

# Indicators for a Broad and Bold Education Agenda:

Addressing “Measurability” Concerns for Post-2015 Education Targets



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## Addressing “Measurability” Concerns for Post-2015 Education Targets<sup>1</sup>

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*Cover photo:* School children in a classroom in Gao, Mali. © 2014 UN Photo/Marco Dormino.

■ This paper and the four commissioned works on which it is based are guided by the important question: **How can we start valuing practices and outcomes of teaching and learning that are difficult to reduce to numbers?** As the process of developing indicators for the Post-2015 education targets unfolds, some of the targets are at risk of being dropped on account of being ‘un-measurable.’ However, excluding more holistic but harder to assess educational targets will inevitably remove vital focus from some of the most important aspects of high quality education provision. The Open Society Foundations has identified three of the education targets that are particularly contentious and commissioned four papers proposing formulations of indicators that suggest ways of measuring what we care about rather than what is easiest to measure.

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The first set of concrete and actionable goals to increase development and improve access to education for all children was laid out in 2000. The Education for All (EFA) goals and the Millennium Development Goal (MDG) for education emphasized literacy, numeracy, and life skills. The new post-2015 education goal and its related targets revisit these themes and also introduce new and controversial terrain, including education for sustainable development, cultivating lifelong learners, and developing global citizens.

The global community formulated the post-2015 targets through a broadly democratic process that has included states and civil society. The Open Working Group on Sustainable Development of the U.N. General Assembly (OWG) proposed ten targets, while the Education for All Steering Committee (EFA-SC) proposed seven targets. These two sets of targets are largely consistent, though there are some notable differences. Indicators appropriate for monitoring progress toward these targets are currently being developed.

Economist and philosopher, Amartya Sen has critiqued the MDGs, arguing that they narrowed the Millennium Declaration, on which they were based, by dispensing with anything that was not immediately measurable. There is a similar risk of narrowing in the current Sustainable Development Goals (SDGs) process. The three proposed education targets that are the focus of this paper are particularly contentious and are being deemed 'not measurable' either because they lack specificity or because data for proposed measures are 'currently unavailable.' This raises an important question: How can we start valuing practices and outcomes of teaching and learning that are difficult to reduce to numbers?

It's not just that measurable education goals aren't enough—our concern is that excluding more holistic but harder to assess educational targets from systems of accountability will inevitably remove vital focus from some of the most important aspects of high quality education provision.

It's not just that measurable education goals aren't enough—our concern is that excluding more holistic but harder to assess educational targets from systems of accountability will inevitably remove vital focus from some of the most important aspects of high quality education provision.

In response to these concerns, The Open Society Foundations commissioned four papers proposing formulations of indicators for the proposed EFA-SC and OWG targets relating to: i) determining what **Relevant and Effective Learning Outcomes** students completing primary and secondary education should achieve; ii) identifying **Knowledge, Values, Skills, and Attitudes to Establish Sustainable and Peaceful Societies**; and iii) securing **Teachers and Safe, Inclusive, and Effective Learning Environments**. Read the full text of the commissioned papers at <http://www.opensocietyfoundations.org/publications/indicators-broad-bold-education-agenda>.

The following sections highlight some of the main ideas put forward by the authors of the four commissioned papers. The annex to this document briefly describes the

commissioned papers and presents the indicators proposed by the authors. The indicator frameworks reflect their diverse thinking, rather than consensus on any of the issues explored. The proposed indicators highlight the crucial need to go beyond measurable targets to capture more holistic data that can convey the complexity and diversity of national systems. Progress toward the proposed indicators will depend on establishing a monitoring framework that is easily understood and tightly linked to local capacity development for implementation and data collection. The possibilities presented in the commissioned papers are a resource that can be used by policy makers and advocacy groups as the process to settle the new SDGs continues to unfold.

## The Three Targets Explored in this Paper

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The following education targets, developed by the EFA-SC and the OWG, are the thematic foci of this paper. These three targets are at risk of being excluded from the final formulation of the SDGs in response to practical concerns about the number of targets being excessive as well as concerns that targets such as these “rely too much on vague, qualitative language rather than hard, measurable, time-bound, quantitative targets.”<sup>2</sup> We have added emphasis to the key words that are addressed by the authors as they propose ways of measuring what we care about rather than what is easiest to measure.



Malian school children in classroom, December 2014. © 2014 UN Photo/Marco Dormino

### Relevant Learning Outcomes

- EFA Target 2: By 2030, all girls and boys complete free and compulsory quality basic education of at least 9 years and **achieve relevant learning outcomes**, with particular attention to gender equality and the most marginalized.
- OWG Target 4.1: By 2030, ensure all girls and boys complete free, equitable and quality primary and secondary education leading to **relevant and effective learning outcomes**.

### Knowledge, Values, Skills, and Attitudes to Establish Sustainable and Peaceful Societies

- EFA Target 5: By 2030, all **learners acquire knowledge, skills, values and attitudes to establish sustainable and peaceful societies**, including through **global citizenship education** and **education for sustainable development**.
- OWG 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.

### Teachers and Safe, Inclusive, and Effective Learning Environments

- EFA Target 6: By 2030 all governments ensure that all learners are taught by **qualified, professionally trained, motivated and well-supported teachers**.
- OWG 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.
- OWG Target 4.c: By 2030 increase by x% the supply of **qualified teachers**, including through international cooperation for **teacher training** in developing countries, especially LDCs and SIDS.

## Considerations Related to Creating Indicators for These Three Targets

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The three targets explored in this paper overlap significantly. For example, Target 2: Relevant Learning Outcomes and Target 5: Knowledge, Skills, Values, and Attitudes, overlap considerably when “relevant learning outcomes” are understood to be comprised of knowledge, skills, values, and attitudes. Whereas specific learning outcomes are not identified under Target 2, Target 5 identifies global citizenship education as one possible pathway to achieving the knowledge, skills, values, and attitudes that learners should acquire. At the same time, Target 2 also focuses on gender equity and completion of

secondary school, both of which are arguably covered under Target 6: Safe, Inclusive, and Effective Learning Environments. As written, the targets treat learning outcomes, educational content, and learning environments discretely. Treating and measuring the three targets in a more integrated fashion allows us to highlight the interconnected reality of educational systems and their processes.

Indicators that monitor nations' progress toward these education targets must be able to assess whether adequate conditions are in place to produce those outcomes, and must allow for flexibility in different contexts, cultures, and conditions. Further, since these education targets aim to realize human rights, it is important to thoughtfully consider in what ways they promote rights *to* education (access), *in* education (quality, processes) and *through* education (outcomes).<sup>3</sup>

Quantitative input and output indicators should be paired with qualitative indicators focused on system-level policies and processes that aim to create conditions that enable teachers, learning, and learners.

