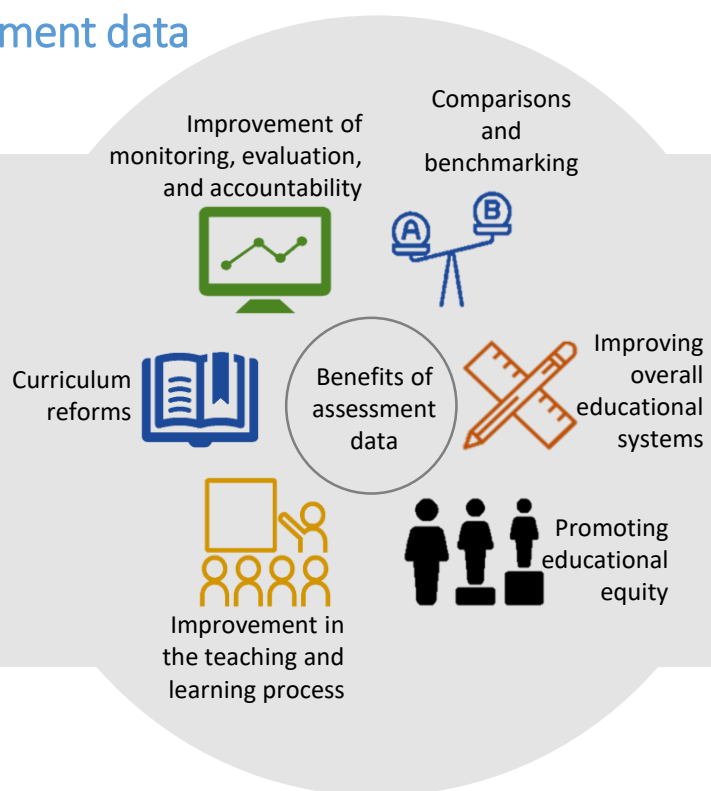


Figure 1 summarizes results obtained from the literature review on how countries have been using cross-national and regional assessments to shape their educational practices and policies. It shows the countries that have been benefiting from the results of cross-national assessment. The shade of blue illustrates the extent to which they are gaining from the benefits illustrated above. For example, New Zealand is making more use – and hence gaining more – from cross-national assessment data than Canada and the United States, which in turn are benefiting more than Brazil and Russia.

Figure 2 shows how countries have been benefiting from the six advantages identified in the literature: comparisons and benchmarking; improving overall educational systems; promoting educational equity; improvement in the teaching and learning process; curriculum reforms; and improvement of monitoring, evaluation, and accountability. The illustration shows the different ways in which countries can benefit from the use of cross-national assessment data, as in the cases of Canada, the United States, and Australia.

The source of cross-national assessment data is presented in **Figure 3**. It shows that some countries benefit from data from several cross-national assessments, like Australia and Canada, which implement PISA, TIMSS, and PIRLS, while other countries, such as Brazil and Russia, use data from one or two assessments.

Figure 1. Countries using cross-national assessments in educational policy and practice

