Reference metadata template for data reported on the Sustainable Development Goals (SDGs)

The purpose of this template is for international agencies to submit reference metadata on the agreed upon tier I and II global indicators and associated data for which they are responsible, in order to monitor the Sustainable Development Goals (SDGs) and targets in a consistent manner. In order to ensure coherence and consistency of the metadata that will be presented alongside the SDG indicator database, we are requesting uniform reference metadata on the global indicators and on associated data that you are reporting using this standard template.

While we realise this form is detailed, your willingness to provide this reference metadata in a standard format will be vital to users better understanding of the global indicators and associated data you have provided. We hope any metadata submitted previously can be copied and pasted into the relevant section of this form. Any metadata that was previously submitted to UNSD prior to July 2016 can be found at: http://unstats.un.org/sdgs/iaeg-sdgs/metadata-compilation/.

This form should be completed by the international agencies that provided their data for inclusion in the SDG progress report and associated database. Please replace the instruction text shaded in yellow with the appropriate text describing the reference metadata for that section (i.e. definition, rationale, etc.). Please try to make your responses as concise as possible while making sure to include all relevant information. For more detailed methodological information, a link can be included in the reference section (see page 4).

If there are any questions regarding SDG metadata or this form, please contact Zin Lin at lin@un.org.

Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
Target 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
Indicator: Completion rate (primary education, lower secondary education, upper secondary education)

Institutional information

Organization(s):
UNESCO Institute for Statistics

Contact person(s):
Silvia Montoya

Email address (for internal use only)
s.montoya@unesco.org

Concepts and definitions

Definition:
Percentage of a cohort of children or young people aged 3-5 years above the intended age for the last grade of each level of education who have completed that grade.

Rationale:
The indicator responds to the first part of target 4.1, '*ensure that all girls and boys complete … primary and secondary education*'. Currently, global indicator 4.1.1 on the achievement of a minimum level of proficiency in reading and mathematics only focuses on the second part if target 4,1, *'ensure … relevant and effective learning outcomes'*, but does so only for children and young people who are in school.

The proposed indicator can be used either as a self-standing indicator or in combination with SDG indicator 4.1.1 (proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics). Combining the completion rate with indicator 4.1.1 would provide information on the percentage of children *in a cohort* who achieve a minimum level of proficiency, and not on just the percentage of children *in school* who achieve minimum proficiency.

Concepts:
The intended age for the last grade of each level of education is the age at which pupils would enter the grade if they had started school at the official primary entrance age, had studied full-time and had progressed without repeating or skipping a grade.

Comments and limitations:
The age group 3-5 years above the official age of entry into the last grade for a given level of education was selected for the calculation of the completion rate to allow for some delayed entry or repetition. In countries where entry can occur very late or where repetition is common, some children or adolescents in

the age group examined may still attend school and the eventual rate of completion may therefore be underestimated.

The indicator is calculated from household survey data and is therefore subject to time lag in the availability of data. When multiple surveys are available, they may provide conflicting information due to the possible presence of sampling and non-sampling errors in survey data. The Technical Cooperation Group has also requested the refinement of the methodology to model the completion rate estimates, following an approach similar to that used for the estimation of child mortality rates. The model would ensure that common challenges with household survey data, such as timeliness and sampling or non-sampling errors are addressed to provide up-to-date and more robust data.

Methodology

Computation Method:
The number of persons in the relevant age group who have completed the last grade of a given level of education is divided by the total population (in the survey sample) of the same age group.

Formula:

$$CR_n = \frac{P_{C_n,AG_{a+3t5}}}{P_{AG_{a+3t5}}}$$

where:

CR_n = completion rate for level *n* of education
$P_{C_n,Age_{a+3t5}}$ = population aged 3 to 5 years above the official entrance age *a* into the last grade of level *n* of education who completed level *n*
$P_{Age_{a+3t5}}$ = population aged 3 to 5 years above the official entrance age *a* into the last grade of level *n* of education
n = ISCED level 1 (primary education), 2 (lower secondary education), or 3 (upper secondary education)

Disaggregation:
The indicator is disaggregated by sex, location, wealth and other dimensions specified in global indicator 4.5.1 (parity index).

Treatment of missing values:

- At country level

The completion rate can be calculated from older cohorts who are outside of the age bracket specified in the definition of the indicator to obtain estimates for different years. Gaps in national time series can also be imputed.

- At regional and global levels

See above.

Regional aggregates:

Global and regional estimates of the primary, lower secondary and upper secondary completion rate are derived by using the national population in the respective age groups as weights for aggregation of national values.

Sources of discrepancies:
National data are often collected and reported in reference to national systems of education. The mapping from a national classification to the International Standard Classification of Education (ISCED) is not always straightforward and can cause discrepancies between national and international indicator estimates.

Methods and guidance available to countries for the compilation of the data at the national level:
Countries can calculate the completion rate using the methodology described in this document. ISCED mappings that help countries report their data in an internationally comparable framework are available on the website of the UNESCO Institute for Statistics (http://uis.unesco.org/en/isced-mappings).

