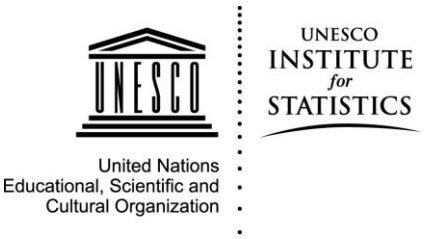

Thematic Indicators to Monitor the Education 2030 Agenda

Technical Advisory Group Proposal

October 2015

Technical Advisory Group Proposal: Thematic Indicators to Monitor the Education 2030 Agenda

The Technical Advisory Group (TAG) was established by UNESCO to develop recommendations for education indicators and to help guide the establishment of a measurement agenda, thus informing and supporting the work of the Education for All Steering Committee and the Education 2030 Framework for Action Drafting Group. It is chaired by the UNESCO Institute for Statistics (UIS) and includes experts from Member States (Armenia, Brazil, China, Egypt, France, India, Mexico, the Russian Federation, Senegal, South Africa, the United Kingdom, and the United Republic of Tanzania), international partners (EFA Global Monitoring Report, OECD, UNESCO, UNICEF and the World Bank) and civil society (Education International).

1. Introduction

In 2013 the Technical Advisory Group (TAG) was given the mandate by UNESCO to review and recommend indicators that can be used to track global progress in the implementation of the post-2015 education agenda, now known as *Education 2030*. This paper is the result of 18 months of developmental work and extensive consultation with stakeholders. It proposes thematic indicators to measure global progress towards the achievement of the 7+3 education targets that have been adopted by UN Member States as part of the 2030 Agenda for Sustainable Development and the Education 2030 Framework for Action.

The selection of indicators for tracking the Education 2030 targets was guided by an agreed set of criteria and aimed to meet specific demands. In keeping with its mandate, the TAG concentrated on indicators which provide comparable information across countries. The TAG envisions global and thematic tracking as part of a broader and more contextually-sensitive monitoring system that will be designed by countries and regions as part of their implementation of Education 2030. It is not possible to fully measure the breadth and vision behind the goal and targets with available indicators. Therefore, the TAG has proposed an initial set of indicators based on data availability, relevance and feasibility as an intermediate step towards a comprehensive data and measurement agenda for education, which will require further coordination, technical capacity and extensive development and investment to achieve.

2. Rationale for the TAG's proposed indicators

As proposed in the UN Secretary-General's synthesis report in December 2014, there are four levels of indicators for monitoring the 2030 Agenda for Sustainable Development:

- Global: A small set of globally-comparable indicators for all sustainable development goals, including Goal 4 on education, to be endorsed by the UN Statistical Commission (UNSC) upon a proposal of the Inter-Agency and Expert Group on the Sustainable Development Goal Indicators (IAEG-SDGs) and used to monitor the 17 goals and 169 targets.

- Thematic: A broader set of globally-comparable indicators. The specification of thematic indicators for education was the primary focus of the TAG. These indicators are designed to track the education targets more comprehensively across countries and are meant to include the global reporting indicators as a subset, once they have been approved by the UNSC.
- Regional: Additional indicators may be developed to take account of specific regional contexts and relevant policy priorities for concepts that are less amenable to global comparison.
- National: Indicators selected or developed by countries to take account of their national contexts, corresponding to their education systems, plans and policy agendas.

The global reporting indicators are intended to serve as the primary foundation to track progress of all countries towards the education targets on an internationally-comparable basis. The thematic set includes a larger number of indicators to provide greater alignment between the targets and national priorities and contexts. Some of the indicators will require further development and decisionmaking on the extent to which globally-comparable data are attainable or desirable. The TAG understands that the small set of global reporting indicators will be reflected in the thematic level and, as relevant and appropriate, at the regional and national levels.

Although this proposal does not make recommendations for the indicators to be included at the regional and national levels, monitoring at these levels is essential for several reasons. First, more frequent and locally-relevant data can be collected through regional and national systems. For some constructs, the standards required for global tracking may not be met or be feasible for some targets, but they may be tracked at the national level. At the regional level, harmonisation is often easier as groups of countries share similar challenges and need common measures to meet their policy needs.

The TAG's recommendations can be considered as the framework for global and thematic indicators that countries can use as a starting point for their national monitoring, which can then be supplemented with nationally- or regionally-developed indicators.

