



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

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, by sex

Definition:

Percentage of children and young people achieving at least a minimum proficiency level in (i) reading and (ii) mathematics during primary education (Grade 2 or 3), at the end of primary education, and at the end of lower secondary education. The minimum proficiency level will be measured relative to new common reading and mathematics scales currently in development.

Minimum proficiency level is the benchmark of basic knowledge in a domain (mathematics, reading, etc.) measured through learning assessments. As of August 2018 there is no globally agreed definition of minimum proficiency level. As an interim reporting strategy the UIS is reporting according to the minimum proficiency level informed by each assessment.

Purpose:

The indicator aims to measure the percentage of children and young people who have achieved the minimum learning outcomes in reading and mathematics during or at the end of the relevant stages of education.

Calculation method:

The number of children and/or young people at the relevant stage of education **n** in year **t** achieving or exceeding the pre-defined proficiency level in subject **s** expressed as a percentage of the number of children and/or young people at stage of education **n**, in year **t**, in any proficiency level in subject **s**.

$$MPL_{t,n,s} = \frac{MP_{t,n,s}}{P_{t,n}}$$

Where:

MP_{t,n,s} = the number of children and young people at stage of education **n**, in year **t**, who have achieved or exceeded the minimum proficiency level in subject **s**.



$P_{t,n}$ = the number of children and young people at stage of education n , in year t , in any proficiency level in subject s .

n = the stage of education that was assessed

s = the subject that was assessed (reading or mathematics).

Interpretation:

Each measurement point will have its own minimum standard. Thus, for each point of measurement, there is only one threshold that divides students into below minimum or at or above minimum proficiency levels.

(a) Below minimum is the proportion or percentage of students who do not achieve the minimum proficiency level as defined by each assessment.

(b) At or above minimum is the proportion or percentage of students who have achieved at least the minimum proficiency level as defined by each assessment.

Type of data source:

School-based and population-based learning assessments.

Table: How interim reporting is structured

	School-based		Population-based	What grade
	Cross-national	National		
Grade 2 or 3	LLECE PASEC TIMSS PIRLS	Yes	MICS6 EGRA/EGMA PAL network	2/3 plus one year when primary lasts more than 4 years according to ISCED levels in the country
End of primary	LLECE PASEC SACMEQ PILNA SEAMEAO TIMSS PIRLS	Yes	PAL network	Plus or minus one year of last year of primary according to ISCED levels in the country
End of lower secondary	TIMSS PISA PISA4D	Yes	Young Lives	Plus two minus one of last year of lower secondary according to ISCED levels in the country



Definition of minimum level until 2018 release	The ones defined by each assessment by point of measurement and domain
Definition of minimum level from 2019	According to alignment as adopted by GAML and TCG
Grade for end of primary and end of lower secondary	As defined by the ISCED levels in each country
Validation	Sent by the UIS for countries' approval

Notes: * TIMSS/PIRLS Grade 4: these results are allocated to the end of primary when, according to the ISCED levels in a given country, there are 4 grades in primary. When primary has more than 4 grades, they are allocated to grade 2/3.

** The UIS advises to complement this indicator with out-of-school children indicators.

Source: UIS.

Minimum proficiency levels defined by each learning assessment

The table below shows the minimum proficiency levels for each learning assessment by target grade/age and domain. Due to heterogeneity of performance levels set by national and cross-national assessments, these performance levels will be mapped to the globally-defined minimum performance levels and policy descriptors that will allow pedagogical linking. Once the performance levels are mapped, the global education community will be able to identify for each country the proportion or percentage of children who achieved at least minimum proficiency levels.