Hence, while overarching global goals and related targets provide a framework and direction, **flexible [fit-for-purpose] system-level indicators of progress are most appropriate for focusing attention on the processes, resources, and conditions that enable teachers and learners to achieve desired learning outcomes.** To this end, **quantitative input and output indicators should be paired with qualitative indicators focused on system-level policies and processes that aim to create conditions that enable teachers, learning, and learners.** Langford (2012) notes that such “conduct” indicators can set out an action-oriented agenda that focuses on steps to be taken, rather than a compliance agenda that constantly looks backwards at what has been achieved so far.<sup>4</sup>

## Key Principles That Should Guide the Design of Indicators for Each Target

### Relevant Learning Outcomes

Learning outcomes should be progressive, developmental, and multi-dimensional over the course of one's educational career. A bolder set of indicators for the Learning Outcomes target might be based on the following key principles:

- Ensuring that *the systems and processes* for achieving expected learning outcomes are clear, well-articulated, internally coherent, and based on the best empirical knowledge and scientific research related to children's educational success;
- Recognizing that teachers are key to children's educational success and therefore ensuring that teachers have the resources, recognition, and skills to support children's achievement;
- Ensuring that teachers and learners have the financial resources, physical infrastructure, and professional support to be successful in the teaching and learning process; and
- Promoting teaching and learning competencies (i.e., measurable knowledge, skills, and ability to execute) rather than seat time, professional qualifications, or years of experience as the basis for defining success.

### **Knowledge, Values, Skills, and Attitudes to Establish Sustainable and Peaceful Societies**

Cultures differ in their vision of what learning content, outcomes, and pedagogy would promote education for sustainable development and education for global citizenship. “Values” and “attitudes” are grounded in cultural beliefs and practices. Given these considerations, global monitoring should support diverse interpretations and policy solutions for different contexts. While this form of monitoring may be messy, it provides a richer understanding of rights-based education and education for sustainable development across and within education systems, enabling us to facilitate education for these purposes.

Though there is no consensus on how to define global citizenship, there is an abundance of evidence, information, tools, curricula, and instructional methods to help educators develop associated competencies. Measuring the competencies associated with being a global citizen will be technically challenging and resource intensive because these competencies will have to be assessed *in situ* in classrooms (as simulations or classroom procedures), within schools (in interactions among students, teachers, and administrative and support staff), and in communities (where real-life impacts must materialize when competencies are achieved).

### **Teachers and Safe, Inclusive, and Effective Learning Environments**

Infrastructure, school systems, classroom practices, and teacher characteristics are undeniably influential in creating a safe, inclusive, and effective learning experience for students. All students need to feel secure, valued, and motivated in the classroom and



A Civil Affairs Officer with the UN Interim Force in Lebanon speaks with young students in Bint Jbeil as part of the “School Drop Out” project sponsored by the mission. © 2011 UN Photo/Pasqual Gorriz



broader schooling environment. Yet, abundant research demonstrates the absence of these characteristics across both highly-developed and under-developed contexts. According to The Salamanca Statement (1994), inclusive education “recognizes and responds to the diverse needs of . . . students, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resources and partnerships with . . . communities.”<sup>5</sup> Learning environments that are child-, disability-, and gender-sensitive will be safer and more inclusive. Indicators that measure for more specific conditions can address school-specific barriers that encourage school-leaving before the full nine years, or that inhibit students’ completion, especially among the most marginalized populations where opportunity costs are higher.

**Teacher indicators have particular impact leverage**, yet the EFA-SC, and OWG targets situate teachers as an *input*, assuming an unproblematic relationship between training teachers and the practice of qualified teachers. This is not borne out by education research. **Having appropriate numbers of trained and competent teachers in well-funded schools with appropriate learning space is central to the definition of quality education—not simply an input to achieve it.** Tackling this issue will require a host of policy interventions designed to interact in ways that create the most enabling environment for teachers to be effective in their specific teaching context.

Indicators that ask questions of curriculum, assessment, and how teachers’ work is evaluated can complement system level indicators that enable education professionals to make learning relevant for diverse learners in diverse contexts. As with students, attending to the whole-teacher is important. Teacher evaluation and performance policies need to be designed in concert with policies ensuring decent teacher pay, adequate teacher preparation and ongoing support in their practice, and attention to psycho-social support in contexts of conflict or emergency.

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## Implementation and Data Collection

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International investment to support improved learning, quality, and equity does not need to focus mainly on the technologies of cross-national measurement of learning outcomes.

**Post-2015, investment could (and should) be targeted at building capacity for measuring and analyzing learning outcomes and relevant curriculum design at the national level, closer to the classrooms where SDGs will be implemented.**

Furthermore, while learning outcomes may be powerful indicators of equity, they can only be partial indicators of quality. From a human rights perspective, standardized test performance tells us little about educational processes. Any assessments students must do—classroom-based performance tasks, international standardized tests, and everything in between—should produce *learning*. Learning should feed directly back into the processes of teaching and learning, while also providing information about how well the education system is working to produce the intended outcomes and competencies.

To accommodate the indicators proposed, it will be essential to develop new measures and systems for tracking educational progress based on authentic instruction and learning outcomes. High quality, disaggregated education and demographic data will be critical in order to identify and attend to the most marginalized groups and to measure progress in ways that are representative of and proportionate to a country's general population and sub-groups.

Compliance with the new framework must not divert valuable resources away from the actual work of teaching and learning by imposing burdensome monitoring and accountability measures. Capacity building and stakeholder participation at the local and system levels can be fostered if monitoring frameworks are easily understood and resources are allocated locally rather than used to retain external experts. Holistic systemic alignment will include all key stakeholders in clear communication networks through which information related to the quality of education flows transparently, and in which stakeholders have power to share insights when gaps occur.

### Box 1. Assessing Quality

Education quality can be understood to be consistent with human rights and the overarching sustainable development agenda. Questions to ask of indicators related to education quality can be categorized into two groups: questions about fitness for purpose and how well the indicators capture the essence of a rights-based view of education. Various measurement experts suggest using more robust indicators that are only partially fit-for-purpose in combination with less robust indicators for aspects of a target that are less amenable to measurement.

Experience with the education MDG and EFA suggests that robust and communicable quantitative indicators have far greater traction than newer, less robust qualitative conduct indicators, especially if the indicator is still under development. **Qualitative indicators for which cross-nationally comparable data is not available should thus be used to create space in the global monitoring framework for the very democratic debate and participation that underpin inclusive and relevant education.**<sup>6</sup> The purchase of qualitative indicators will depend on amplification through mechanisms of monitoring and reporting—so thoughtful attention needs to be given to how qualitative indicators will be monitored and communicated.

## Box 2. Future Research

Rigorous research in the following areas is likely to be particularly valuable to the iterative process of advancing the quality, equity, and sustainability aspects of the post-2015 global education agenda:

- Case study research as stakeholders learn from early efforts and propose new paths forward.
- Methodological research that clearly describes qualitative approaches to monitoring and evaluation of complex indicators.
- Research that examines successful multicultural pedagogies by exploring how students across different contexts are marginalized and how their teachers can be adequately prepared to adapt their own practice and pedagogy so that all students can learn well.
- Empirical research focused on teacher preparation (e.g., how teachers are trained and by whom, what competencies are prioritized during teacher training, etc.) and the ways teachers are positioned and valued within and across societies (e.g., how remuneration impacts the lifestyles and livelihoods of teachers serving in diverse contexts and how this affects their professional conduct and practices).

