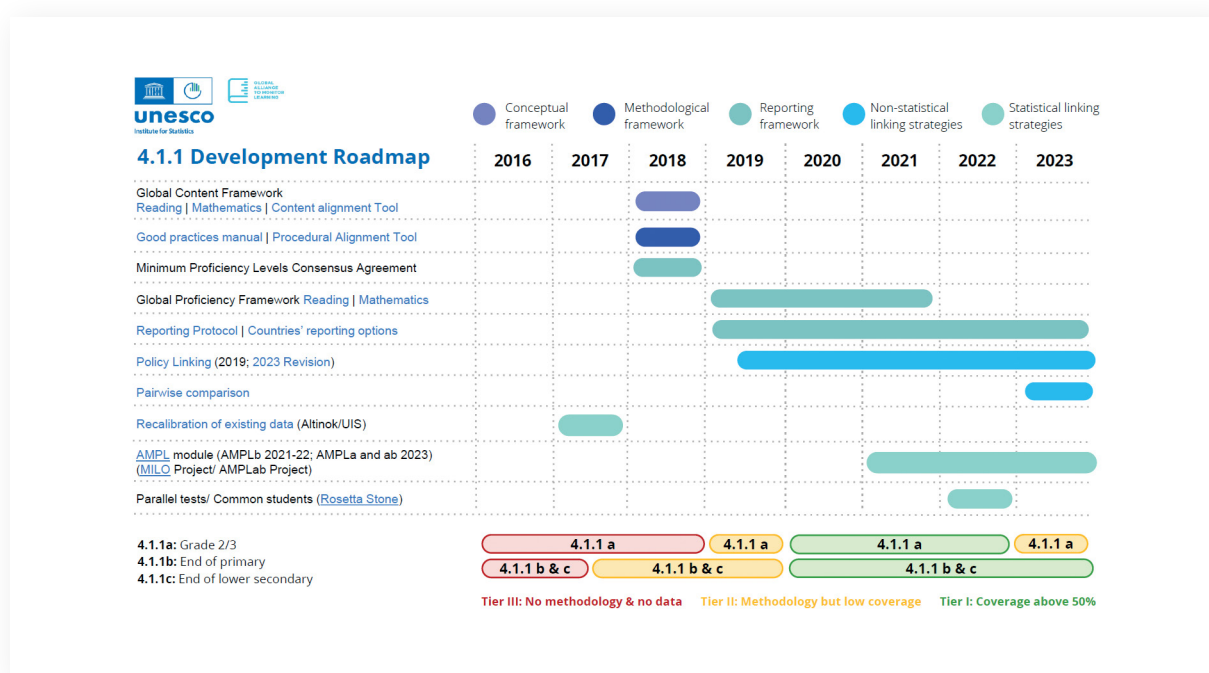


Tools and Resources for Monitoring SDG 4 Indicator 4.1.1

The UNESCO Institute for Statistics (UIS) plays a crucial role in tracking the progress towards Sustainable Development Goal 4 (SDG 4), particularly focusing on learning outcomes as specified in SDG Indicator 4.1.1.

This process encompasses a series of conceptual, methodological, and reporting frameworks. The UIS's responsibilities extend beyond mere reporting of learning outcomes; it also stimulates further research

and activities in this domain. This approach is essential in generating reliable, comprehensive data that guide policymakers and educational stakeholders in making well-informed decisions, thereby aiding the achievement of SDG 4. For a more detailed understanding of the UIS's methodologies and initiatives, explore the Global Alliance to Monitor Learning (GAML) webpage at UIS Resources. Additionally, consider revising the UIS Toolkit to incorporate the latest updates and best practices in monitoring learning outcomes.



Timeline of SDG 4 output and resources process

1 Overview

Aligning and reporting on indicator 4.1.1: UIS annotated workflow



This "document" summarizes the development of a reporting program for SDG Indicator 4.1.1, focusing on children achieving minimum proficiency levels in reading and mathematics at different education stages. It discusses major outputs, the UIS GAML workflow, and three phases: conceptual, methodological, and reporting frameworks as described below. Challenges in achieving global reporting consistency are highlighted, emphasizing the need for harmonizing data even when indicators are agreed upon. The document outlines the reporting format, covering content measurement, data quality, proficiency level definition, and linking strategies. The UIS prioritizes this work for data consistency and flexibility while ensuring comparability across assessments.