Learning assessment			
Name	Target grade/age	Domain	Minimum proficiency level (MPL)
LLECE	Grade 3	Reading	Level 2
		Math	Level 2
	Grade 6	Reading	Level 2
		Math	Level 2
PASEC	Grade 2	Reading	Level 3
		Math	Level 2
	Grade 6	Reading	Level 3
		Math	Level 2
TIMSS	Grade 4	Math	Low International Benchmark
	Grade 8	Math	Low International Benchmark
PIRLS	Grade 4	Reading	Low International Benchmark
MICS6	Grade 2/3	Reading	Foundational reading skills
		Math	Foundational numeracy skills
EGRA	Grade 2/3	Reading	Number of correct words per minutes (cwpm) above a given threshold (e.g. 45 cwpm) defined by each country
EGMA	Grade 2/3	Math	Percentage of correct answers for addition and subtraction above a given threshold (e.g. 80% of correct answers) defined by each country
PAL Network	Grade 3	Reading	Can read texts as defined by each country
		Math	Can do arithmetic problems as defined by each country
	Grade 5	Reading	Can read texts as defined by each country
		Math	Can do arithmetic problems as defined by each country
SACMEQ	Grade 6	Reading	Level 3
		Math	Level 3
National assessment	Grade 2/3, end of primary, or end of secondary	Reading	As defined by each national assessment
		Math	As defined by each national assessment
PISA	15 years old students mapped to the grade of the theoretical age according to the ISCED mapping in the country	Reading	Level 2
		Math	Level 2

Disaggregation:

By age or age-group, sex, location, socio-economic status, migrant status, ethnicity and language of the test at home.

Data required:

Data on learning outcomes from national or cross-national assessments. The data must be available as the percentage of students by proficiency level. The minimum proficiency level must be defined.

Limitations and comments:

Learning outcomes from national school- or household-based learning assessments are not comparable across countries unless they are linked by design. Learning outcomes from cross-national learning assessment are comparable for countries which participated in the same cross-national



learning assessments but they are not comparable across different cross-national learning assessments.

Comparability over time is possible if the assessment is designed with an adequate linking process between waves of administration.



4.1.2 Administration of a nationally-representative learning assessment (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education

Definition:

Whether a national or cross-national assessment of learning outcomes was conducted in the last 5 years in (a) reading, writing or language and (b) mathematics at the relevant stages of education.

An *assessment of learning outcomes* is a test or examination which measures the achievement in selected subjects of students at a particular age or grade.

Purpose:

The capacity of countries to assess learning via large-scale assessments is key to monitoring quality and equity of learning. The administration of national learning assessments is essential to supply information on the performance of education systems at least every five years.

Calculation method:

The indicator is expressed as a simple 'yes' or 'no' for each subject area and each stage of education.

$LA_{n,s}^t = 1$, **yes** if there exists a national, regional or international learning assessment in any year between $t-5$ and t

= **0, no** otherwise

where:

$LA_{n,s}^t$ = existence of a national, regional or international learning assessment at stage of education n , in subject s in any year ($t-i$) where $0 \leq i \leq 5$

Interpretation:

'Yes' values indicate that the country is monitoring learning outcomes regularly at the given stage of education and in the given subject areas. This will enable the country to review and adapt as necessary its national policies on education and learning to ensure that all children and young people have the opportunity to acquire basic skills at each education level and in each subject area.

Type of data source:

Learning assessments.

**Disaggregation:**

By stage or level of education and subject.

Data required:

Information on the implementation of learning assessments in each subject and at each stage of education in each country.

Data sources:

Data on the administration of a large-scale assessment from a national representative sample from national learning assessment offices, ministries of education or other bodies responsible for learning assessments, including regional or international organizations running learning assessments (e.g. CONFEMEN, EQAP, IEA, OECD, SACMEQ and TERCE).

Limitations and comments:

In calculating this indicator, language or writing assessments are also considered as types of reading assessments. The indicator does not measure the skills of children but only the existence of assessments in a country.



4.1.3 Gross intake ratio to the last grade (primary, lower secondary)

Definition:

Total number of new entrants into the last grade of primary education or lower secondary general education, regardless of age, expressed as a percentage of the population at the intended entrance age to the last grade of primary education or lower secondary general education.