## Endnotes

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1. This paper is a synthesis of ideas put forward in four papers commissioned by the Open Society Foundations. The commissioned papers are briefly described in the annex to this document along with the full text of the indicators proposed by the authors.
2. International Council for Science. (2015). Review of targets for the Sustainable Development Goals: The Science Perspective. Retrieved from <http://www.icsu.org/publications/reports-and-reviews/review-of-targets-for-the-sustainable-development-goals-the-science-perspective-2015>.
3. Subrahmanian, R. (2002). Engendering education: Prospects for a rights based approach to female education deprivation in India. In M. Molyneux & S. Razavi (Eds.). *Gender justice, development, and rights* (pp. 204-237). Oxford: Oxford University Press.
4. Langford, M. (2012). *The art of the impossible: Measurement choices and the post-2015 development agenda*. Governance and human rights: Criteria and measurement proposals for a post-2015 development agenda, OHCHR/UNDP Expert Consultation. New York: UN Sustainable Development Knowledge Platform.
5. The Salamanca statement and framework for action on special needs education. (1994). World Conference on Special Needs Education: Access and Quality, Salamanca, Spain.
6. Barrett, A. M. (2011). An education Millennium Development Goal for quality: Complexity and democracy. *Compare: a Journal of Comparative and International Education*, 41(1), 145-148.

# Annex: Indicators Proposed for a Broad and Bold Education Agenda

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## Proposed Indicators for the Three Targets Explored

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To best translate the EFA-SC and OWG targets into a framework for action that will fundamentally shift priorities, resources, dynamics, and outcomes throughout the sphere of education, this paper suggests pairing quantitative input and output indicators with qualitative conduct indicators that signal quality and process expectations. Qualitative indicators, most of which focus on the system level, should explicitly reference the right to education and the broader sustainable development agenda, both of which prioritize processes as well outcomes. Flexibility within many of the indicators themselves is desirable because this allows localized contexts to influence how indicators are pursued and eventually achieved.

The task of formulating practicable indicators to achieve a post-2015 education agenda that is broad and bold, equitable and sustainable, offers an unparalleled opportunity to advance the processes and systems that enable children everywhere to enjoy the benefits of learning. With well-formulated indicators that are supported at successive levels by thoughtful policy, planning, and implementation, as well as clear plans and systems for scaling effective educational practices, the post-2015 education framework can translate the vision of a new global partnership into action.

Indicator frameworks, presented in two-dimensional tables, cannot capture the complexity of dynamic systems or show how they respond to changing circumstances, needs, and desires. Just as the indicators themselves must resist standardization and recognize differences in context, culture, and conditions, the indicators proposed here reflect different conceptual and presentation approaches. Some of the proposed indicators reflect current capacities while others point to paths we should consider. Overall, **the various proposals presented below should be understood as a range of suggestions that support understanding and implementing quality education across various levels of governance, in diverse contexts and capture data about what really matters.**

The commissioned papers are briefly described below, followed by the full text of the indicators proposed by the respective authors.

**Angeline Barrett and Tore Bernt Sorenson** present the case that current indicators focus heavily on the level of the individual learner without paying sufficient attention to the level of the learning system that supports the individual learner or teacher. They urge greater focus on the development of system level indicators across targets as a means of monitoring education quality. Their suggested indicators for relevant learning (Table 1) couple quantitative outcomes indicators with qualitative process indicators intended to stimulate debate around what constitutes relevant learning for different contexts and lead to the formulation of national and sub-national indicators that support and enable equitable, relevant learning for sustainable development. Their suggested indicators for teachers (Table 2) situate these critical stakeholders as active collaborators in creating and implementing a broad and bold post-2015 agenda that responds to the particular needs and contexts of their students. Read the full text of the [paper](#).

TABLE 1

## Indicators Proposed by Barrett and Sorenson for Relevant Learning Outcomes

### Equity in educational outcomes

- Proficiency in literacy and mathematics at various points in basic education cycle as measured by **existing** surveys, including international and regional large-scale educational assessments and hybrid assessments. Disaggregated according to gender, socio-economic status, rural/urban location and types of special needs.

*Monitored at international level*

- Performance in national examinations, disaggregated by gender, school location and special needs/disabilities.
- Transition rates to different forms of post-basic education, disaggregated by gender, school location and, if available, information on special needs.

*Variables for disaggregation determined at national level to be responsive to available data and patterns of marginalization*

### System level processes to ensure equity and relevance

- Curriculum and assessment is appropriate to learners' age and level of schooling and responsive to their learning needs, with particular attention to the most marginalized groups.

*In some countries, this may need to be elaborated at sub-national level to be*

*responsive to learners' language capabilities and the prevalence of printed literature in different communities*

- National assessments are fair, robust and transparent.  
*Involves professional judgment and international sharing of assessment expertise*
- National learning objectives are linked to national economic, social and environmental development priorities and lay a foundation for developing knowledge, skills and values for decent life and work across the economic, social and environmental contexts within which learners live.  
*Needs to be elaborated at national level*
- National learning objectives are the subject of informed public and professional debate and consultation, and data relating to each indicator is disseminated to stakeholders including the general public, parents and educational professionals through accessible formats.  
*Appropriate means of dissemination to be determined at national and sub-national level but should include use of independent public media*

#### **Learner level inputs to ensure readiness to learn**

- All learners are ready to learn, including not being hungry, having access to safe drinking water at school and basic equipment for learning, such as pens, exercise books and textbooks that are necessary for learning, with particular attention to the most marginalized.  
*Inputs to be selected at national and/or sub-national level to be responsive to the most prevalent forms of need*

TABLE 2

### **Indicators Proposed by Barrett and Sorenson for Professional Teachers and Educational Processes**

#### **Learner level input for equitable quality education**

- Every learner is in a class with a teacher to learner ratio more than one to fifty.
- Every learner has a teacher who engages in regular continuing professional development and is supervised on a regular basis.

#### **Inputs for professional teachers and schools**

- All schools are visited at least once a month during term time by an external supervisor, with particular attention to schools in rural and remote locations.

- Teachers engage in at least one day of formal professional development for every year that they teach.

*Figures should be interpreted as lowest possible level and countries can set higher levels, which may represent current practices or an ambition for improving inputs for teacher professionalism*

- Teachers' remuneration, living and working conditions meet the criteria of decent life and work.

### **System processes that ensure quality of school and classroom processes**

- Schools are evaluated according to transparent criteria consistent with the right to education and with the principles of education for sustainable development.
- Teacher education and professional development promotes the right to education and education for sustainable development.
- Teachers have the freedom and resources to form professional associations for the purpose of improving teaching and learning, maintaining ethical standards and protecting their rights as employees.
- Teachers are drawn from all sections of society, including the most marginalized groups.

### **School level processes**

- Information on school quality, such as inspection or evaluation reports and assessment data, are made publicly available and accessible to parents and the local community.
- Representatives of parents and local community participate in decision making in all aspects of school life.

*Mechanisms and institutions for this are set at national level*

**Antoni Verger, Xavier Bonal, and Adrián Zancajo** present indicators (Tables 3-5) using reading and mathematics as illustrative subject areas to monitor learning outcomes; knowledge/skills, attitudes/values, intended behavior, and actual behavior to monitor education for global citizenship and education for sustainable development (EGC and ESD); and qualified and professionally trained teachers, motivated teachers, well supported teachers/effective learning environments, and safe/inclusive schools to monitor teachers and learning environments. Verger et al. include explicit equity indicators (social, gender, and location) for each dimension. Read the full text of the [paper](#).