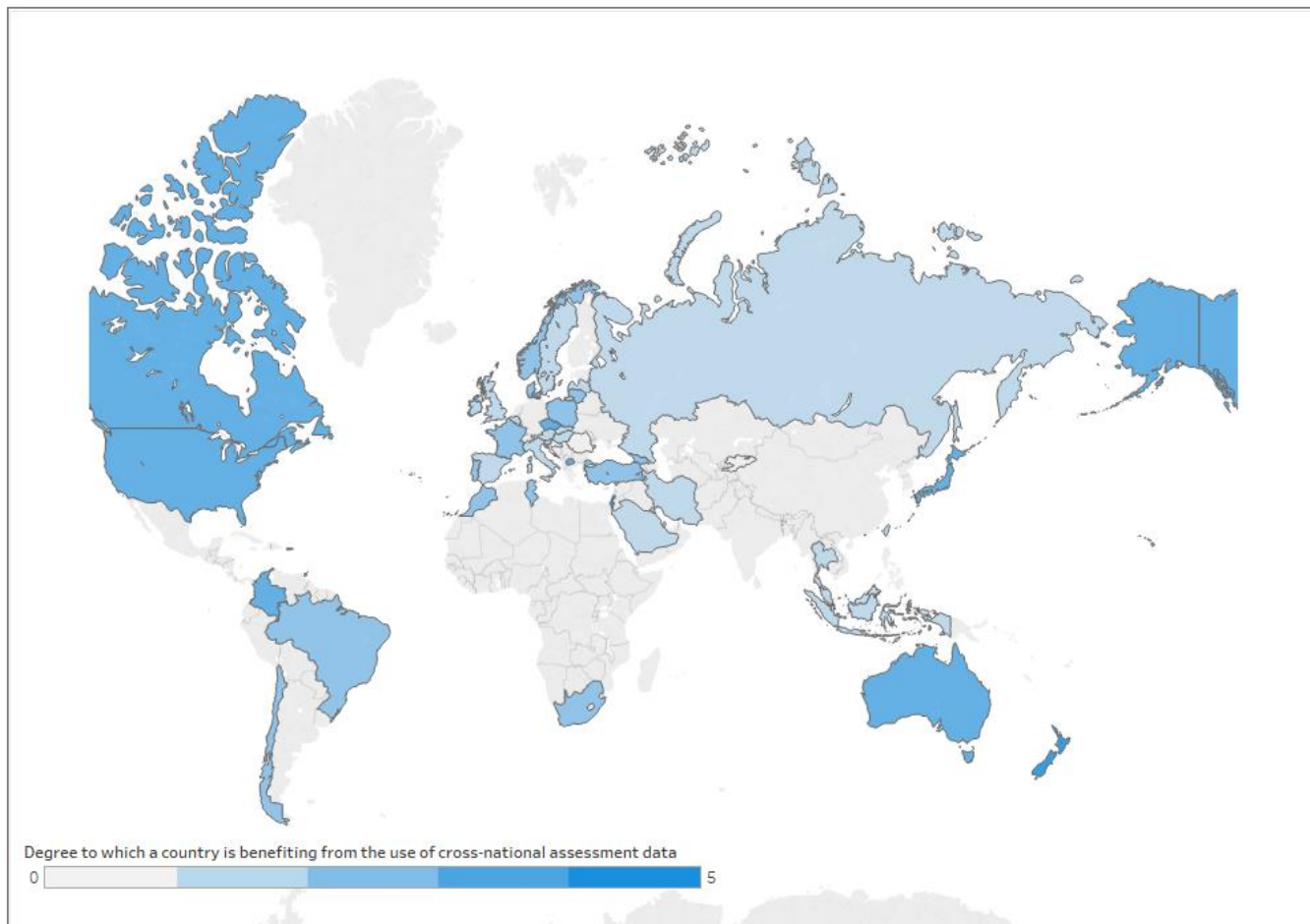


Figure 2. How countries have been using large-scale assessments to shape their educational practices and policies