The *intended entrance age to the last grade* 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.

Purpose:

This is a proxy measure of primary completion. It reflects how the impact of policies on access to and progression through the early grades of each level of education impact the final grade of that level. It also indicates the capacity of the education system to cater for the completion of the population of the intended entrance age to the last grade of the given level of education. It assumes that pupils entering the last grade for the first time will eventually complete the grade and hence the given level of education.

Calculation method:

The number of new entrants in the last grade of the given level of education, regardless of age, is expressed as a percentage of the population of the intended entrance age to the last grade of that level of education.

$$\text{GIRLG}_n = \frac{\text{NE}_{l,n}}{\text{P}_{n,a}}$$

where:

GIRLG_n = gross intake ratio to the last grade **l** of level **n** of education

NE_{l,n} = new entrants to the last grade **l** of level **n** of education

P_{n,a} = population of the intended entrance age **a** to the last grade of level **n** of education

n = 1 (primary) or 2 (lower secondary)

Note: If data on new entrants are not collected directly, they can be calculated by subtracting the number of pupils repeating the last grade from total enrolment in the last grade.

**Interpretation:**

A high ratio indicates a high degree of primary or lower secondary education completion.

Type of data source:

Administrative data.

Disaggregation:

By sex and level of education.

Data required:

New entrants to the last grade of each level of education (or enrolment minus repeaters in the last grade); population of the intended entrance age to the last grade of each level of education and data on the structure (entrance age and duration) of each level of education.

Data sources:

Administrative data from schools on enrolment and repeaters or new entrants by grade; population censuses and surveys for population estimates by single year of age; administrative data from ministries of education on the structure of the education system.

Limitations and comments:

This is a gross measure and may therefore exceed 100% if there are large numbers of pupils who entered school either early or late and/or who have repeated earlier grades. The fact that the GIR can exceed 100% also makes it more difficult to interpret than the completion rate.

Compared to the completion rate, the gross intake ratio to the last grade does not indicate how many children complete the last grade, only how many children enter that grade. If students in the last grade leave school before graduation, the gross intake ratio to the last grade overestimates completion.



4.1.4 Completion rate (primary education, lower secondary education, upper secondary education)

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.

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.

Purpose:

The completion rate indicates how many persons in a given age group have completed the relevant level of education. By choosing an age-group which is slightly older than the theoretical age-group for completing each level of education, the indicator measures how many children and adolescents enter school more or less on time and progress through the education system without excessive delays.

Calculation method:

The number of persons in the relevant age group who have completed the last grade of the given level of education is expressed as a percentage of the total population of the same age group.

$$CR_n = \frac{EAP_{n,AG(a+3t5)}}{PAG_{(a+3t5)}}$$

where:

CR_n = completion rate for level **n** of education

EAP_{n,AG(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**

PAG_(a+3t5) = population aged 3 to 5 years above the official entrance **a** into the last grade of level **n** of education

Interpretation:

A completion rate at or near 100% indicates that most or all children and adolescents have completed a level of education by the time they are 3 to 5 years older than the official age of entry into the last grade of the given level of education.



A low completion rate indicates low or delayed entry into a given level of education, high drop-out, high repetition, late completion, or a combination of these factors.

To identify the causes of low completion rates, it is necessary to examine other indicators, for example the out-of-school rate, the gross intake ratio to the last grade, and the percentage of over-age children.

When disaggregated by sex, location and other characteristics, this indicator can identify excluded population groups.

Type of data source:

Population censuses, household surveys.

Disaggregation:

By age or age-group of students, sex, location, socio-economic status, level of education, and others as available.

Data required:

Population in the relevant age group by the highest level of education or grade completed; data on the structure (entrance age and duration) of each level of education.