TABLE 3  
**Indicators Proposed by Verger et al. to Monitor Learning Outcomes**

Dimension	Indicator	Progress Measure	Equity Indicators
Reading	Percentage of children who achieve minimum proficiency standards in reading at ages 12 and 15.	By 2030, countries should increase by XX% the children who achieve minimum proficiency standards in reading at ages 12 and 15.	<b>Social</b> Ratio between first and fifth quintile of SES: % of children who achieve minimum proficiency standards in reading at ages 12 and 15.
			<b>Gender</b> Ratio between males and females: % of children who achieve minimum proficiency standards in reading at ages 12 and 15.
			<b>Location</b> Ratio between urban and rural: % of children who achieve minimum proficiency standards in reading at ages 12 and 15.
Mathematics	Percentage of children who achieve minimum proficiency standards in mathematics at ages 12 and 15.	By 2030, countries should increase by XX% the children who achieve minimum proficiency standards in mathematics at ages 12 and 15.	<b>Social</b> Ratio between first and fifth quintile of SES: % of children who achieve minimum proficiency standards in mathematics at ages 12 and 15.
			<b>Gender</b> Ratio between males and females: % of children who achieve minimum proficiency standards in mathematics at ages 12 and 15.
			<b>Location</b> Ratio between urban and rural: % of children who achieve minimum proficiency standards in mathematics at ages 12 and 15.



TABLE 4

## Indicators Proposed by Verger et al. to Monitor Knowledge, Skills, Values, and Attitudes (EGC and ESD)

Dimension	Indicator	Progress Measure	Equity Indicators
Knowledge/ Skills	% of respondents with basic knowledge of political institutions (e.g., distinction between executive, legislative, and judiciary powers).	By 2030, countries should increase by XX% the proportion of children who have basic knowledge of political institutions and by XX% the proportion of children with precise knowledge about causes of environmental damage.	<b>Social</b> Ratio between first and fifth quintile of SES: % of children who respond positively to basic knowledge of political institutions.
	% of respondents that know specific causes of environmental damage (e.g., harmful gases, deforestation, specific industries, construction, agricultural policies).		<b>Social</b> Ratio between first and fifth quintile of SES: % of children with precise knowledge about causes of environmental damage.
			<b>Gender</b> Ratio between males and females: % of children who respond positively to basic knowledge of political institutions.
			<b>Gender</b> Ratio between males and females: % of children with precise knowledge about causes of environmental damage.
Attitudes/ Values	% of respondents that respond positively to the question “All ethnic/racial groups should have equal chance to get good jobs.”	By 2030, countries should increase by XX% the proportion of children who respond positively to the question “All ethnic/racial groups should have equal chance to get good jobs” and by XX% the proportion of respondents that respond positively to the question “The government should increase sanctions for those organizations and individuals that cause some form of environmental damage.”	<b>Social</b> Ratio between first and fifth quintile of SES: % of respondents that respond positively to the question “All ethnic/racial groups should have equal chance to get good jobs.”
			<b>Social</b> Ratio between first and fifth quintile of SES: % of respondents that respond positively to the question “The government should increase sanctions for those organizations and individuals that cause some form of environmental damage.”
	% of respondents that respond positively to the question “The government should increase sanctions for those organizations and individuals that cause some form of environmental damage.”		<b>Gender</b> Ratio between males and females: % of respondents that respond positively to the question “All ethnic/racial groups should have equal chance to get good jobs.”
			<b>Gender</b> Ratio between males and females: % of respondents that respond positively to the question “The government should increase sanctions for those organizations and individuals that cause some form of environmental damage.”
	% of respondents that respond positively to the question “The government should increase sanctions for those organizations and individuals that cause some form of environmental damage.”		<b>Location</b> Ratio between urban and rural: % of respondents that respond positively to the question “All ethnic/racial groups should have equal chance to get good jobs.”
			<b>Location</b> Ratio between urban and rural: % of respondents that respond positively to the question “The government should increase sanctions for those organizations and individuals that cause some form of environmental damage.”

Intended Behaviour	% of respondents that show some form of positive response to the question “If I see a racist attitude in the street I would...” (respond to the aggressor, denounce the aggressor, etc.).	By 2030, countries should increase by XX% the proportion of children that show some positive response to the question “If I see a racist attitude in the street I would...” and by XX% the proportion of children that respond positively to the question “I would never buy a product that is not environmental friendly even if it is convenient for me.”	Social	Ratio between first and fifth quintile of SES: % of children who respond positively to the question “If I see a racist attitude in the street I would...”	
	% of respondents that respond positively to the question “I would never buy a product that is not environmentally friendly even if it is convenient for me.”		Gender	Ratio between first and fifth quintile of SES: % of children who respond positively to the question “I would never buy a product that is not environmental friendly even if it is convenient for me.”	
			Location	Ratio between urban and rural: % of children who respond positively to “If I see a racist attitude in the street I would...”	
	% of respondents that have engaged in some form of political action during the last month (public demonstration, political association meetings, presentation of a collective appeal, etc.).		% of respondents that have a pro-environmental behaviour in their everyday life (recycling, saving water, collecting garbage in a public space, have denounced anti-environmental behaviour).	Location	Ratio between urban and rural: % of children who respond positively to the question “I would never buy a product that is not environmental friendly even if it is convenient for me.”
				Social	Ratio between first and fifth quintile of SES: % of children who have engaged in some form of political action during the last month.
				Gender	Ratio between first and fifth quintile of SES: % of children that have a pro-environmental behaviour in their everyday life.
Actual Behaviour	% of respondents that have a pro-environmental behaviour in their everyday life (recycling, saving water, collecting garbage in a public space, have denounced anti-environmental behaviour).	Gender	Ratio between males and females: % of children who have engaged in some form of political action during the last month.		
		Location	Ratio between males and females % of children that have a pro-environmental behaviour in their everyday life.		
		Location	Ratio between urban and rural: % of children who have engaged in some form of political action during the last month.		
			Location	Ratio between urban/rural: % of children that have a pro-environmental behaviour in their everyday life.	

TABLE 5

## Indicators Proposed by Verger et al. to Monitor Teachers and Learning Environments

Dimension	Indicator	Progress Measure	Equity Indicators	
Qualified and professionally trained teachers	% of qualified teachers	By 2030, all governments ensure that all learners are taught by qualified and professionally trained teachers	<b>Social</b>	% of qualified teachers according to students' first/fifth quintile ratio
	Students/qualified teachers ratio			Students/qualified teachers ratio according to students' first/fifth quintile ratio
				<b>Gender</b>
	Students/qualified teachers ratio according to teachers' gender ratio			
Motivated teachers	Percentage of teachers with a salary that is double the minimum salary in the country*	By 2030, countries should increase in XX% the percentage of teachers with decent working conditions	<b>Social</b>	% of qualified teachers according to urban/rural ratio
	Percentage of teachers whose salary is paid on time*			Students/qualified teachers ratio according to urban/rural ratio
				Percentage of teachers with full-time contract*
	Teacher attrition			
		Percentage of teachers with a say on the school goals and educational approach*	- whose salary is paid on time	
			- with full-time contract	
		- with a say on the goals/educational approach of the school		
		Teacher attrition according to students' first/fifth quintile ratio		
	By 2030, countries should reduce in XX% the percentage of teachers' attrition	<b>Gender</b>	% of teachers:	
			- with a salary that is double the minimum salary in the country	
			- whose salary is paid on time	
			- with full time contract	
			- with a say on the goals/educational approach of the school according to teachers' gender ratio	
			Teacher attrition according to teachers' gender ratio	
			<b>Location</b>	According to urban/rural ratio, % of teachers:
		- with a salary that is double the minimum salary in the country		
		- whose salary is paid on time		
		- with full-time contract		
				- with a say on the goals/educational approach of the school
				Teacher attrition according to urban/rural ratio