2 Conceptual framework



This phase involves the establishment of a Global Content Framework. Setting the parameters and defining what constitutes learning outcomes, it provides a clear conceptual basis for further methodological and reporting activities. This framework is essential in ensuring a globally agreed-upon understanding of learning outcomes.

The conceptual framework for reporting SDG 4.1.1 outputs involves three key initiatives. Firstly, the Global Content Framework for reading (2018) and Global Content Framework for mathematics (2018) which provide essential guidelines for content alignment. Secondly, the Content Alignment Tool (CAT) (2018) is a valuable resource for aligning content with proficiency

levels. Lastly, the Online CAT Platform (2018) offers a solution for content alignment efforts. These initiatives collectively contribute to a comprehensive framework for aligning and reporting on SDG 4.1.1, ensuring that education systems worldwide can measure and report on learning outcomes consistently and effectively.

3 Methodological framework

In this phase, the focus shifts to procedural alignment encompassing the development and standardization of methodologies used in assessing and reporting learning outcomes. This phase is critical as it ensures consistency and comparability of data across different countries and educational contexts. The UIS, having completed most of the required work in this area before accepting the custodial role for SDG 4.1.1, applies these methodologies to various levels and types of assessments. The methodological framework for reporting SDG 4.1.1 outputs emphasizes procedural alignment and encompasses three vital resources. Firstly, the manual of good practices, Principles of good practice in learning assessment (2017), provides foundational principles for quality learning assessments. Secondly, the Procedure Alignment Tool (PAT) (2018) offers practical guidance for aligning assessment procedures. Lastly, the Online PAT Platform (2018) facilitates online procedural alignment efforts, streamlining the process. These resources collectively contribute to a robust framework for ensuring that the procedures used for learning assessments align with SDG 4.1.1 reporting requirements, promoting consistency and accuracy in educational reporting worldwide..

4 Reporting framework

The final phase involves a comprehensive reporting framework. This framework includes a range of elements such as defining the Minimum Proficiency Level, establishing a Global Proficiency Framework, and devising strategies for linking different assessment outcomes. It also involves setting protocols for official reporting, detailing metadata requirements, and providing countries with options and guidance on using cross-national assessments for reporting. This framework is instrumental in translating the collected data into actionable insights and coherent reports that accurately reflect the learning outcomes across different regions.

Reporting SDG Indicator 4.1.1: Overview



The UIS has developed a cohesive framework for monitoring educational progress through three key documents. The first, "**Metadata Indicator 4.1.1**", outlines methodologies for tracking

minimum proficiency levels in reading and mathematics under SDG 4.1.1, focusing on data harmonization and reporting challenges. The second document, "**Protocol for reporting 4.1.1**", provides a detailed protocol for reporting on this indicator, emphasizing global consistency in reporting and alignment of national assessments with global standards. Lastly, "**Reporting learning outcomes in basic education: Country's options for Indicator 4.1.1**" discusses the production of quality learning data and various methodologies available to countries for this purpose, including cross-national and national assessments.

Monitoring of the Sustainable Development Goals using large-scale international assessments



This paper highlights the critical role of international and regional student learning assessments in "**Monitoring the Sustainable Development Goals (SDGs)**". It emphasizes two key functions:

providing globally comparable measures of minimum learning proficiency for SDG 4.1.1 and offering insights into students and schools beyond what administrative data captures. The guidance focuses on estimating SDG 4 indicators using data from large-scale assessments in reading and mathematics. It covers reporting Indicator 4.1.1 and selecting appropriate reporting sources and methodologies for other SDG 4 indicators, such as those related to school infrastructure, teacher development, exposure to bullying, and language of instruction.

Minimum Proficiency Level



The document focuses on the concept of "**Minimum Proficiency Level (MPL)**". It outlines standards or benchmarks that learners should achieve in specific educational areas, typically used for

assessing educational progress and performance. The MPL is a crucial tool in educational evaluation,

helping to identify where students stand in relation to expected learning outcomes. It serves as a key indicator in educational assessment, providing insights into the effectiveness of teaching methods.