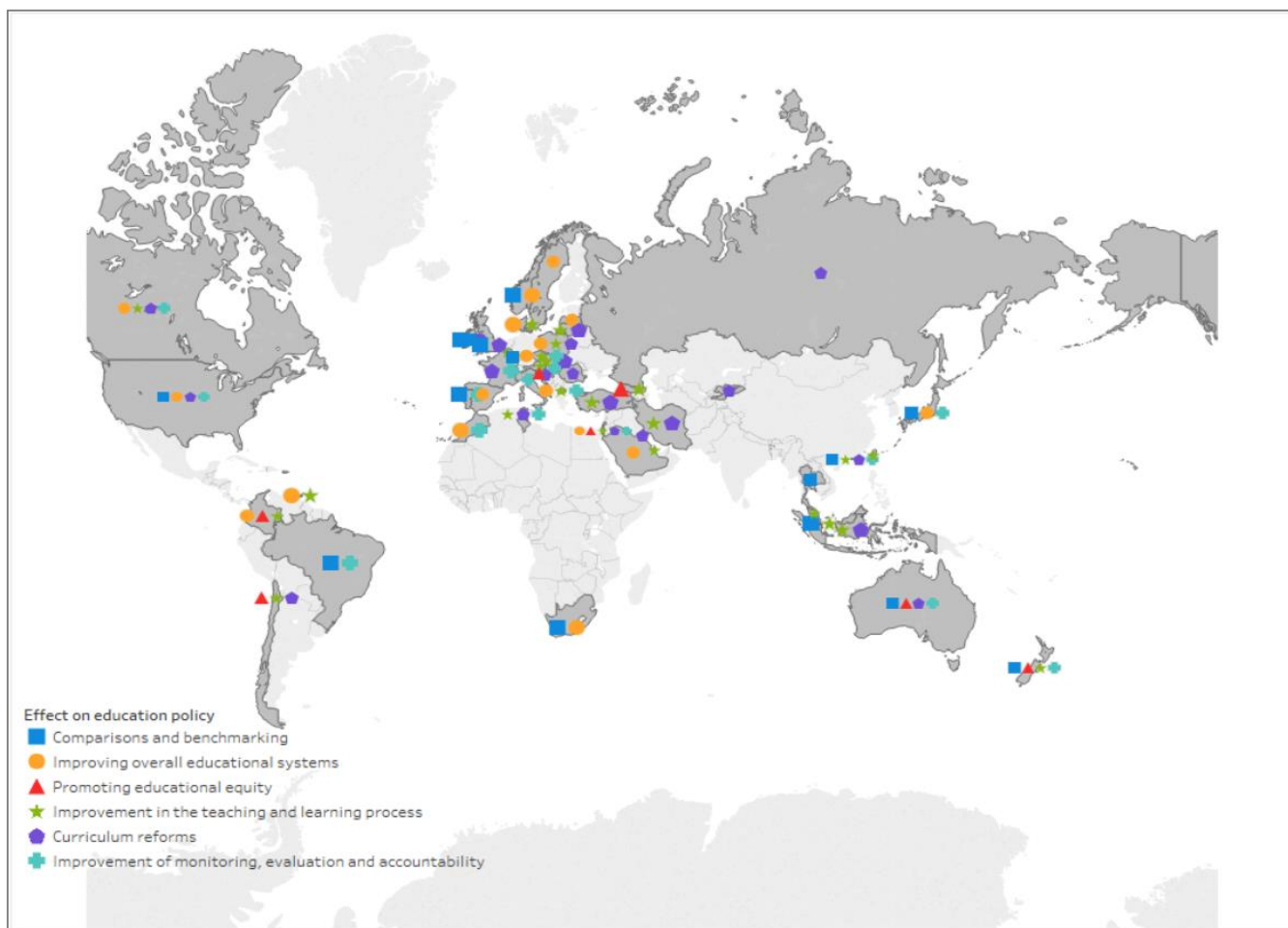
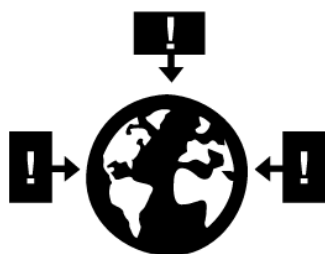