Dimension	Indicator	Progress Measure	Equity Indicators
Well supported teachers/ effective learning environments	Percentage of teachers that receive feedback*	By 2030, all governments ensure that all learners are taught by well supported teachers working in effective learning environments	<p>According to students' first/fifth quintile ratio, % of teachers that:</p> <ul style="list-style-type: none"> <li>- receive feedback</li> <li>- have a mentor</li> </ul> <p><b>Social</b></p> <ul style="list-style-type: none"> <li>- received in-service training in the last year</li> <li>- are allowed to be part of a union</li> </ul> <p>% of non-teaching working hours of teachers according to students' first/fifth quintile ratio</p> <p>% of schools with full school day according to students' first/fifth quintile ratio</p>
	Percentage of new teachers with a mentor*		<p>According to teachers' gender ratio, % of teachers that:</p> <ul style="list-style-type: none"> <li>- receive feedback</li> <li>- have a mentor</li> </ul> <p><b>Gender</b></p> <ul style="list-style-type: none"> <li>- received in-service training in the last year</li> <li>- are allowed to be part of a union</li> </ul> <p>% of non-teaching working hours of teachers according to teachers' gender ratio</p> <p>% of schools with full school day according to teachers' gender ratio</p>
	Percentage of non-teaching working hours*		<p>According to urban/rural ratio, % of teachers that:</p> <ul style="list-style-type: none"> <li>- receive feedback</li> <li>- with a mentor</li> </ul> <p><b>Location</b></p> <ul style="list-style-type: none"> <li>- received in-service training in the last year</li> <li>- are allowed to be part of a union</li> </ul> <p>% of non-teaching working hours of teachers according to urban/rural ratio</p> <p>% of schools with full school day according to urban/rural ratio</p>
	Percentage of teachers that received in-service training in the last year*		
	Percentage of schools with full school day**		
Safe/inclusive schools	Access to basic services index (electricity, water, and single-sex toilets)	By 2030, governments increase by XX% the percentage of teachers and learners that are in safe and inclusive schools	<p><b>Social</b></p> <p>% of schools with access to basic services (electricity, water, and single-sex toilets) according to students' first/fifth quintile ratio</p> <p>% of schools with more than 40% of children from the lowest quintile**</p>
	Percentage of teachers experiencing situations of violence in the last year at the school*		<p><b>Gender</b></p> <p>--</p>
	Percentage of children that have experienced kind/helpful attitudes of peer students in the last month		<p><b>Location</b></p> <p>% of schools with access to basic services (electricity, water, and single-sex toilets) according to urban/rural ratio</p>

\* Data need to be developed via a survey

\*\* Survey or available administrative databases

Moira N. Wilkinson, Matthew A. M. Thomas, Cory Heyman, Lesley Bartlett, Pragati Godbole, Stephanie Hodge, Sailesh Naidu, Tawnya Switzer, and Frances Vavrus present an integrated indicator framework by type (i.e., input, process, outcome, and impact) and propose, for each of the measured targets, indicators for both a near-term minimal level of shared global expectations as well as longer-term aspirational indicators, allowing a wide band of autonomy within which countries may operate. The term “curriculum” in Wilkinson et al.’s proposed indicators (Tables 6-9) refers to educational content that incorporates the knowledge, values, skills, and attitudes understood to produce the “global citizenship competency” outcome alluded to in EFA Target 5 and OWG Target 4.7. The term “Global Citizenship skills” is shorthand for the detailed content in Box 3, which is designed to be a companion to Wilkinson et al.’s indicator framework. Read the full text of the [paper](#).

### Box 3. Content Comprising Global Citizenship Competency

**KNOWLEDGE:** The factual knowledge embedded in Global Citizenship is largely place-specific and straddles the realms of governance, sciences, and systems. Key knowledge for Global Citizenship includes knowledge of: 1) one’s human rights, laws, and government procedures; 2) laws of physical sciences and natural resources, especially as connected to one’s particular physical surroundings; and 3) understanding the basic elements of systems and how systems operate. The three other types of knowledge in Bloom’s Taxonomy—procedural, conceptual, and meta-cognitive—are more sophisticated ways of interacting with discrete facts and are often expressed through application, demonstration, or doing. Knowledge can be understood as inputs to build skills, values, attitudes, and behaviors.

**SKILLS:** In addition to the foundational skills of literacy and numeracy, skills for Global Citizenship bridge an individual’s life-skills to her/his responsibility to the species and to future generations. Some of the skills embedded in Global Citizenship Competency have clear criteria for success and are easily observable and measurable, though many are more subjective both in their interpretation and in their particular cultural context. Designing and validating tools sensitive enough to measure such skills will be critical. Systems thinking, which is critical for this competency, allows people to see or imagine across space and time, and to understand relationships and the impact of our choices and actions on each other and on the planet. Global Citizenship Competency requires skills in non-violent conflict transformation, natural resource conservation, leadership and governance, youth participatory action research, and informed decision-making, as well as imagination, empathy, agency, and meta-cognition (or reflection). Empathy and agency, while difficult to measure, are vital to shifting relationship dynamics interpersonally and, writ large, internationally.

**VALUES and ATTITUDES:** In relevant, competency-based learning systems the relationship between skills and values and attitudes is strong. This is important in the post-2015 context because the values basic to Global Citizenship do not reflect the mainstream in many places and run counter to the culture in many schools, which has numerous implications for the leadership team in those schools. In instances where the benefit of adopting a given value or attitude is less obvious to the learner, the value is not reflected in the surrounding environment, or costs are high for doing or not doing something based on that value or attitude, cultivating shifts toward new values and attitudes can be especially difficult. Global Citizens hold the values of peace, reciprocity, collaboration, creativity, inclusion, interdependence, inquiry, learning, trust, and trustworthiness. Related attitudes include hopefulness, leadership, resilience, and non-violence. Skills, values, and attitudes guide our decisions; these factors often show up in our indicator framework as *processes*.

**BEHAVIORS:** Behaviors are the full expression of the knowledge we have, the skills we develop, and our underlying values and attitudes, whether those are conscious or unconscious. Behaviors are the outcomes of those constituent pieces. Global Citizens might be expected to behave/act in ways that transform producer and consumer actions and modes of ownership (e.g., cooperatives versus sole owners) and engage in civic and social justice initiatives.