In line with the above:

- The TAG is proposing a set of 43 **thematic indicators**.
- Of these, 10 indicators, one per target, were proposed by the UN System to be included as **global reporting indicators** for monitoring the education goal of the 2030 Agenda for Sustainable Development. These global reporting indicators are being developed by the IAEG-SDGs. If the formulation of any of these global reporting indicators changes by the time they are adopted in September 2016, then these changes will be reflected in the TAG's proposal and, subsequently in the Education 2030 Framework for Action.

Criteria for selection and prioritisation of indicators by the TAG

Indicators for global tracking should ideally meet a range of standards that ensure technical strength, feasibility, frequency of reporting, cross-national comparability and interpretability, and availability of data over time. For simplicity, the TAG focused on five criteria, notably:

- **Relevance:** While it is difficult for indicators alone to fully capture the vision behind the proposed targets, indicators should ideally reflect the most critical policy themes in the targets. Across all proposed targets, emphasis has been placed on measuring learning outcomes and equity.

- **Alignment**: The construct to be measured must be valid and reliable relative to the targets, such that the indicator has the same meaning and significance in all settings, ideally measured by a similar question or item. Measuring constructs that vary across settings pose challenges for global tracking. It may be possible to measure some elements globally, while others may be best measured at the national or regional level, with flexibility to adapt constructs to local contexts.

- **Feasibility**: Global tracking is most effective when the data are collected on a regular basis (though not necessarily annually) and all or nearly all countries routinely collect the data in a similar manner. Infrequent or low coverage of data constrains the ability to track changes over time. It must be feasible and cost-effective to collect data over time.

- **Communicability:** The indicators selected must be easily understood and lend themselves to the development of a clear narrative regarding progress towards the goal and targets. The indicator framework for education should facilitate clear and transparent reporting and effective communication about the objectives and achievements of each stage of implementation.

- **Interpretability**: The indicator values and their changes over time must be easily understood.

Focus on learning outcomes and equity

The Education 2030 agenda requires the international community to address two critical measurement challenges: i) measurement of learning outcomes; and ii) improved measurement of equity in education. In both cases, the challenges are to be addressed through a universal agenda with indicators that are relevant to all countries. To achieve this goal, it will be essential to: strengthen data from administrative and household sources; agree on common definitions and standards; and create stronger partnerships between organizations focused on measurement.

Learning outcomes

Five of the seven education targets focus on learning outcomes (i.e. the effect of education on individual children, young people and adults). This is a shift from previous global education targets, such as those in the Millennium Development Goals (MDGs), which solely focused on ensuring access, participation and completion in formal primary education and on gender parity in primary, secondary and tertiary education. The Education 2030 targets highlight that enrolment and participation (e.g. in early childhood development programmes, formal schooling or adult education programmes) are the means to attain results and learning outcomes at every stage (e.g. school readiness for young children; academic competencies for children in primary and secondary education; functional literacy and numeracy skills; and skills for work, global citizenship and sustainable development for youth and adults). Indicators for global monitoring must emphasise this renewed focus on outcome measures. The TAG proposes indicators that enable the measurement and comparison of learning outcomes at all levels of education.

Equity

The SDG agenda calls for an explicit focus on equity, including equity-specific goals (Goal 5 on gender equity and Goal 10 on reductions in inequalities). In response, education indicators should aim to capture not just national averages but also the variation across different sections of the population defined by group and individual characteristics, such as sex, wealth, location, ethnicity, language or disability (and combinations of these characteristics).

Global monitoring of inequalities in education and other sectors has so far mainly captured differences by sex. This reflects the focus on gender inequalities in the MDGs, which was also driven by the availability of data for most countries. However, to look systematically at the range of potential dimensions of disadvantage in education will require disaggregated data on individuals from a variety of sources, including administrative sources and household or school-based surveys. The TAG proposes indicators that enable the tracking of progress in reducing inequalities in all focus areas of the education targets.

3. Proposed thematic indicator framework

Table 1 presents the proposed indicators by target. The following information is provided for each indicator:

- Column 1 indicates the concept of each target to which an indicator corresponds. For example, in the case of Target 4.1, indicators are classified in four groups: learning outcomes, completion of each level, participation in each level and provision of education.
- As part of the focus on equity, Columns 4-7 indicate whether only the national average or aggregate value of an indicator can be tracked or whether, as in the majority of cases, the indicator can be disaggregated by particular individual characteristics (sex, location or wealth).
- Column 8 indicates whether an indicator is currently available and, if not, how long it might take for an indicator to be developed. If an indicator is currently available, Column 9 indicates the current extent of country coverage.
- Column 10 identifies those indicators that were proposed by the UN System to the IAEG-SDGs as potential global reporting indicators and identifies the two cases where the TAG recommends an alternative selection.
- Finally, Column 11 offers some initial thoughts on outstanding, indicator-specific issues, which have been taken into account and need to be addressed.