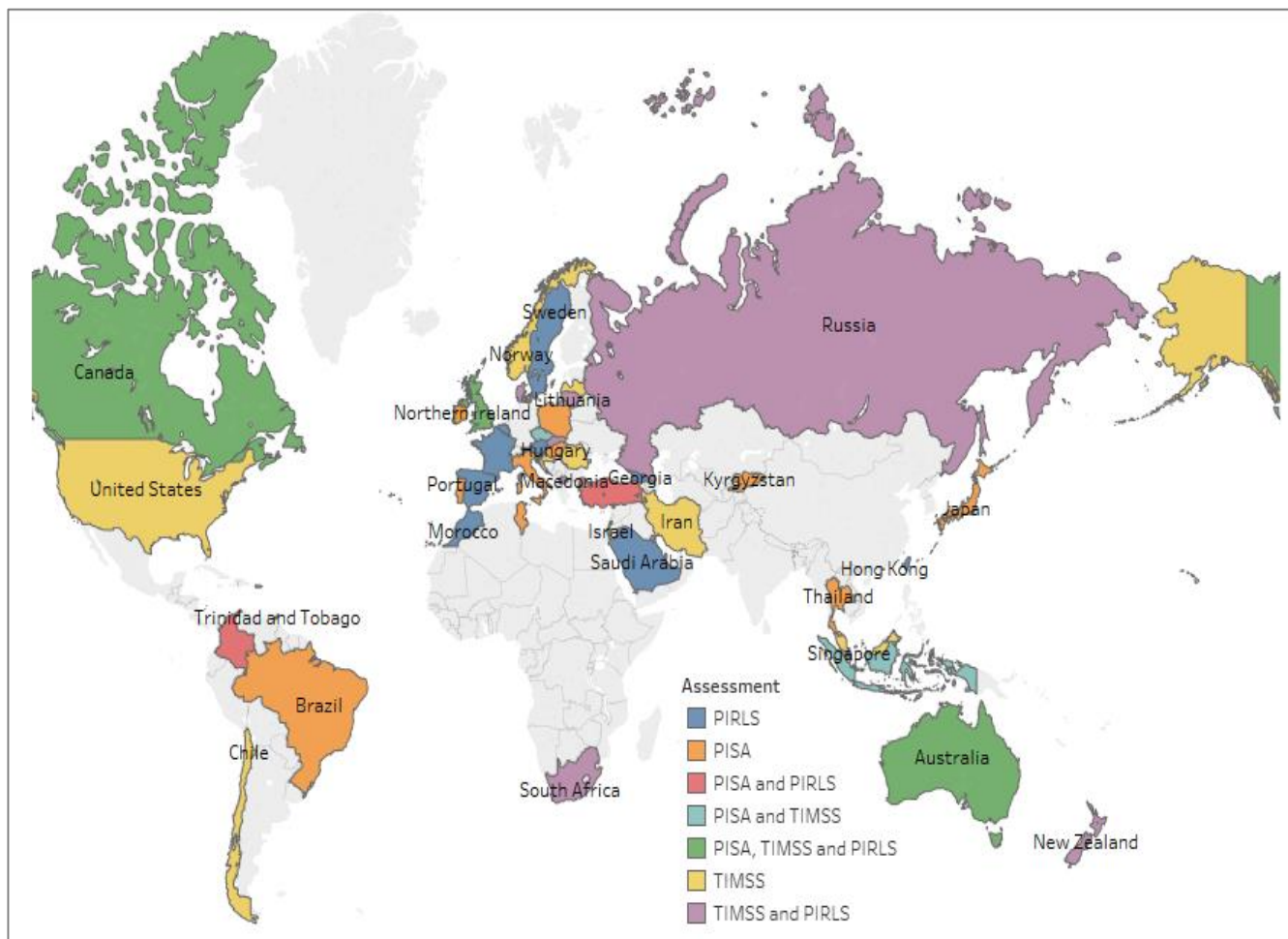