Quality assurance
The process for quality assurance includes review of survey documentation, calculation of measures of reliability, examination of consistency of indicator values derived from different sources and, if necessary, consultation with data providers.

Before its annual data release and addition to the global SDG Indicators Database, the UNESCO Institute for Statistics submits all indicator values and notes on methodology to National Statistical Offices, Ministries of Education or other relevant agencies in individual countries for their review and feedback.

Data Sources

Description:
The data can be obtained from population censuses and household surveys that collect information on the highest level of education completed by children and young people in a household. Typical questions in a survey to collect data on educational attainment are:

- What is the highest level of education [name of household member] has attended?
- What is the highest grade of education [name of household member] completed at that level?

Sources include publicly available data from Demographic and Health Surveys (DHS), Multiple Indicator Cluster Surveys (MICS), the European Union Statistics on Income and Living Condition (EU-SILC), the Integrated Public Use Microdata Series (IPUMS), and national household surveys and censuses.

Collection process:
Data from all publicly available household surveys and censuses with the required information are compiled and used to calculate the completion rate. For international comparability, national data are mapped to the International Standard Classification of Education (ISCED) before indicator calculation.

Indicator values intended for dissemination and addition to the global SDG Indicators Database are submitted by the UNESCO Institute for Statistics to National Statistical Offices, Ministries of Education or other relevant agencies in individual countries for their review and feedback.

Data Availability

Description:

The primary completion rate is currently available for 111 countries, representing 46% of all countries worldwide and 89% of the global population in the reference age group (see table below). The lower secondary completion rate is available for 145 countries, representing 61% of all countries and 94% of the global population (see the figure below). Coverage for the upper secondary completion rate is similar, with data for 144 countries, representing 60% of all countries and 93% of the global population.

Available completion rates by SDG region, 2018 or latest year

Region	Countries with completion rates								
	Primary education			Lower secondary education			Upper secondary education		
	No. of countries	% of countries	% of pop. in region	No. of countries	% of countries	% of pop. in region	No. of countries	% of countries	% of pop. in region
Central and Southern Asia	11	78.6	93.9	11	78.6	93.7	10	71.4	93.8
Eastern and South-Eastern Asia	10	55.6	91.5	10	55.6	91.2	10	55.6	89.7
Europe and Northern America	10	17.5	51.5	41	71.9	100.0	41	71.9	100.0
Latin America and the Caribbean	28	57.1	99.7	28	57.1	99.7	28	57.1	99.7
Northern Africa and Western Asia	12	48.0	75.3	14	56.0	77.0	14	56.0	77.5
Oceania	0	0	0	1	4.0	59.4	1	4.0	35.8
Sub-Saharan Africa	40	78.4	97.6	40	78.4	98.0	40	78.4	96.7
World	111	46.4	88.8	145	60.7	93.8	144	60.3	93.1

Notes: Oceania includes Australia and New Zealand. Population refers to theoretical age for the respective levels of education (primary, lower secondary, upper secondary).
Sources: UIS database, http://data.uis.unesco.org; World Inequality Database on Education (WIDE), https://www.education-inequalities.org.

Time series:

The completion rate is available for the years since 2000. National time series are incomplete due to the infrequent implementation of household surveys and censuses.

Calendar

Data collection:

Household survey and census datasets are publicly available from the sources described above.

Data release:

Completion rates are released twice per year by the UNESCO Institute for Statistics, around February and September.

Data providers

Household survey and census datasets are publicly available from the sources described above.

Data compilers

UNESCO Institute for Statistics.

References

UNESCO Institute for Statistics (UIS). 2018. *Metadata for the Global and Thematic Indicators for the Follow-up and Review of SDG 4 and Education 2030*. Montreal: UIS. http://uis.unesco.org/sites/default/files/documents/sdg4-metadata-global-thematic-indicators-en.pdf

UNESCO Institute for Statistics (UIS). 2019. UIS.Stat online database.

- Primary completion rate: http://data.uis.unesco.org/index.aspx?queryid=3417
- Lower secondary completion rate: http://data.uis.unesco.org/index.aspx?queryid=3420
- Upper secondary completion rate: http://data.uis.unesco.org/index.aspx?queryid=3423

UNESCO Institute for Statistics (UIS) and Global Education Monitoring Report. 2019. World Inequality Database on Education (WIDE).

- Primary completion rate: https://www.education-inequalities.org/indicators/comp_prim_v2
- Lower secondary completion rate: https://www.education-inequalities.org/indicators/comp_lowsec_v2
- Upper secondary completion rate: https://www.education-inequalities.org/indicators/comp_upsec_v2

Related indicators

Combined with SDG indicator 4.1.1 – proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics – the completion rate can provide information on the percentage of children in a given cohort who achieve minimum proficiency in reading and mathematics.