Table 2 presents information on the interpretability of the potential global reporting indicators for education proposed by the IAEG-SDGs in August 2015 as an illustration.

Table 1. Proposed thematic indicator framework

Goal: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

1 Concept	2 No.	3 Indicator	4 Equity	5 Sex	6 Location	7 Wealth	8 Available	9 Coverage	10 Proposed global reporting indicators *	11 Comments
		Targets 4.1-4.7								
4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes										
Learning	1.	Percentage of children/young people (i) at the end of primary and (ii) at end of lower secondary achieving at least a minimum proficiency level in (a) reading and (b) mathematics	Yes	X	X	X	1-3 years		TAG UN	Efforts to generate global measures will focus on common concepts of minimum proficiencies drawing links between national, regional and international student assessment studies (e.g. LLECE, SACMEQ, PASEC, PILNA) and international ones (e.g. PIRLS, PISA, TIMSS). Covers children both in-school and out-of-school although most existing assessments are school-based only.
	2.	Administration of a nationally representative learning assessment (i) during primary (ii) at the end of primary and (iii) at the end of lower secondary education	No				1-3 years			Standards need to be developed for all assessments – national, regional and international – to improve their quality. The UIS Observatory of Learning Outcomes will track national, regional and international assessments.
Completion	3.	Gross intake ratio to the last grade (primary, lower secondary)	Yes	X			Yes	c150		
	4.	Completion rate (primary, lower secondary, upper secondary)	Yes	X	X	X	Yes	c100		The rate is calculated for young people aged 3-5 years above the official ending age for a given level of education
Participation	5.	Out-of-school rate (primary, lower secondary, upper secondary)	Yes	X	X	X	Yes	c160		This indicator will also be used to monitor children and adolescents in refugee and displaced populations in line with efforts to improve coverage.
	6.	Percentage of children over-age for grade (primary, lower secondary)	Yes	X	X	X	Yes	c100		This indicator is currently available. A common methodology for age adjustment needs to be developed.

Provision	7.	Number of years of (i) free and (ii) compulsory primary and secondary education guaranteed in legal frameworks	No	Yes All		
4.2 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						
Readiness	8.	Percentage of children of school entrance age who are developmentally on track in health, learning and psychosocial well-being	Yes X X X	3-5 years	TAG UN	This indicator is currently available from Multiple Indicator Cluster Surveys (MICS). Alternative approaches will be examined in order to reach consensus and develop a set of questions for use across surveys.
	9.	Percentage of children under 5 years of age experiencing positive and stimulating home learning environments	Yes X X X	Yes c30		This indicator is currently available through MICS. Alternative approaches will be examined in order to reach consensus and develop a set of questions for use across surveys.
Participation	10.	Participation rate in early childhood care and education in a given period prior to entry into primary education	Yes X X X	3-5 years		It is necessary to harmonise this indicator across surveys in two areas: (i) age group of reference (e.g. MICS asks question about 3- to 4-year-olds) and (ii) types of programmes covered.
	11.	Gross pre-primary enrolment ratio	Yes X	Yes c165		
Provision	12.	Number of years of (i) free and (ii) compulsory pre-primary education guaranteed in legal frameworks	No	Yes All		
4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university						
Participation	13.	Gross enrolment ratio for tertiary education	Yes X	Yes c145		
	14.	Participation rate in technical-vocational education programmes (15- to 24-year-olds)	Yes X	3-5 years		Data are available on technical-vocational enrolment in upper secondary, post-secondary non-tertiary and short-cycle tertiary education. There are difficulties in collecting TVET data by age in settings other than formal schools/universities.
	15.	Percentage of youth/ adults participating in education and training in the last 12 months, by type of programme (formal and non-formal) and by age group	Yes X X X	Yes c30	TAG UN	Currently data are only available on adult education in European Union countries. A set of questions will be developed to be applied in labour force or other surveys globally. The indicator will be calculated for a range of age groups and for different types of formal and non-formal programmes, including adult learning.

