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MEASURING WHAT MATTERS

What is measured shapes what is learned: Rethinking education metrics for planetary futures.



KEY MESSAGES

- The current architecture of education metrics, including standardized assessments, global rankings, and performance indicators, prioritizes measures that are often misaligned with planetary realities.
- While existing metrics provide insights into system variation and outputs, the overall landscape of education measures needs to be broadened. The challenge is to better assess how, and under what conditions, education enables learners and communities to sustain life, adapt to change, and act with care, extending attention beyond individual achievement and attainment to relational wellbeing and collective capacity within planetary limits.
- Reimagined metrics can inform and contribute to the transformation of education systems and policies by making visible how education contributes to learner wellbeing, sustainable and just societies, and supporting all forms of life on the planet.

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INSIGHT

Data, indicators, and assessment frameworks have become integral to contemporary education governance, providing important tools for monitoring progress, supporting accountability, shaping policy, and enabling comparison across education systems. In doing so, they influence what aspects of education systems are valued and prioritized. The purposes of measurement have shifted over time: from auditing religious fidelity, moral worldviews and political loyalties, to advancing human rights and universal access aligned with global policy commitments, to more recent emphases on human capital formation and individual achievement (Sellar & Lingard, 2014). The challenge today is to ensure that what education systems measure reflects the evolving purposes of education in an era of planetary change. Existing systems not only provide valuable insights into foundational skills (literacy and numeracy), human capital outcomes and overall attainment, they also shape policy attention, resources, and practice. As a result, existing metrics constrain what is institutionally visible and offer only a partial view of education's broader contributions to learner and societal wellbeing, including through developing relational and collective capacities that support life within planetary boundaries (McKenzie, 2021; Benavot et al., 2026).

This is not an argument against measurement. Rather, it is a call to expand and rebalance what is measured and why. Existing measurement frameworks, such as the IEA's TIMSS and OECD's PISA, have enabled forms of accountability, comparison, policy coordination and peer learning across diverse contexts, and have shaped education systems worldwide (Sellar & Lingard, 2014). However, such frameworks tend to privilege individual achievement and attainment, and historically had a narrow focus on basic learning outcomes, overlooking the development of broader skills and capacities that are increasingly called for in the face of multiple crises, including the relational and collective wellbeing aspects essential for individual flourishing, societal health and planetary sustainability (Benavot, McKenzie & MECCE Project Team, 2021; Fischman et al., 2019). As a result, current global metrics provide only a partial view of the important roles of education in society, capturing aspects of performance and output, but providing limited insight into how learning contributes to sustaining life, strengthening communities, and navigating complexity (McKenzie, 2021).

Basic information on education access, participation and completion, as well as international large-scale assessments (ILSAs) such as PISA, have become dominant forces in the global measurement landscape. Designed to enable comparability across education systems, they have produced influential data on provision, attainment, foundational learning and system performance as well as salient inequalities by location, gender, race, ethnicity, and socio-demographic dimensions. But what legitimately counts as the purposes and outcomes of teaching and learning have become narrowly defined. For example, the emphasis on standardized cognitive outcomes and cross-national ranking privileges forms of knowledge that can be measured uniformly across contexts, while rendering other learning aspects less visible within dominant frameworks (Fischman et al., 2019; Sellar & Lingard, 2014). In this sense, what is not measured is not simply absent, but systematically marginalized within policy discourse. It should be possible for assessment frameworks to also render visible more contextualized forms of knowledge and learner experience, even if they are less standardized and comparable with other systems.

Current global metrics have played powerful roles in structuring global and national education agendas, often shaping policy priorities, donor allocations, and reform trajectories in ways that extend beyond their technical function (Benavot & Smith, 2020; Grey & Morris, 2023; Chandir, Gorur, & Blackmore, 2025; Smith & Benavot, 2020). While typically framed as neutral tools of comparison, their influence can narrow the space of what is considered legitimate knowledge, critical skills, and desirable outcomes; often privileging competition, standardization, and comparability over relational, contextual, and interdependent forms of learning.

The dynamics of constructing and disseminating global metrics reflect how indicators are used within global education governance. Existing indicators do not simply monitor progress; they actively shape policy priorities, resource allocation, and public discourse. Their strength emanates from their ability to simplify complex and context-dependent realities into proxy measures that are more easily communicated, even if that means

ignoring lived experience (Benavot et al., 2026). In this way, current education metrics tend to privilege priorities of competition and marketization, over what may be more meaningful or necessary for societal continuation in the face of growing planetary challenges and associated declines in the wellbeing of young people (McGorry et al., 2024). Without reconsideration and redesign, such metrics risk directing attention toward improving “the numbers” rather than the underlying conditions they are intended to represent, reinforcing a tendency to prioritize measurable outputs over more complex and contextually grounded forms of teaching, learning and change (Benavot et al., 2026).