*Source: Adapted from Wilkinson et al., 2015*

TABLE 6

## Wilkinson et al.'s Proposed Input Indicators [people, money, equipment, and policies]

Targets Measured	Near-term Indicators (to be achieved ≤ 5 years)	Long-term Indicators (to be achieved ≤ 15 years)	Tracking these indicators (across transversal variables) has what utility in decision-making?	Ways to Measure/ Monitor
EFA 2/OWG 4.1 EFA 6/OWG 4.a, 4.c	75% of provinces have national or sub-national legislation on education as an equal right.	Country has national or sub-national legislation on education as an equal right.	Demonstrates regional and national commitment; constitutional guarantee of Education for All.	National educational policies; sub-national educational policies
EFA 2/OWG 4.1 EFA 6/OWG 4.a, 4.c	75% of provinces have national/sub-national Fair pay/Teacher Compensation policies or legislation.	Country has national or sub-national legislation on Fair pay/Teacher Compensation policies or legislation.	Demonstrates national or sub-national commitment to quality of teaching personnel in education.	National or sub-national educational policies; employer-based and employee-based survey of earnings
EFA 2/OWG 4.1 EFA 6/OWG 4.a, 4.c	75% of provinces have annual recurring budget available for development of: 1. national/local curricula for formal learning settings 2. national/local curricula for alternative learning settings 3. teacher-training curricula for formal learning settings 4. teacher-training curricula for alternative settings 5. construction and maintenance of schools	Country has annual recurring budget available for development of: 6. national/local curricula for formal learning settings 7. national/local curricula for alternative learning settings 8. teacher-training curricula for formal learning settings 9. teacher-training curricula for alternative settings 10. construction and maintenance of schools	Demonstrates fiscal commitment to education through adequate resources.	National policies; budgets (national and local); teacher/head teacher/ principal interviews
EFA 2/OWG 4.1 EFA 6/OWG 4.a, 4.c	75% of schools have school-based management teams.	All schools have school-based management teams.	Monitors inclusive education.	Regional school records
EFA 2/OWG 4.1 EFA 6/OWG 4.a, 4.c	75% of schools have school-based personnel to meet psycho-social cognitive disability needs of learners	All schools have school-based personnel to meet psycho-social cognitive disability needs of learners	Monitors inclusive education.	National policies on teacher allocation; school surveys; qualifications and experience of personnel

TABLE 7

## Wilkinson et al.'s Proposed Process Indicators [training, management, and logistics]

Targets Measured	Near-term Indicators (to be achieved ≤ 5 years)	Long-term Indicators (to be achieved ≤ 15 years)	Tracking these indicators (across transversal variables) has what utility in decision-making?	Ways to Measure/ Monitor
EFA 2/OWG 4.1 EFA 6/OWG 4.a, 4.c	75% of the schools report teacher compensation scale is aligned to mean salaries in the formal economy.	All schools report teacher compensation scale is aligned to mean salaries in the formal economy.	Monitors quality of teaching personnel.	Regional policies; teacher surveys; administrator surveys
EFA 2/OWG 4.1 EFA 5/OWG 4.7	75% of provinces develop national/local curricula aligned to Global Citizenship competency.	Country develops national/local curricula aligned to Global Citizenship competency.	Demonstrates national commitment.	National policies
EFA 2/OWG 4.1 EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	75% of teachers trained on national/local curricula.	All teachers trained on national/local curricula.	Helps ensure that teachers are trained to promote student outcomes.	Province level training records
EFA 2/OWG 4.1 EFA 5/OWG 4.7	75% of provinces undertake activities consistent with the purpose and direction of their national curricula:  alignment of curriculum with national priorities alignment of curricular content aligned with instruction alignment instruction with classroom assessment	All provinces undertake activities consistent with the purpose and direction of their national curricula:  alignment of curriculum with national priorities alignment of curricular content aligned with instruction alignment instruction with assessment	Assesses internal consistency of national curricula.	Plans/policies that support individual country's priorities
EFA 2/OWG 4.1 EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	75% of the school-based management teams are active and involved in decision-making.	All the school-based management teams are active and involved in decision-making.	Assesses the process of Global Citizenship within the system.	Regional records; meeting records
EFA 5/OWG 4.7	75% of schools adhere to national/local curricula based on Global Citizenship Competency.	All schools adhere to national/local curricula based on Global Citizenship Competency.	Demonstrates national commitment to Global Citizenship education.	Teacher observations/ teacher surveys
EFA 5/OWG 4.7	75% of schools' head teacher or administrator models global citizenship competencies in their:  formal interactions with all learners and other stakeholders informal interactions with all learners and other stakeholders	All schools' head teacher or administrator models global citizenship competencies in their:  formal interactions with all learners and other stakeholders informal interactions with all learners and other stakeholders	Assesses the embedded-ness of Global Citizenship Competency in the school culture.	Teacher observations/ teacher surveys
EFA 5/OWG 4.7	75% of schools' teachers model global citizenship competencies in their:  formal interactions with all learners and other stakeholders informal interactions with all learners and other stakeholders	All schools' teachers model global citizenship competencies in their:  formal interactions with all learners and other stakeholders informal interactions with all learners and other stakeholders	Assesses the embedded-ness of Global Citizenship Competency in school culture and classroom practices.	Teacher observations/ teacher surveys

EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	75% of schools support individual learning collaborative learning positive social interaction	All schools support individual learning collaborative learning positive social interaction	Assesses inclusiveness and effectiveness of school structures.	Assessing/testing a sub-sample of children in each country
EFA 5/OWG 4.7	75% of teachers report using/observed to align instructional methods with instructional content.	All teachers report/ align instructional methods with instructional content.	Monitors inclusive and effective teaching and learning practices.	Teacher surveys/ observation checklists
EFA 5/OWG 4.7	75% of teachers report using/observed to align assessment methods with instructional content.	All teachers report/align assessment methods with instructional content.	Monitors inclusive and effective teaching and learning practices.	Teacher surveys/ observation checklists
EFA 2/OWG 4.1 EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	75% of schools report parental and student participation in leadership and decision-making bodies (e.g. school-based management teams).	All schools report parental and student participation in leadership and decision-making bodies (e.g. school-based management teams).	Monitors relevant learning outcomes, Demonstrates school's commitment to Global Citizenship Competency, Monitors inclusive and effective education.	Disaggregated parental and student membership in school-based management teams
EFA 6/OWG 4.a, 4.c	75% of schools report teacher composition to be similar to school demographics.	All schools report teacher composition to be similar to school demographics.	Monitors inclusive education.	Regional documents; school surveys
EFA 6/OWG 4.a, 4.c	75% of schools report less than 10% student absenteeism on average during school year.	All schools report less than 10% student absenteeism on average during school year.	Provides information on inclusive and effective learning environments.	Student attendance records
EFA 6/OWG 4.a, 4.c	75% of schools report teachers present at least 90 percent of school days.	All schools report teachers present at least 90 percent of school days.	Provides information on inclusive and effective learning environments.	Student surveys/ teacher attendance records