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship						
Skills	16.	1. Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills 2. Percentage of individuals with ICT skills by type of skill	Yes X X X Yes X X X	1-3 years 1-3 years	TAG UN	Few surveys (e.g. ICILS) attempt to measure such skills. Major efforts are required to develop a global data collection. The global reporting indicator proposed by the UN will be derived from ITU's survey (and also possibly from the OECD)
	17.	Youth/adult educational attainment rates by age group, economic activity status, levels of education and programme orientation	Yes X X ?	Yes c120		
4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations						
Equity cross-targets	…	Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status and conflict-affected as data become available) for all indicators on this list that can be disaggregated (identified in Columns 4-7) Where possible, other indicators should be presented in relation to their distribution across the population			TAG UN	Alternative indicators include: (i) odds ratio; (ii) concentration index; or (iii) least advantaged group (e.g. poorest rural girls) relative to the mean.
Policy	18.	Percentage of students in primary education whose first or home language is the language of instruction	Yes X X X	3-5 years		Measures of home language and language of instruction will be required to develop a global measurement tool.
	19.	Extent to which explicit formula-based policies reallocate education resources to disadvantaged populations	No	3-5 years		A reporting process will be established to describe and assess country policies on expenditure allocation.
	20.	Education expenditure per student by level of education and source of funding	No	1-3 years		The coverage of this indicator, especially for private education expenditure, needs to be expanded significantly.
	21.	Percentage of total aid to education allocated to low-income countries	No	Yes c60		
4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy						
Skills	22.	Percentage of the population by age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills	Yes X X X	3-5 years	TAG UN	A number of middle-income and high-income countries have assessed literacy and numeracy skills of adults based on the STEP and PIAAC surveys respectively. A cost-effective tool needs to be inserted in household surveys for use by other countries.
	23.	Youth/adult literacy rate	Yes X X	Yes c160		The target ages are 15-24 years for youth and 15+ years for adults, but other age groups are also possible
Provision	24.	Participation rate of youth/adults in literacy programmes	Yes X X X	3-5 years		Tools should be developed in conjunction with indicator 15.

4.7 By 2030, ensure that all learners acquire the 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						
Provision	25.	Extent to which (i) global citizenship education; and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education; and (d) student assessment	No	1-3 years	TAG	A reporting process will be established to describe and assess country policies in these areas.
Knowledge	26.	Percentage of students by age group (or education level) showing adequate understanding of issues relating to global citizenship and sustainability	Yes X ? ?	3-5 years		There is not currently a cross-national survey that collects the necessary data
	27.	Percentage of 15-year-old students showing proficiency in knowledge of environmental science and geoscience	Yes X X X	Yes c55	UN	As more data become available and as more relevant indicators are developed this indicator may be replaced.
Provision	28.	Percentage of schools that provide life skills-based HIV and sexuality education	No	3-5 years		Preparatory work is required to develop a consensus on defining such approaches and developing frameworks for collecting data.
	29.	Extent to which the framework on the World Programme on Human Rights Education is implemented nationally (as per UNGA Resolution 59/113)	No	3-5 years All		Preparatory work is required to develop a consensus on how this framework can be monitored.

		Means of implementation 4.a-4.c				
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						
Resources	30.	Percentage of schools with access to (i) basic drinking water; (ii) basic sanitation facilities; and (iii) basic hand-washing facilities	Yes X	1-3 years	TAG UN	The coverage of current data collection efforts will be extended to all countries including the implementation of the WASH indicator definitions.
	31.	Percentage of schools with access to (i) electricity; (ii) Internet access for pedagogical purposes; and (iii) computers for pedagogical purposes	Yes X	Yes c70	TAG UN	
	32.	Percentage of schools with adapted infrastructure and materials for students with disabilities	Yes X	3-5 years	TAG UN	Preparatory work is required to develop an approach on assessing criteria for school conditions for people with disabilities across countries.
Environment	33.	Percentage of students experiencing bullying, corporal punishment, harassment, violence, sexual discrimination and abuse	Yes X X X	Yes 80		The indicator is available through the Global School-based Student Health Survey.
	34.	Number of attacks on students, personnel and institutions	No	1-3 years		An organized data collection will be established to measure this indicator based on examples from the Education under Attack report.