In recent years, efforts are underway to extend and diversify what is measured and for what purposes. Global indicators of climate change education demonstrate how measurement can move beyond self-reported country commitments toward more systematic analysis of curriculum content and policy frameworks. For example, greening curriculum indicator 4.7.1b, added to SDG global indicator 4.7.1 in 2024, provides a structured approach to assessing the integration of environment, sustainability, biodiversity and climate change themes across curricular policies and science and social science curricula (McKenzie, Benavot & Redman, 2024; MECCE Project, 2024). Other developments are extending measurement toward learner capacities. OECD’s forthcoming PISA 2029 Climate Literacy assessment, for example, will examine 15-year-old students’ climate knowledge, skills, attitudes, and values, including their capacity to understand climate systems, evaluate evidence, engage with diverse perspectives, and exercise agency in envisioning sustainable solutions (OECD, 2026). Such initiatives help create a new evidentiary base that can support country peer learning and evidence-informed policy making. They can also play a critical role in establishing new global baselines and comparability across systems to track changes over time.

Despite these advances, the ongoing challenge remains clear: while indicators and other global data on curriculum or learner achievement provide important signals of intent and of outcomes of certain types, they are limited either in their ability to reflect how education and pedagogy are practiced, or in their scope of cognitive based learning which leaves out the development of capacities for adaptation, relational wellbeing in the face of a changing planet, and resilient collective action. As a result, key dimensions of educational transformation, particularly those that are relational and collective remain relatively invisible in existing measurement architectures.

Such limitations point not to the failure of education measurement, but to the need to reimagine its purposes and the content of the toolkits being utilized. Emerging work on greening education indicators demonstrates how metrics, when thoughtfully designed, can function as new leverage points for system change and act as boundary objects, connecting governance levels, aligning diverse actors, and supporting shared understandings of progress toward sustainability and climate adaptation (McKenzie, Benavot & Redman, 2024; Benavot, McKenzie & MECCE Project Team, 2021). At its best, education measurement becomes a practice of collective sensemaking, enabling systems to learn from themselves and others, and adapt educational aims and outcomes in response to complex and evolving conditions. Well-conceived indicators can serve as powerful levers for policy change when deliberately designed to inform, motivate, and support action (Benavot et al., 2026; Antoninis, Benavot & McKenzie 2025). Drawing on diverse data sources, stakeholder perspectives, and contextual knowledge, collaborative approaches to indicator development can enhance both the relevance and uptake of metrics, positioning them not only as tools for monitoring, but as catalysts for coordination, learning, and transformation.

Reimagining education metrics in this context requires a shift from measuring individual learning achievement to also focusing on the understandings and capacities necessary for personal and collective wellbeing in the face of planetary change. Transforming existing metrics involves exploring a broader array of learning in different modalities, at different levels, including forms of learning that are relational and collective. This includes, for example, the ways in which education systems support forms of agency, imagination, and belonging that are enacted within communities and embedded in social and ecological relationships. It also involves understanding how learning contributes to collective capacity for adaptation, resilience, and care — dimensions that extend beyond individual achievement and require attention to the conditions under which people learn, relate, and act together. Assessment could therefore examine how local school communities

identify and respond collectively to locally experienced climate risks, engage community and local knowledge, and connect learning with tangible changes in their social and ecological contexts. Globally defined indicators can be complemented by locally generated and participatory forms of evidence that reflect these differing conditions and priorities.

Other examples of transformed metrics are emerging. Consider, for example, the Inner Development Goals (2023), which point to the importance of qualities such as presence, empathy, and purpose in navigating complexity and enabling collective action. While such dimensions have historically been marginal within formal measurement systems, they are increasingly recognized as central to how individuals and communities respond to uncertainty and change. Or consider the work of the UN's High-Level Expert Group on Beyond GDP, which released its final report in 2026, entitled [Counting What Counts: A Compass of Progress for People and Planet](#). The report proposes a dashboard of 31 indicators organized around four interconnected dimensions: foundational principles (peace, human rights, and respect for the planet); wellbeing (including material conditions, health, education, security, social cohesion, and environmental quality); equity and inclusion (capturing inequalities and disparities across population groups); and sustainability and resilience (linking present outcomes to future wellbeing).

These emerging approaches highlight a more complete and contextually grounded understanding of education and learning not only as ends in themselves but also as means to other ends. These measurement tools help orient education systems toward the conditions required for sustaining life within planetary boundaries. What is measured shapes what is valued, and what is valued, in turn, shapes the trajectories of education systems and societies. Reimagining education metrics is therefore not simply a technical exercise; it is an opportunity to redefine what education is for in an era of planetary change.

09 Pathways for transformation

- 01 Broaden what education systems measure.** Complement existing indicators with new measurement approaches, including locally generated and participatory ones, that prioritise relational well-being, collective capacity and community knowledge and ecological experiences.
- 02 Design metrics for collective learning and transformation.** Use indicators as tools for reflection, coordination, and shared learning across local, national, regional and global contexts, rather than primarily for ranking, comparison, or sanctioning.
- 03 Align education metrics architectures with planetary conditions.** Ensure that data collection and monitoring systems reflect the capacities needed to live within ecological limits and support regenerative futures.
- 04 Create innovative measures that focus on youth and adult learning outside of formal education.** Develop measures of non-formal and informal learning that would supplement existing metrics and provide an emergent platform of lifelong and life-wide learning for people and the planet.