TABLE 8

## Wilkinson et al.'s Proposed Outcome Indicators [behaviour, practices, and attitudes]

Targets Measured	Near-term Indicators (to be achieved ≤ 5 years)	Long-term Indicators (to be achieved ≤ 15 years)	Tracking these indicators (across transversal variables) has what utility in decision-making?	Ways to Measure/ Monitor
EFA 2/OWG 4.1	75% of learners read fluently in their first language by end of grade 3.	All learners read fluently in their first language by end of grade 3.	Monitors relevant learning outcomes and Global Citizenship Competency.	Assessing/testing a sub-sample of children across the country.
EFA 2/OWG 4.1	75% of learners read for comprehension, interpreting, and engaging with diverse written texts by the end of secondary school.	All learners read for comprehension, interpreting, and engaging with diverse written texts by the end of secondary school.	Monitors relevant learning outcomes and Global Citizenship Competency.	Assessing/testing a sub-sample of children across the country.
EFA 2/OWG 4.1	75% of learners proficient in math procedural knowledge and math reasoning to solve common household problems by the end of grade 3.	All learners proficient in math procedural knowledge and math reasoning to solve common household problems by the end of grade 3.	Monitors relevant learning outcomes and Global Citizenship Competency.	Assessing/testing a sub-sample of children across the country.
EFA 2/OWG 4.1	75% of learners demonstrate functional literacy and numeracy skills by the end of secondary school.	All learners demonstrate functional literacy and numeracy skills by the end of secondary school.	Monitors relevant learning outcomes and Global Citizenship Competency.	Assessing/testing a sub-sample of children across the country.
EFA 2/OWG 4.1	75% of learners demonstrate use of technology.	All learners demonstrate use of technology.	Monitors relevant learning outcomes and Global Citizenship Competency.	Assessments/tests on Global Citizenship Competency among representative sub-sample of children across country.
EFA 2/OWG 4.1 EFA 5/OWG 4.7	75% of learners understand Global Citizenship knowledge.	All learners understand Global Citizenship knowledge.	Measure components of Global Citizenship Competency.	International/national/ sub-national assessments/tests on Global Citizenship knowledge among representative sub-sample of children across country.
EFA 2/OWG 4.1 EFA 5/OWG 4.7	75% of learners demonstrate Global Citizenship skills.	All learners demonstrate Global Citizenship skills.	Measure components of Global Citizenship Competency.	International/national/ sub-national assessments/tests on Global Citizenship skills among representative sub-sample of children across country; observation checklist; simulation
EFA 2/OWG 4.1 EFA 5/OWG 4.7	75% of learners report/demonstrate Global Citizenship values and attitudes.	All learners report/demonstrate Global Citizenship values and attitudes.	Measure components of Global Citizenship Competency.	International/national/ sub-national assessments/tests on Global Citizenship skills among representative sub-sample of children across country. Student survey; teacher survey; administrator survey; observation checklist; simulation
EFA 2/OWG 4.1 EFA 5/OWG 4.7	75% of learners report/demonstrate Global Citizenship behaviors in their interactions with school stakeholders.	All learners report/demonstrate Global Citizenship behaviors in their interactions with school stakeholders.	Measure components of Global Citizenship Competency.	International/national/ sub-national assessments/tests on Global Citizenship skills among representative sub-sample of children across country; student survey; teacher survey; administrator survey; observation checklist; simulation

EFA 2/OWG 4.1 EFA 5/OWG 4.7	75% of schools report secondary student-community collaborations on community improvement ventures.	All schools report secondary student-community collaborations on community improvement ventures.	Measure components of Global Citizenship Competency.	Student, teacher, administrator, parent surveys/questionnaires
EFA 6/OWG 4.a, 4.c	75% of learners perceive that they are/are physically safe in their: on their way to school on the school grounds in classrooms	All learners perceive that they are/are physically safe in their: on their way to school on the school grounds in classrooms	Assesses the safety of school and surroundings.	Student surveys/ questionnaires; observation checklists
EFA 6/OWG 4.a, 4.c	75% of learners perceive that they are/are included: in formal classroom activities in informal interactions at school	All learners perceive that they are/are included: in formal classroom activities. in informal interactions at school	Assesses the inclusiveness of school and surroundings.	Student surveys/questionnaires Teacher, administrator, parent surveys; observation checklists
EFA 2/OWG 4.1 EFA 6/OWG 4.a, 4.c	60% of learners complete secondary schooling.	All learners complete secondary schooling.	Assesses the relevance, inclusiveness, and effectiveness of school and surroundings.	National level secondary school examination data

**TABLE 9**  
**Wilkinson et al.’s Proposed Impact Indicators**

<b>Targets Measured</b>	<b>Near-term Indicators (to be achieved ≤ 5 years)</b>	<b>Long-term Indicators (to be achieved ≤ 15 years)</b>	<b>Tracking these indicators (across transversal variables) has what utility in decision-making?</b>	<b>Ways to Measure/ Monitor</b>
EFA 2/OWG 4.1 EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	Country’s National Progress Out of Poverty Index score reduced by at least 10 percent.	National Progress Out of Poverty Index reduced by at least 15 percent.	Demonstrates national and sub-national commitment to eradicating poverty.	National Progress Out of Poverty Index
EFA 2/OWG 4.1 EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	Country’s Gender Inequality Index score reduced by at least 10 percent.	Country’s Gender Inequality Index score reduced by at least 15 percent.	Demonstrates national and sub-national commitment to achieving gender equality.	Gender Inequality Index
EFA 2/OWG 4.1 EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	Country rises one category on the Global Peace Index.	Country ranks high or very high on the Global Peace Index.	Demonstrates national and sub-national commitment to building peaceful society.	Global Peace Index
EFA 2/OWG 4.1 EFA 5/OWG 4.7 EFA 6/OWG 4.a, 4.c	Country increases their Environmental Performance Index score by more than 10 percent.	Country increases their Environmental Performance Index score by more than 15 percent.	Demonstrates national and sub-national commitment to sustainable development.	Environmental Performance Index

**Keith Lewin** makes the point that the existing targets must continue to evolve until 2030 to reflect progress and to address ambiguities, inconsistencies, and dimensions that cannot, or should not, be measured. He proposes a list of improved targets (Table 10) that retain the sentiments behind the original target formulations but improve wording and specificity; he also suggests a set of indicators for these improved targets (Table 11) that he feels will be particularly useful, viable, and possible to measure robustly at realistic costs. Read the full text of the [paper](#).

TABLE 10

## Lewin’s Proposed Improved Targets

Preferred Existing Target	Improved Target
<b>MA Ensure equitable and inclusive quality education and lifelong learning for all by 2030</b>	<b>Equal Opportunities for Quality Education and Lifelong Learning for All by 2030</b>
	<b>BY 2030 ENSURE:</b>
OWG4.2 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	<b>1</b> All girls and boys have access to quality early childhood development, care and pre-primary education free to households by 2030
OWG4.1 by 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes	<b>2</b> All girls and boys have access to a full cycle of nine years of quality primary and secondary education which is free and completed by the age of 15 years.
	<b>3</b> All girls and boys achieve nationally defined minimum learning outcomes that are relevant to employment, livelihoods and wellbeing by the age of 15 years in maths, science and language.
	<b>4</b> Differences in attainment and achievement in 2015 at end of primary and end of secondary between boys and girls and children from the top and bottom 20% of household income will be reduced to half their level by 2030
OWG4.6 by 2030 ensure that all youth and at least x% of adults, both men and women, achieve literacy and numeracy	<b>5</b> All young people below the age of 25 years achieve nationally defined levels of literacy and numeracy; literacy rates for adults between 25 and 65 years improve by 4% per year
OWG4.3 by 2030 ensure equal access for all women and men to affordable quality technical, vocational and tertiary education, including university	<b>6</b> Equal access for all women and men to quality technical, vocational and tertiary education, including university that is free to those unable to pay the direct and indirect costs.
MA5. By 2030, all learners acquire knowledge, skills, values and attitudes to establish sustainable and peaceful societies, including through global citizenship education and education for sustainable development.	<b>7</b> All learners acquire knowledge, skills, values and attitudes consistent with nationally defined curriculum outcomes for citizenship education including global citizenship and awareness of environment science

**Preferred Existing Target**

MA6. By 2030, all governments ensure that all learners are taught by qualified, professionally-trained, motivated and well-supported teachers.