Assessments for Minimum Proficiency Levels (AMPL)



The paper on Assessments for "**Minimum Proficiency Levels (AMPL)**" presents a pioneering tool for measuring reading and mathematics proficiency at specific education levels. AMPLs

identify the proportion of children achieving the Minimum Proficiency Level, addressing the need for quality, internationally comparable learning data. They offer flexible administration mechanisms, and their implementation includes rigorous standards and capacity building. Country-specific reports are generated promptly, and SDG 4.1.1 indicators are produced by sex. Developed in collaboration with ACER, "**AMPLs were piloted in six African countries for assessing COVID-19's impact on learning**" and expanding UIS's bank of items for primary education, supporting SDG 4 reporting.

Global Proficiency Framework



The "**Global Proficiency Framework (GPF)**" serves as a universal reference for countries and assessment organizations to report progress on SDG Indicator 4.1.1, which tracks the

proficiency of children and young people in reading and mathematics at various educational stages. The GPF enables comparison of different assessments by providing a common scale. Countries can link their assessments to the GPF, allowing them to set benchmarks and measure the proportion of learners achieving the global MPL. Beyond global reporting, the GPF aids in developing new assessments, evaluating curricula, and aligning educational elements like standards and teacher training with global learner expectations. Its application fosters critical analysis of teaching quality and assessment robustness.



Linking strategies



The effort to explore linking strategies for educational assessments has materialized in three key documents by the UIS. "**Exploring commonalities and differences in regional and international assessments**" analyses a range of literacy and numeracy assessments to guide UNESCO's SDG 4 measurement strategies. "**Costs and benefits of different approaches to measuring the learning proficiency of students (SDG Indicator 4.1.1) (2019)**" focuses on the challenges of achieving comparability in proficiency levels across various assessments. Lastly, "**The feasibility of harmonizing scores produced by Assessments for Minimum Proficiency Levels (AMPL) to the TIMSS and PIRLS test scores to measure and monitor SDG 4.1.1b (2023)**" examines the challenges and potential methodologies for harmonizing different scoring systems to accurately monitor educational progress.

Rosetta Stone concordance tables



The "**Rosetta Stone**" study contributes to measuring global progress towards SDG 4.1.1 by connecting national and regional assessments with international ones. It assesses primary school students' proficiency in literacy and numeracy, enabling international comparisons. Initial efforts involve linking regional assessments like ERCE and PASEC with international assessments such as TIMSS and PIRLS. This approach enhances global monitoring of education outcomes, informs curriculum development, and influences educational policy and planning. The document likely outlines MPL criteria, its application in education, and its role in monitoring and improving student learning.

Policy linking



The "**UIS's policy linking methodology**" addresses the challenge of non-comparability in national learning assessments. This strategy employs a non-statistical, judgment-based approach to align national assessment items with the GPF, establishing globally comparable benchmarks. Policy linking involves a workshop with experts to align, match, and set benchmarks for reporting on SDG

Indicator 4.1.1, focusing on minimum proficiency in reading and mathematics. The "**Policy linking toolkit**" outlines criteria to ensure reliability, including alignment with the GPF, representative samples, and adherence to quality standards in assessment administration. Policy linking is a non-statistical, judgmental method for measuring global learning outcomes, which has also been referred to as social moderation. The UIS has included policy linking in its list of acceptable methodologies for reporting on SDG 4.1.1.

Global Item Bank



The reporting strategy to support countries in monitoring SDG Indicator 4.1.1 involves the "**Global Bank of Items**", a collaboration between the World Bank and UIS. It offers a global repository of assessment items for assessing reading and mathematics proficiency at various education stages. This resource enables countries to access standardized assessment items, improving the quality of global education data and facilitating SDG 4.1.1 monitoring.

Mapping of SDG indicators in learning assessments



The "**Mapping of SDG Indicators in Learning Assessments**" is a valuable tool for assessing and improving learning outcomes. It offers a repository of prominent learning assessment programs, highlighting their potential to monitor progress towards SDG 4. The tool is based on mapping both cognitive and non-cognitive questionnaires to SDG 4 indicators. It categorizes assessments that contain questions relevant to specific indicators, with an "i" icon providing reference to the source questionnaire for each question. This tool not only demonstrates the significance of learning assessments but also offers insights for future learning assessment initiatives. The mapping is completed by guidelines for the production of SDG4 indicators based on "**international learning assessments**" including the selection of reporting sources and methodology to estimate other indicators within the SDG 4 framework (such as school infrastructure, teachers' professional development, students' exposure to bullying and whether students are learning in their home language).