ILLUSTRATIVE PATHWAYS IN PRACTICE

The following examples illustrate how measurement can make previously overlooked dimensions of education visible and support policy coordination, collective learning, and improvement. They also demonstrate the importance of combining global indicators with contextual and locally generated evidence rather than assuming that all meaningful learning can or should be standardized.

Greening Curriculum Indicator: Changing What the SDGs Measure

The **Greening Curriculum Indicator** (GCI) represents an important shift in what the international community recognizes and monitors as global educational progress. Developed through a collaboration between the Monitoring and Evaluating Climate Communication and Education ([MECCE](#)) Project and UNESCO (the ESD section, the Global Education Monitoring Report, and the Institute for Statistics), the GCI emerged in response to a decision by the SDG4 High-Level Steering Committee to track country efforts to address one of seven Global Initiatives launched at the 2022 [UN Transforming Education Summit: Greening Education – to get every learner climate ready](#). After addressing questions raised by technical experts and country representatives, the GCI was formally adopted in 2024 by members of the UN Inter-Agency and Expert Group on Sustainable Development Goal Indicators as SDG global indicator [4.7.1b](#). Its inclusion means that the integration of environment, sustainability, climate change, and biodiversity into national curricula is now a visible feature of the framework used to monitor global progress on education. The indicator examines two kinds of official documents: national curriculum frameworks and science and social science curricula for grades 3, 6, and 9. Initial estimates covering 110 countries indicate that approximately 85% of national curriculum frameworks contain some greening content, although its depth and distribution vary significantly across grades and knowledge domains. The GCI demonstrates how collaborative research can reshape global policy priorities and make previously overlooked dimensions of education internationally visible. Because it examines intended curricula rather than classroom practice or learners' experiences, it also illustrates why global indicators must be complemented by other forms of evidence that provide more in-depth and contextually relevant information.

Learn more

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Global Knowledge Index: Reorienting Measurement toward Interdependence

The 2025 *Global Knowledge Index* (GKI), produced by UNDP in partnership with the Mohammed bin Rashid Al Maktoum Knowledge Foundation, assesses knowledge systems across 195 countries. Its revised education framework seeks to move beyond an exclusive focus on individual achievement and national economic competitiveness by giving greater attention to sustainability, wellbeing, resilience, diverse forms of knowledge, and interdependence. New and revised measures include green curriculum intentions and student wellbeing in pre-university education, as well as sciences–humanities parity, international research collaboration, and

greening research in higher education. Together, these measures recognize that education shapes how learners relate to one another and the natural environment and that responding to planetary challenges requires knowledge from across disciplines and societies. The GKI illustrates how an established global index can be broadened to reflect changing understandings of educational purpose, while also demonstrating the continuing need to complement internationally comparable indicators with contextual and locally generated evidence.

Learn more

United Nations Development Programme & Mohammed bin Rashid Al Maktoum Knowledge Foundation. (2025). *Global Knowledge Index 2025*. <https://www.undp.org/arab-states/publications/global-knowledge-index-2025>

Chile's National Environmental Certification System for Educational Establishments: Localizing Metrics for Socio-Ecological Transformation

The National Environmental Certification System for Educational Establishments (SNCAE) in Chile represents a shift from standardized cognitive benchmarking toward holistic, locally grounded education metrics. Established in 2003 through an agreement involving the Ministry of the Environment, the Ministry of Education, the National Forestry Corporation and the Chilean Association of Municipalities, SNCAE is a voluntary public certification program. Rather than treating sustainability as a detached, "green housekeeping" compliance exercise, the framework establishes measurement tools designed to orient school toward life sustenance, community cohesion, and a just socio-ecological transition.

The SNCAE offers public certification at three levels (Basic, Intermediate and Excellent) and evaluates schools across three key domains: *Curricular-Pedagogical* (are environmental dimensions included across statutory management instruments, interdisciplinary lesson plans, outdoor education, and family participation); *Management* (energy efficiency, water conservation, solid-waste management, biodiversity protection, and climate change disaster-risk reduction) and *Relations with the Surroundings* (do schools develop local socio-environmental risks and build collaborations with neighboring communities, municipalities, and local organizations). The assessment process is organized internally by local school Environmental Committees composed of principals, teachers, parents, and students. Subsequently the evidence is reviewed regionally by a dedicated committee that validates qualitative and contextual indicators before granting public certification. Basic and intermediate certification are valid for two years and excellence for four, after which the school submits a revalidation report covering the actions taken since the last certification. By March 2025, the initiative reported 2,450 active certified educational institutions (about one-fifth of all schools), with nearly 60% reaching the Excellence level. Ultimately, SNCAE demonstrates how a state-supported framework can successfully merge structured public evaluation with participatory, context-specific evidence to make visible small-scale and meaningful educational transformation.

Learn more

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