MA7. By 2030, all countries allocate at least 4-6% of their Gross Domestic Product (GDP) or at least 15-20% of their public expenditure to education, prioritizing groups most in need; and strengthen financial cooperation for education, prioritizing countries most in need.

OWG4.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

OWG4.b by 2020 expand by x% globally the number of scholarships for developing countries in particular LDCs, SIDS and African countries to enrol in higher education, including vocational training, ICT, technical, engineering and scientific programmes in developed countries and other developing countries

**Improved Target**

**8** All governments ensure that all learners are taught by qualified, professionally-trained, motivated and well-supported teachers.

**9** All countries collect at least 25% of GDP in domestic revenue to finance government, and allocate at least 4% of GDP and 15% of government expenditure to education to ensure universal access to free basic education and support for pro-poor financing of public post-basic education

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

**11** Classify and monitor the number of higher education scholarships awarded for study internationally

TABLE 11

## Lewin's Proposed Education Indicators

### IMPROVED GOAL

Equal Opportunities for Quality Education and Lifelong Learning for All by 2030

### PREFERRED INDICATORS

#### BY 2030 ENSURE:

All girls and boys have access to quality early childhood development, care and pre-primary education free to households by 2030.

<b>Health</b>	Under five mortality rate (%)
	Under five stunting rate (%)
<b>Preschool</b>	Preschool attendance rates from household survey data
	Preschool enrolment rates in recognised preschools from administrative data
	Legislation and financial provision for one or more years of preschool

All girls and boys have access to a full cycle of nine years of quality primary and secondary education that is free and completed by the age of 15 years.

<b>Primary</b>	Gross and Net Intake Rate to first grade of primary school
	Gross Intake Rate to last grade of primary education
	On-schedule graduation rate from primary school
	Primary education attainment rate for 15 year old population
<b>Lower Secondary</b>	Lower secondary attainment rate for 18 year old population
<b>Upper Secondary</b>	Upper secondary attainment rate for 20 year olds
<b>Never Enrolled</b>	Number and rate of Never Enrolled children of primary and lower secondary school age from HH survey data
<b>Out of School</b>	Number and rate of Out of School Children and adolescents
<b>Flow</b>	Grade by grade Gross (and Net ) enrolment rates for all grades
<b>Free Education</b>	Legislation and financing to guarantee access to nine years of free education for all

All girls and boys achieve nationally defined minimum learning outcomes that are relevant to employment, livelihoods, and wellbeing by the age of 15 years.	<b>Learning Outcomes</b>	Performance on national examinations; primary leaving, lower secondary, upper secondary, identifying thresholds of performance at different levels  Performance on international standardised tests as appropriate.
	<b>Early Grade Assessment</b>	Classroom based formative assessment and sample based monitoring assessments at grade 2 level
	<b>School Readiness</b>	School entry diagnostic assessments
	<b>Learning Index</b>	Learning Yield Coefficient - % of age group reaching minimum competency level in major learning domains (maths, science, language 1, language 2) at key stages (e.g., end of primary)
Differences in attainment and achievement in 2015 at end of primary and end of secondary between boys and girls and children from the top and bottom 20% of household income will be reduced to half their level by 2030.	<b>Gender equity</b>	Attainment of richest and poorest girls and boys at age 12, 15, and 20 years, or ages at which data is available
	<b>HH Wealth Equity</b>	Achievement of richest 20% and poorest 20% girls and boys at end of primary, lower secondary, and upper secondary if data is available
	<b>Social Equities</b>	Achievement differences between significant social groups (language, ethnicity, disability, location) defined nationally
All young people below the age of 25 years achieve nationally defined levels of literacy and numeracy; literacy rates for adults between 25 and 65 years improve by 4% per year.	<b>Youth Literacy</b>	Age-specific literacy for those between 15 and 25 years based on HH-based assessment
	<b>Youth Literacy</b>	Age-specific numeracy for those between 15 and 25 years based on HH-based assessment
	<b>Adult Literacy</b>	Literacy rates for adults aged 30, 40, and 50 years
	<b>Adult Numeracy</b>	Numeracy rates for adults aged 30, 40, and 50 years
Equal access for all women and men to quality technical, vocational, and tertiary education, including university that is free to those unable to pay the direct and indirect costs.	<b>Participation in TVET</b>	Examination entry for award bearing courses for technical and vocational qualifications by level
		% of 18-20 year olds in full-time education by level and field of study
		% of 18-20 year olds in full-time higher education by level and field of study
	<b>Problem Solving Skills</b>	Higher levels of cognitive achievement in mathematics, science and technology curricula, and language on assessment items with high cognitive demand
<b>Internet Facility</b>	% of young people and adults with daily access to the internet	

All learners acquire knowledge, skills, values, and attitudes consistent with nationally defined curriculum outcomes for citizenship education, including global citizenship and awareness of environmental science.	<b>Knowledge of Citizenship</b>	Examination performance for citizenship and related subjects in national curriculum
	<b>Knowledge of Environment Science</b>	Examination performance in environment science and related subjects
	<b>Participation in Citizenship</b>	Time allocation to citizenship or related subjects in the national curriculum
	<b>Participation in Environment Science</b>	Time allocation to environment science or related subjects in the national curriculum
All governments ensure that all learners are taught by qualified, professionally-trained, motivated, and well-supported teachers.		% of qualified teachers. % of schools without qualified teachers in core subjects (maths, science, language 1, and language 2)
		% of trained teachers. % of schools without trained teachers in core subjects (maths, science, language 1, and language 2)
		Pupil:teacher ratio at different levels (average, range, ratio of top 10% of schools to bottom 10%)
		Pupil trained:qualified teacher ratio in core subjects
		Teachers' salary at different levels as % of GDP per capita; teachers' salaries as % of median HH expenditure (see Goal below 9)
		Teacher turnover and attrition rates; teacher attendance; teacher sickness; entry grades of ITE entrants
All countries collect at least 25% of GDP in domestic revenue to finance government, and allocate at least 4% of GDP and 15% of government expenditure to education to ensure universal access to free basic education and support for pro-poor financing of public post-basic education	<b>Budget Allocations</b>	Public expenditure on education as percentage of GDP by level
		Public expenditure on education as percentage of total public expenditure by level
		Government total expenditure as % of GDP
		Expenditure per child per year by level as % of GDP (= expenditure / number enrolled)
	<b>Teachers' Salaries</b>	Teachers' salary at different levels as % of GDP per capita; teachers' salaries as % of median HH expenditure; teachers' salaries as % of recurrent budget
	<b>Equity</b>	Share of public expenditure on education received by poorest and by richest quintile
	<b>Aid</b>	Aid to education by country (volume and % of budget)
		Aid to basic education (volume and % of budget)

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Build and upgrade education facilities that are child, disability, and gender sensitive and provide safe, non-violent, inclusive, and effective learning environments for all children and adults

**Teaching Groups**

Teacher:teaching group size ratio (average teaching class size)

**Classrooms**

Pupil per classroom ratio

**Utilities**

Connection to utilities, ratio of toilets, taps, desks and chairs, blackboards to boys and girls, etc.

**Learning Environment**

Desk and chairs per student, text books per student, library, internet access, science equipment

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Classify and monitor the number of higher education scholarships awarded for study internationally.

**Scholarships**

Volume of official and foundation scholarships. Sample survey of arriving students. Indicators are unlikely to be reliable or cross nationally comparable.

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