4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries						
Number	35.	Number of higher education scholarships awarded by beneficiary country	No	1-3 years		An organized data collection mechanism to measure this target will be established. The equitable distribution of scholarships will be measured where individual-level data are available.
	36.	Volume of official development assistance (ODA) flows for scholarships by sector and type of study	No	Yes All	TAG UN	This indicator only measures some sources of scholarships.
4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States						
Qualified	37.	Percentage of teachers qualified according to national standards by education level and type of institution	Yes X X	Yes		Common standards will need to be agreed that can be applied to both public and private institutions. Qualified teachers have at least the minimum academic qualifications required by national standards for teaching a specific subject
	38.	Pupil/qualified teacher ratio by education level	No	Yes		
Trained	39.	Percentage of teachers in (i) pre-primary; (ii) primary; (ii) lower secondary; and (iv) upper secondary who have received at least the minimum organized and recognized teacher (i.e. pedagogical) training pre-service and in-service required for teaching at the relevant level in a given country, by type of institution	Yes X X	Yes	TAG UN	Common standards will need to be agreed that can be applied to both public and private institutions. Trained teachers have received at least the minimum pedagogical training required by national standards to become a teacher
	40.	Pupil/trained teacher ratio by education level	No	Yes		
Motivated	41.	Average teacher salary relative to other professions requiring a comparable level of education qualification	No	1-3 years		A methodology will be developed based on labour force data.
	42.	Teacher attrition rate by education level	No X	1-3 years		The coverage of current data collections will be extended to all countries.
Supported	43.	Percentage of teachers who received in-service training in the last 12 months by type of training	No X	3-5 years		A tool to assess the incidence, duration and content of training will be developed.

Note: Column 10 indicates which indicators are recommended by the TAG as global reporting indicators (TAG) and those which have been proposed by the UN System (UN) to be included in the global set of indicators for monitoring the goals of the 2030 Agenda for Sustainable Development, which is being developed by the Inter-Agency and Expert Group on the Sustainable Development Goal indicators (IAEG-SDGs). Indicators 30-32 were merged into a single indicator in that proposal. The TAG supports the UN System's proposals except for the indicators for Targets 4.4 and 4.7.

Table 2. Suggested interpretation of the global reporting indicators for education proposed by the IAEG-SDGs in August 2015

Goal: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

1 Concept	2 No.	3 Indicator	4 Interpretation
		Targets 4.1-4.7	
4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes			
Learning	1.	Percentage of children/young people at the end of each level of education achieving at least a minimum proficiency level in (a) reading and (b) mathematics	This is a direct measure of the learning outcomes achieved in the two subject areas at the end of the relevant levels of education. An increase in the value of the indicator would suggest that more children/young people have reached or exceeded the minimum proficiency levels specified in each subject at a given level of education.
4.2 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			
Readiness	8.	Percentage of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being	This is a broad measure of children's development and their preparedness to begin school. An increase in the value of the indicator would suggest that more children are ready for school.
4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university			
Participation	15.	Participation rate of adults in formal and non-formal education and training in the last 12 months	This measures youth and adult access to education and training for a recent time period. An increase in the value of the indicator would suggest that more people are participating in education and training. It would not indicate whether more training is being delivered as the intensity of training is not measured by this indicator.

4.4 By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship			
Skills	16.	2. Percentage of youth/adults with ICT skills by type of skill	ICT skills determine the effective use that is made of ICTs. The lack of such skills continues to be one of the key barriers keeping people, and in particular women, from fully benefitting from the potential of information and communication technologies. This indicator will help make the link between ICT usage and impact and help measure and track the level of proficiency of ICT users. An increase in the value of this indicator would suggest that more people have gained the relevant ICT skills.
4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples, and children in vulnerable situations			
Equity cross-targets	…	Parity indices (female/male, urban/rural, bottom/top wealth quintile) for all indicators on this list that can be disaggregated	This indicator measures whether the relative shares of people in the two groups being compared are equal or not in the given indicator. The further from 1 the parity index lies, the greater the disparity between the two groups of interest.
4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy			
Skills	22.	Percentage of the population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills.	This is a direct measure of the skill levels of youth and adults in literacy and numeracy. An increase in the value of this indicator would suggest that more people have gained proficiency in literacy and numeracy.
4.7 By 2030, ensure that all learners acquire the 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			
Knowledge	27.	Percentage of 15-year-old students enrolled in secondary school demonstrating at least a fixed level of knowledge across a selection of topics in environmental science and geoscience.	This is a direct measure of the learning outcomes achieved in two key subjects relevant for the promotion of sustainable development. An increase in the value of this indicator would suggest that more 15-year-old students have gained proficiency in knowledge in these key subjects.