Data sources:

Population censuses and household surveys which collect data on the highest level of education or grade completed by children and young people in a household, through self- or household-declarations. In the former case, each household member above a certain age reports his or her own level of educational attainment. In the latter case, one person, usually the head of the household or another reference person, indicates the highest grade and/or level of education completed by each member of the household. Administrative data from ministries of education on the structure of the education system are also needed.

Labour force surveys can serve as a source of data for lower and upper secondary completion if they collect information for the age groups of concern. International sample surveys, such as Demographic and Health Surveys (DHS, <http://dhsprogram.com>) or Multiple Indicator Cluster Surveys (MICS, <http://mics.unicef.org>), are another source. These surveys are designed to meet commonly agreed upon international data needs while also providing data for national policy purposes. These surveys are implemented on a regular basis in selected countries, on average every 3 to 5 years. They aim to assure cross-national comparability, although they often integrate national modules to suit specific country data needs. Modules from international surveys are sometimes added to other on-going national sample surveys.



Population censuses are another important source of attainment data but they are carried out less frequently than household surveys, often only once per decade.

Data on attainment collected with surveys or censuses are usually mapped to ISCED levels post-enumeration.

Limitations and comments:

National data on educational attainment are often collected and reported in reference to national systems of education. The mapping from a national classification to ISCED, needed for calculation of the completion rate, is not always straightforward and can cause discrepancies between measures of attainment in national and international data. Data collection and mapping to ISCED are more difficult for upper secondary education than lower levels of education because of the variety of providers and programmes at the upper secondary level.



4.1.5 Out-of-school rate (primary education, lower secondary education, upper secondary education)

Definition:

Children and young people in the official age range for the given level of education who are not enrolled in primary, secondary or higher levels of education. Children and young people who are enrolled in pre-primary education are considered to be out of school.

Purpose:

To identify the size of the population in the official age range for the given level of education who are not enrolled in school in order that they can be better targeted and appropriate policies can be put in place to ensure they have access to education.

Calculation method:

The number of students of the official age for the given level of education enrolled in primary, secondary or higher levels of education is subtracted from the total population of the same age.

$$OSR_n = \frac{SAP_n - \sum_{i=1}^8 E_{i,AGn}}{SAP_n}$$

where

OSR_n = out-of-school rate for children and young people of the official age for level **n** of education

SAP_n = population of the official age for level **n** of education

$E_{i,AGn}$ = enrolment in ISCED level **i** of children and young people of the official age for level **n** of education

Interpretation:

The higher the number of out-of-school children and adolescents, the greater the need to focus on improving access to education. Some children have never been in school or may not eventually enrol as late entrants. Other children may have initially enrolled but dropped out before reaching the intended age of completion of the given level. When disaggregated by sex, location and other characteristics, this indicator can identify excluded population groups.

Type of data source:

Administrative data, household surveys.

**Disaggregation:**

By age or age-group and sex (administrative data); by age or age-group and sex, location, and socio-economic status (household surveys) and others as available.

Data required:

Enrolment by single year of age in each level of education, population estimates by single year of age and data on the structure (entrance age and duration) of each level of education.

Data sources:

Administrative data from schools or household survey data on enrolment by single year of age; population censuses and surveys for population estimates by single year of age (if using administrative data on enrolment); administrative data from ministries of education on the structure (entrance age and duration) of the education system.

Limitations and comments:

Inconsistencies between enrolment and population data from different sources may result in inaccurate estimates of out-of-school children and adolescents. Data from household surveys conducted late in the school year where ages are recorded at the enumeration date may result in over-estimates.



4.1.6 Percentage of children over-age for grade (primary education, lower secondary education)

Definition:

Percentage of pupils in each level of education (primary and lower secondary general education) who are at least 2 years above the intended age for their grade.

The *intended age for a given grade* 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.

Purpose:

The indicator measures progress towards ensuring all girls and boys complete a full cycle of quality primary and secondary education and achieve at least minimum levels of proficiency in reading and mathematics at each level.

Children may be over-age for a grade because they started school late and/or they have repeated one or more previous grades.

