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Institute for Statistics

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

METADATA

Target 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

4.c.2 Pupil-trained teacher ratio by education level

Definition

Average number of pupils per trained teacher at each level of education (pre-primary, primary, lower and upper secondary education) in a given academic year.

A *trained teacher* is one who has received at least the minimum organized pedagogical teacher training pre-service and in-service required for teaching at the relevant level in a given country in a given academic year.

Purpose

To measure trained teacher workloads and human resource allocations in educational institutions, and to give a general indication of the average amount of time and individual attention a pupil is likely to receive from trained teachers.

Since well-trained teachers play a key role in ensuring the quality of education provided, the pupil/trained teacher ratio is considered an important determinant of learning outcomes and an indicator of the overall quality of an education system.

Calculation method

The total number of pupils and students in the relevant level in a given academic year, expressed as a percentage of the number of trained teachers in the same level in that academic year.

$$PTTR_{n,t} = \frac{E_{n,t}}{TT_{n,t}}$$

where:

$PTTR_{n,t}$ = pupil-trained teacher ratio at level **n** of education in year **t**

$E_{n,t}$ = pupils enrolled in level n of education in year t
 $TT_{n,t}$ = trained teachers at level n of education in year t
 n = 02 (pre-primary), 1 (primary), 2 (lower secondary), 3 (upper secondary) and 23 (secondary)

Interpretation

The higher the pupil/ trained teacher ratio, the lower the relative access of pupils to trained teachers. Results can be compared with established national norms on the number of pupils per trained teacher for each level of education.

Type of data source

Administrative data.

Disaggregation

By level of education and type of institution (public/private).

Data required

Number of pupils and trained teachers at each level of education in a given academic year.

Data sources

Administrative data from schools and other organized learning centres.

Quality assurance

The indicator should be based on available data on students and on trained teachers for the given level of education, from all types of educational institutions in the country (public and private). The UIS sets standards and maintains the global database used to produce this indicator.

Limitations and comments

The 'ideal' pupil/trained teacher ratios may depend on a wide variety of complex factors, including the age and academic needs of the pupils represented in the ratio (younger children or those with special educational needs typically require more time, attention, and instructional support from teachers) or the experience, skill, and effectiveness of the teachers (highly skilled teachers may be able to achieve better academic results with larger classes than less skilled teachers with smaller classes).

In calculating and interpreting this indicator, one should take into account the existence of part-time teaching, school-shifts, multi-grade classes and other practices that may affect the precision and meaningfulness of pupil/teacher ratios. When feasible, the number of part-time teachers should be converted to 'full-time equivalent' numbers of teachers; a double-

shift teacher should be counted twice, etc. Ideally, all staff involved in direct classroom-teaching roles should be included in the calculations.

Pupil/teacher ratios are not equivalent to the average class size. It is important to note that national teacher training requirements can vary from one country to the next. To address this limitation, the UIS has initiated the development of an international classification of teacher training programmes that can be used for comparisons of such programmes across countries.