

## SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all

### METADATA

**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**

#### 4.1.0 Proportion of children/young people prepared for the future, by sex

##### Definition

Proportion of children (a) reaching grade 3, (b) completing primary and (c) completing lower secondary and achieving minimum proficiency in (i) mathematics and (ii) reading, at the respective levels, by sex

##### Purpose

Target 4.1 is to ensure that “all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.” Progress towards this goal has been predominantly measured by using school-based learning assessments to provide estimates of the proportion of students that achieve a minimum level of proficiency in mathematics and reading. However, in many countries, particularly lower income countries, many children are either out of school or do not complete school. The result is that measurement of progress towards Target 4.1 using school-based learning assessments alone may overestimate progress. By measuring the proportion of children that both complete a certain level of school and achieve minimum proficiency more accurately measures progress towards Target 4.1 and captured both the aspects of the quality of education as well as access.

##### Calculation method

The indicator,  $I$ , is estimated as

$$I_{d,j} = P_{d,j} \times C_{d,j} \times 100$$

where  $j$  denotes the level of education (3<sup>rd</sup> grade, end of primary, end of lower secondary)  $d$  denotes the domain (mathematics or reading),  $P$  denotes the proportion of students attaining minimum proficiency, and  $C$  denotes the proportion of children completing the level.



### Interpretation

A higher value for the indicator denotes a higher percentage of children are both completing and attaining minimum proficiency in the specified domain and level of education.

### Data sources

The indicator is derived from two data sources: SDG indicator 4.1.1 which provides the percent of students achieving minimum proficiency for the specified levels of education and domains and the Adjusted Bayesian Completion Rate (ABCR) dataset (Barakat et al. 2021) which provides estimates of completion rates for the corresponding levels of education.

### Disaggregation

The indicator can be disaggregated for subpopulations which are available for both sources of data. Presently, the indicator is disaggregated by sex which is currently available in the ABCR dataset. For the first time, the UNESCO Institute for Statistics is publishing regional averages for indicator 4.1.0 from 2000 to 2020 in the September 2022 data release, in addition to data for indicator 4.1.0 for mathematics - the proportion of children/young people prepared for the future for mathematics.

### Methodological challenges

The indicator inherits the same methodological challenges as those of the source datasets as outlined in their respective metadata documentation. For this indicator specifically, the chief challenge is to find completion rate data that corresponds to the assessment years. Completion rates from ABCR dataset were used because the estimation methodology provides time series for most countries.

### Limitations and comments

As above, this indicator also inherits the limitations of the two source datasets. For this indicator, the primary limitation lies in the correspondence between completion rates and assessment. Ideally, the indicator would provide a measure of assessment for the children who are completing school in a given year. This indicator deviates from this ideal in two ways. First, learning assessment data vary in the grade level being assessed and may not be completed exactly at the last year of a given level of school but rather in close proximity (the mapping of grade level to level of education is described in the metadata for 4.1.1). This means that proficiency level of students being assessed may differ from those who are completing school in a given year. Second, completion rate measures are based on household survey data which estimate completion not for a specific year but rather an age cohort that is typically above the theoretical completion age in order to account for students who repeat grades or start late but do ultimately complete school. These mismatches in correspondence between assessment and completion are not expected, however, to generate large errors in the measurement of progress towards Target 4.1.