Figure 3. Sources of assessment data used by countries



Data Gaps

Large data gaps are noticed in figures 1,2 and 3; this is mostly because many countries do not participate in large-scale assessments. Reasons why countries choose not to participate in large-scale assessments are:

1. Coverage issues

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

2. 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.
- 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”.

3. 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.



Investment following the assessment

Large-scale assessment data have inspired resource allocation in various countries. **Table 1** groups the examples of resource investment under three main umbrellas:

Teachers, training, and professional development

Effective teaching depends on both the skills and motivation of teachers. Because both can be strengthened and developed, greater resource allocation to teachers has been a top policy priority as a result of international assessments.




Education funding

Funding for education has been a constant concern and priority for countries, especially as a result of the growing international awareness stemming from assessments like PISA, which highlight the resources that are dedicated to education systems. The World Bank (2018) suggests that as countries increase their budgets for education, they should "shift spending patterns" so that teachers gain the necessary resources they require to improve student learning.

Educational materials and time resources

Infrastructure, the availability of materials, and use of time inside and outside the classroom all have substantial influence on the learning outcomes of students. Increased allocation of resources does not suffice in improving learning: it must be combined or informed by better use of resources.

Table 1. Resources countries have invested based on the outcomes of cross-national assessments

Area of resource investment	Examples
 <p data-bbox="215 495 529 558">Teachers, training, and professional development</p>	<ul style="list-style-type: none"> <li data-bbox="602 210 1453 275">• New online in-service professional development programmes for teachers and leaders <li data-bbox="602 315 1453 380">• Teacher training workshops/integrating technology into classroom activities <li data-bbox="602 390 1453 495">• Incentives to participate in in-service teacher training programmes, encouraging high-performing students to join the teaching profession through incentives, and increasing salaries <li data-bbox="602 506 1453 537">• Improving teachers' pedagogical skills and teaching literacy <li data-bbox="602 548 1453 583">• Incentives for teachers
 <p data-bbox="261 890 480 919">Education funding</p>	<ul style="list-style-type: none"> <li data-bbox="602 604 1453 747">• Increasing budget for education to provide primary and secondary education with additional financial resources to reduce class size, raise teacher salaries, and develop infrastructure <li data-bbox="602 758 1453 823">• Several initiative investments to strengthen literacy development, including a generous Quality Education Fund <li data-bbox="602 842 1453 873">• Funding programmes to promote reading and literacy <li data-bbox="602 884 1453 989">• Donors helping to stimulate a policy response in terms of resource allocation in part through the administration of the assessment <li data-bbox="602 999 1453 1062">• Interventions based on the findings, which are also used to influence policy dialogue and action
 <p data-bbox="196 1327 545 1390">Education materials and time resources</p>	<ul style="list-style-type: none"> <li data-bbox="602 1073 1453 1138">• An increase in classroom instruction time dedicated to mathematics leading to improved assessment scores <li data-bbox="602 1148 1453 1213">• Reductions in teacher shortages as a result of policy changes and efforts <li data-bbox="602 1224 1453 1289">• Hybrid assessment data being incorporated into a national assessment system to inform curriculum and instruction <li data-bbox="602 1299 1453 1365">• Hybrid assessment data to inform the development of materials and strategies for teaching and continuous assessment <li data-bbox="602 1375 1453 1524">• Influencing the national educational programme, resulting in the allocation of significant funding to the building of classrooms, providing instructional materials, and addressing out-of-school children through non-formal education programmes

While increased resources to schools are encouraging, it is important to note that it is not simply the amount of resources that leads to effective educational outcomes. An increase in resources often affects learning outcomes to a small degree. What is more important is how resources are allocated and efficiently utilized through focused and accountable policy measures that are better able to address and create whole-system improvements, even when countries are limited by finances.

Barriers to using large-scale assessment data in policymaking

Although large-scale assessments can provide significant information for countries in terms of comparison, there are instances in which a country participates in a large-scale assessment yet disregards or fails to use the results in education policymaking (see Figure 4 for geographic distribution of large-scale assessments). Below we present the common barriers which prevent the use of assessments in education policy and provide examples.

1. Lack of or poor dissemination of information

- Little awareness of PISA results due to weak dissemination
- Assessment teams not sharing findings in sufficient or salient ways that improve education system operations
- Only education officials and policymakers have access to assessment data, resulting in little public awareness and pressure

2. Limitations in assessment programme and analyses

- Difficulty in comparing results from one assessment programme to another
- Uncertainty of data being recognized at the national level
- Limited capacity of technical experts to analyze large-scale assessment data
- Assessments not responsive to pressing policy concerns of a country's education system
- Results not used to specifically target or develop interventions at the classroom level