	Targets 4.a-4.c		
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			
Resources	30 and 31.	Percentage of schools with access to (i) electricity; (ii) Internet for pedagogical purposes; (iii) basic drinking water; (iv) basic sanitation facilities; and (v) basic handwashing facilities (as per the WASH indicator definitions)	This measures access in schools to key basic services and facilities necessary to ensure a safe and effective learning environment for all students. An increase in the value of this indicator suggests that more schools are providing these services.
4.b By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries			
Number	36.	Volume of ODA flows for scholarships by sector and type of study; Total net official development assistance (ODA) for scholarships and student costs in donor countries (types of aid E01 and E02). Data expressed in US dollars at the average annual exchange rate.	This indicator measures the value of official international assistance to provide education places for developing country nationals in donor country educational institutions. An increase in the value of the indicator suggests more money is being spent on these types of scholarships. It does not measure whether the number of scholarships has increased or not.
4.c By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States			
Trained	39.	Percentage of teachers in (i) pre-primary; (ii) primary; (iii) lower secondary; and (iv) upper secondary education who have received at least the minimum organized teacher (i.e. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country.	This indicator measures the share of the teaching work force which is pedagogically well-trained. An increase in the value of this indicator suggests that more teachers have received the pedagogical training necessary to teach.

Note: The wording of some indicators presented in Table 2 differs slightly from Table 1 but they broadly equate to the indicators identified by number in Column 2. Indicators 30 and 31 (i) and (ii) are presented as a single indicator in Table 2.

4. Key considerations resulting from consultations

The TAG organized two rounds of public consultation on indicators.

- The first round took place from 17 November 2014 to 30 January 2015 and was based on the TAG paper, "Towards indicators for a post-2015 education framework", which was released in November 2014. The consultation posed specific questions on the proposed indicators and offered respondents the opportunity to comment on broader themes related to education measurement for the post-2015 agenda. Comments were solicited online and 195 contributions were received, including several substantial pieces of feedback from representatives of civil society, academia, development partners and other international organizations. In addition, meetings brought together diverse groups of stakeholders at national and international levels, for example in London, New Delhi and Washington, DC.
- The second round took place in August and September 2015. Following the World Education Forum in May 2015, a decision was taken to extend TAG membership to civil society and 12 Member States that would represent different regions. During the first meeting of the extended TAG from 30 to 31 July 2015, the new members were asked to consult with countries in their respective regions. The new members then reported back during the second meeting of the extended TAG from 22 to 23 September 2015.

This section outlines particular cases where contributions had a direct influence on the proposal. In general, these contributions helped the TAG to identify indicators that were not fit for purpose or those that should be added or adjusted. This section also discusses contributions that were considered by the TAG with explanations of why they were not addressed in the proposal.

Recommendations incorporated in the proposal

The proposal reflects several contributions that were made during the consultation process. Through the feedback, indicators were added to the original list while others were identified as not adequately meeting the criteria outlined by the TAG. Furthermore, a number of additions and adjustments were made to the proposal, including the following:

- Greater emphasis was given to input and process indicators which were added to those measuring outcomes. This is in response to comments expressing the need for indicators that are critical to understanding progress towards outcomes.
- Three new indicators of equity were added to better capture inequalities not only in education results but also in education systems (e.g. related to language of instruction, targeting of resources to disadvantaged populations, and the share of education expenditure borne by households).
- The indicators on the existence of legal guarantees related to free and compulsory pre-primary, primary and secondary education were enhanced.
- The indicator definition on whether young children are developmentally on track was broadened until consensus is reached on how it should be measured.
- Adult participation in formal and non-formal education and training was extended to all adults regardless of age.
- New indicators were added to capture the curricular focus on education for sustainable development: global citizenship education, HIV and sexuality education, and human rights education.

- A new indicator was added to capture the availability of information and communication technology (ICT) infrastructure in schools.
- A new indicator was added on the availability of infrastructure and materials for people with disabilities in schools. In addition, the need to monitor the educational experience of people with disabilities was explicitly recognised.
- A new indicator was added on the incidence of bullying, corporal punishment, harassment, violence, sexual discrimination and abuse.
- A new indicator was added on the number of attacks on students, personnel and institutions.
- A new indicator was added to capture not only the volume of higher education scholarships funded by aid programmes but also the total number of scholarships awarded.
- A new indicator on teacher attrition was added to strengthen monitoring of teacher motivation.