Calculation method:

The sum of enrolments across all grades in the given level of education which are 2 or more years older than the intended age for the given grade is expressed as a percentage of the total enrolment in the given level of education.

$$POAG_n = \frac{\sum_{g=1}^{d_n} E_{n,g,AG,2+}}{E_n}$$

where:

POAG_n = percentage of children over-age for grade in level **n** of education

E_{n,g,AG,2+} = enrolment in grade **g** of level **n** of education who are aged at least 2 years older than the intended age for that grade

E_n = total enrolment in level **n** of education

d_n = duration (in years) of level **n** of education

n = 1 (primary) or 2 (lower secondary general)

**Interpretation:**

A low value of this indicator will show that the majority of students start school on time and progress with minimum levels of grade repetition. Over-age progression and significant repetition should be discouraged as both are associated with lower levels of student learning achievement.

Type of data source:

Administrative data, household surveys.

Disaggregation:

By sex (administrative data); by sex, location, and socio-economic status (household surveys) and others as available.

Data required:

Enrolment by single year of age in each grade, population estimates by single year of age and data on the structure (entrance age and duration) of each level of education.

Data sources:

Administrative data from schools or household survey data on enrolment by single year of age and grade; population censuses and surveys for population estimates by single year of age (if using administrative data on enrolment); administrative data from ministries of education on the structure of the education system.

Limitations and comments:

Inconsistencies between enrolment and population data from different sources may result in inaccurate estimates of this indicator. Data from household surveys conducted late in the school year where ages are recorded at the enumeration date may result in over-estimates.



4.1.7 Number of years of (a) free and (b) compulsory primary and secondary education guaranteed in legal frameworks

Definition:

Number of years of primary and secondary education to which children and young people are legally entitled that are either free from tuition fees or compulsory or both.

Most countries have legislation specifying the ages and the level of education (typically pre-primary or primary education) at which children should start school. Such legislation usually also specifies either the number of years of education that are guaranteed or the age at which young people may leave education or, in some cases, both.

The number of years of primary and secondary education to which children are legally entitled should ideally be the number of grades of primary and secondary education which young people are expected to have completed before being legally eligible to leave school. Years of pre-primary education covered by the legal entitlement should be excluded from this indicator (and reported in Indicator 4.2.5 instead).

Purpose:

To measure government commitment to guaranteeing the right to education to children and young people.

Calculation method:

Record the number of grades of primary and secondary education that are guaranteed. If using ages rather than grades, subtract from the upper age, either the lower age if it is an age at which a child should be in primary school or, if not, subtract the official entrance age to primary school. If the upper age is the age at the start of the last year of free or compulsory education, it will be necessary to add 1 to the result.

YF₁₂₃ = number of years of free primary and secondary education (ISCED levels 1, 2 and 3)

YC₁₂₃ = number of years of compulsory primary and secondary education (ISCED levels 1, 2 and 3)

Interpretation:

The existence of national legislation guaranteeing the right to education at given ages and/or grades demonstrates the government's commitment to ensuring that children and young people attend school regularly. The greater the number of years guaranteed the more likely that children and young people will remain in school longer and have the opportunity to acquire the necessary skills and competencies at each level of education.

**Type of data source:**

Administrative data.

Disaggregation:

By level of education.

Data required:

Number of grades of primary and secondary education which are (a) free from tuition fees and/or (b) compulsory according to national legislation. If the number of grades is not specified, the age range in which education is (a) free and/or (b) compulsory may be used instead. Data on the structure (entrance age and duration) of each level of education are also required.

Data sources:

National legislation and formal education standards and norms on access to schooling and, in particular, the legal entitlement or obligation to attend school; and administrative data from ministries of education on the structure of the education system.

Limitations and comments:

The existence of national legislation does not guarantee that countries ensure that it is implemented effectively and that parents are indeed ensuring their children benefit from the provision available.