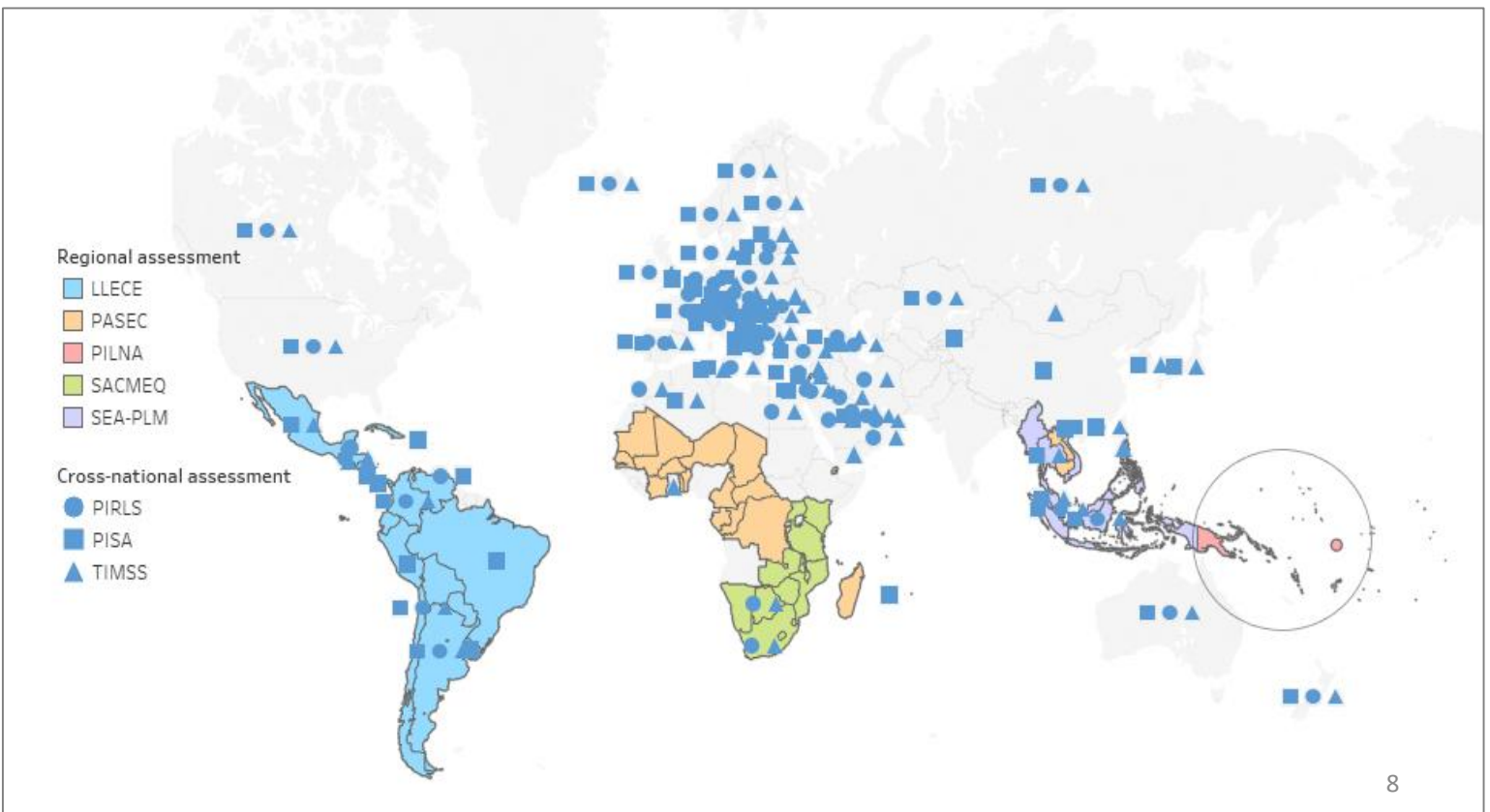
3. Weak assessment bodies and fragmented government agencies

- Assessment mechanisms, especially concerning information dissemination, not being adequate or organized
- Fragmentation and reluctance among relevant government bodies in handling data

4. Political factors

- Violent conflict and political unrest influencing the implementation of assessment
- Lack of political will
- Lack of efforts to improve reading instruction at the primary level despite indications from the data
- No acceptance of assessment results, or no agreement on how to implement changes
- Discrepancies in findings resulting in a policy stalemate
- Data manipulation and corruption leading to policy inaction, or misdirection

Figure 4. Geographic distribution of large-scale learning assessments



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