Other issues considered

Several **cross-cutting** points were made by respondents to strengthen the TAG proposal. For example:

- A number of contributors identified the need to address implementation issues in following up this measurement agenda, especially at the national level. It is true that issues, such as capacity building, reporting and accountability, are not addressed explicitly in this proposal, as the mandate of the TAG was not meant to cover these issues in detail.
- A few participants suggested that the TAG should have taken a stronger inter-sectoral perspective by proposing more indicators that are on the boundaries between education and other sectors. The TAG did in fact take into account indicator proposals made under other SDGs, which already include stunting (Goal 3), early marriage (Goal 5), child labour (Goal 8), and violence (Goal 16).

There was strong support from consultation participants that measurement of **equity** should be a key focus of the post-2015 measurement agenda. In that context, the following challenges were highlighted:

- The education community should consider the use of inequality measures to capture differences between population groups (e.g. an absolute gap measure, a relative parity index, etc.). A number of options are identified in Table 1. Their application should be based on an examination of the relative merits of different inequality indicators.

- The TAG proposes that every indicator should be disaggregated where possible by at least three individual characteristics that allow scope for global comparisons (i.e. sex, location and wealth) and, as data become available, further characteristics including disability status and conflict-affected. The proposal calls for essentially all indicators to draw on data sources that will allow them to be disaggregated, with exceptions for those indicators that do not refer to individuals.

- The TAG proposal is guided by the potential for global comparability. It does not involve an evaluation of what individual/group characteristics should be tracked because this is assumed to vary based on context. Instead, it is based on two considerations.

    i) Does a group characteristic carry the same meaning across countries? For example, consultation responses noted the need for indicators to be disaggregated according to groups defined by language. However, in some countries such minorities may be marginalised, while in others they may be privileged. Within the context of an individual country, tracking these differences is vital; but comparing linguistic minorities from different countries makes little sense for the purposes of a global monitoring framework.

Nevertheless, as language is a key driver of inequality, the TAG has proposed an approach based on a system-related indicator.

ii) How much information is available on specific disadvantaged groups? Two cases emerged in the consultation. First, recent efforts to promote better measurement related to persons with disabilities are likely to advance the tracking of their educational progress. Second, information on refugee and displaced populations has improved in recent years. While few concrete data on educational status are available, it is possible to envisage short-term progress.

- The consultation reinforced the need for more indicators about equity in terms of outcomes, as well as the inputs and processes related to education systems.

Likewise, the consultation participants strongly supported the prioritisation of the measurement of **learning outcomes** in basic education. At the same time, respondents debated the following issues:

- Some felt that the focus on two subjects (reading and mathematics) was justified, whereas others argued that it risked reducing the scope of education. With reference to the selection criteria, measures of reading and mathematics are more available with greater evidence of comparability at this time. The TAG acknowledges the importance of other areas of education and embraces efforts to develop measures in other subjects.
- There were different views on the use of national or international standards to measure learning. The TAG believes that, in order to monitor the success of the post-2015 agenda, it is necessary to develop a shared understanding of what competencies children and adolescents need to possess at the end of each education level using an international standard.
- There were requests for more emphasis on assessment in early grades and not only at the end of the cycle. This approach has been valuable in a number of countries. The TAG has therefore included an indicator regarding the administration of learning assessments at different levels of education including both during and at the end of primary school.
- A few contributors questioned whether the source of information on learning outcomes should be an assessment of the entire *population* of students. However, the recommendation is clear that only a *sample*-based national assessment process tracking system-wide trends should be the preferred source of evidence to avoid high stakes.
- Finally, some emphasised that the learning outcome indicator should cover all children of primary or lower secondary school age, whether in school or not. The TAG agrees with the fundamental importance of this approach and acknowledges that a number of citizen-based assessments have shown a way forward. Although indicator 1 is not restricted to children at school, the costs of collecting the information from out-of-school populations are too high at this stage.

Finally, **education for sustainable development** (ESD) and **global citizenship education** (GCED) are new territory for comparable indicators and many of the contributions to the consultation revealed that there are differences in approach. For example:

- At the level of measuring *inputs*, there were differences in opinion. There were calls for a measure of the extent to which elements of ESD/GCED are found in curricula. However, some argued that it would be a mistake to treat ESD/GCED as subjects, when in practice they are approaches to learning. For that reason, the relevant indicator adopts a more general approach.

- At the level of measuring *knowledge*, there is consensus that progress in the acquisition of knowledge and skills related to sustainable development and global citizenship needs to be monitored, even if it is not linked to changes in attitudes and behaviours. There was some criticism of the focus on a specific age group (e.g. 13-year-olds).
- At the level of measuring *attitudes* and *values*, some contributors proposed relying on the World Values Survey and suggested other questions from that instrument (e.g. attitudes to women's education, tolerance and respect, etc.). However, others pointed to the fact that these are often 'loaded questions' and responses may not be reliable. For that reason, relevant measures are not included in the final proposal.

5. Next steps: Key actions needed on data

The proposed indicator framework is ambitious. The international community is not ready to begin implementing this framework without making considerable efforts and mobilising the necessary resources. The education sector faces many issues in respect of data, some of which were identified in the report of the Independent Expert Advisory Group on a Data Revolution for Sustainable Development, including the need for documented standards in several areas, improved technical capacity and stronger coordination at national and international levels. Some priorities are identified below to highlight the scale and types of challenges ahead in education monitoring:

- The growing evidence on the importance of **early childhood** development has produced a number of research-based measures and one measure is collected through UNICEF's MICS survey, but there is no field-tested consensus on an indicator that can be collected in a cost-effective way and compared across different countries, especially across low- and high-income countries.

- The agenda highlights the need to measure **learning** outcomes at different ages or grades. Despite growing participation in national and cross-national learning assessments, learning outcomes are not yet tracked over time and across countries in a systematic way. Efforts are underway to develop an approach to equate and link national definitions of key learning outcomes in order to compare assessment results across countries.

- The proposed indicator framework prioritises the measurement of **literacy** and **numeracy** by level of proficiency, which marks an important improvement to current measures. However, it will be critical to build on lessons learned from recent efforts (e.g. PIAAC, STEP, LAMP) to assess these skills in order to promote cost-effective approaches that can be used by countries with limited resources.

- Attention to **equity** is critical to the new agenda. This calls for a clear shift in the use of surveys and population censuses – whether of households or schools, children or adults – and efforts to extend the background information available through administrative sources. This process requires the following:
    - The establishment of inter-agency groups to harmonise methodologies and play a role in setting standards for survey-based indicators, building on the lessons from similar exercises in child mortality and nutrition.
    - A coordination mechanism within and across countries to promote existing UN recommendations and new sets of questions to be used across surveys and population censuses (e.g. in the case of early childhood organized learning programmes).

- Better use of disaggregated administrative and survey-based data by national authorities for policymaking, which may entail improved coordination between relevant education stakeholders and national statistical offices.

- In the area of education for **global citizenship** and **sustainable development**, the current proposal is provisional. The international community needs to discuss the essential behaviours and the type of education that lead to desired outcomes. The process of reaching a consensus and using the findings to influence the design of education systems to better serve these objectives will be in itself a ground-breaking result of implementing the post-2015 agenda.

- Work needs to continue to improve coverage, accuracy and timeliness of **finance** data. It would be useful to consider developing or strengthening existing national education accounts to accurately reflect the respective shares of governments, donors and households in total education financing.

6. Next steps for reaching consensus on global and thematic indicators

Drawing on the work of the Technical Advisory Group and upon request of the IAEG-SDGs, UNESCO and UNICEF, as co-lead agencies in the UN System for Goal 4 on education, recommended a sub-set of thematic indicators for consideration as global reporting indicators. The IAEG-SDGs is comprised of representatives of 28 national statistical offices from a geographically diverse set of Member States. Members of international and regional organizations, specialised agencies and civil society are observers to the group.

By the end of November 2015, the IAEG-SDGs will have developed a proposal for a small set of global reporting indicators for the monitoring of the proposed 17 goals and 169 targets. The proposal will be considered by the UNSC at its next session in March 2016. The indicator framework will then be submitted to the Economic and Social Council of the UN General Assembly (ECOSOC) in July 2016 and to the UN General Assembly in September 2016 for final adoption.

It is expected that the high-level global reporting indicator framework will include about 10 indicators for the monitoring of the education goal. These indicators will be included in the larger indicator set for the thematic monitoring of the education targets.

The proposed thematic indicators have been included in the Education 2030 Framework for Action and will be revised following adoption of the global reporting indicators in September 2016. It is expected that the final list of indicators will be submitted to the new Education 2030 Steering Committee for its endorsement thereafter.

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UNESCO	Jordan Naidoo	Director, EFA and Global Agenda Coordination

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