

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

(Updated on 25 April 2016)

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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 4.1.1. Proportion of children and young people: (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex

From UNESCO:

Definition and method of computation: Percentage of children and young people at the end of primary and lower secondary levels of education achieving at least a minimum proficiency level in (a) reading and (b) mathematics. The minimum proficiency level will be measured relative to new common reading and numeracy scales currently in development. The indicator is calculated as the number of children and young people at the end of primary or lower secondary education achieving or exceeding the minimum proficiency level in the given subject, expressed as a percentage of all children and young people at the end of primary or lower secondary education.

Rationale and interpretation: The indicator is a direct measure of the learning outcomes achieved in the two subject areas at the end of the relevant levels of education.

Sources and data collection: Various international assessments (e.g., PIRLS, PISA, TIMSS), regional learning assessments (e.g., LLECE, SACMEQ, PASEC), national and citizen-led learning assessments. While common scales are being developed, monitoring based on the results of individual studies will be necessary.

Comments and limitations: While data from many national assessments are available now, the proposed methodology represents a substantial step forward by using existing data to create global estimates. Since assessments are typically administered within school systems, the available indicators cover only those in school. Extending the assessment of competencies to children and young people who are out of school would require household-based types of surveys. Adding individual assessment of learning to such surveys is under consideration but may be very costly and difficult to administer, and unlikely to be available on the scale needed within the next 3-5 years. The calculation of this indicator requires specific information on the ages of children participating in assessments to create globally comparable data. This makes the calculation of the indicator even more challenging.

Gender equality issues: The indicator will be disaggregated by sex and other relevant characteristics enabling a more thorough analysis of the disparities in learning outcomes between the sexes.

Data for regional and global monitoring: Cross-nationally comparable data are currently available within international and regional learning assessments, which provide the basis for global comparison. However, until the common learning scales are established, the results could not be considered comparable across different assessments. The development of the common learning scales which allows these linkages is underway and are expected to be available within 3-5 years (i.e., by 2020).

Supplementary information: None

References: None

Target 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.

Indicator 4.2.1: Proportion of children under 5 years of age who are developmentally on track in health, learning and psychosocial well-being, by sex

From UNESCO:

Definition and method of computation: The percentage of children at the start of primary school, typically age 6 years in many countries, who demonstrate age-appropriate health, learning and psychosocial well-being and possess the necessary competencies and knowledge required for learning in the early primary grades. The age at which children start primary school varies across countries. This means that the indicator may broadly reflect children's development between about five and seven years of age.

Rationale and interpretation: The indicator is a broad measure of children's development and their preparedness to begin school. Available data for global tracking is presently collected from individual-level data reported by care-givers or teachers, which is then used to calculate an indicator that represents a composite measure across a range of agreed characteristics in the areas of health, learning and psychosocial well-being.

Sources and data collection: One possible source is the Early Childhood Development Index from UNICEF's Multiple Indicator Cluster Surveys (MICS). In addition, there are several regional- and national-level assessments that are also being explored.

Comments and limitations: Further developmental work will be needed to ensure that the proposed measures are relevant to children in all parts of the world, and measure the skills and competencies that are most important for early school participation and learning. This is expected to take 1-3 years to achieve (i.e., by 2018).

Gender equality issues: The indicator will be disaggregated by sex and other relevant characteristics enabling a more thorough analysis of the disparities between the sexes.

Data for regional and global monitoring: Cross-nationally comparable data are currently available for c30 developing countries. Further work is required to agree on levels of achievement in each developmental area, to standardise the method of calculation and extend coverage to more countries. This is expected to take 3-5 years to achieve (i.e., by 2020).

Supplementary information: None

References: None

From UNICEF:

Definition and method of computation

This indicator provides the proportion of children under the age of five who are developmentally on track in health, learning and psychosocial well-being. It is calculated by dividing the number of children under the age of five who are developmentally on track in health, learning and psychosocial well-being by the total number of children under the age of five in the population.

Rationale and interpretation

Early childhood development sets the stage for life-long thriving. Investing in ECD is one of the most critical and cost-effective ways to improve adult health, education and productivity. ECD is equity from the start and provides a good indication of national development and efforts to improve ECD can bring about human, social and economic improvements for both individuals and societies.

Sources and data collection

Household surveys such as UNICEF-supported MICS have been collecting data on this indicator (through the Early Childhood Development Index or ECDI) in low- and middle-income countries since around 2010. Many of the individual items included in the ECDI are collected through other mechanisms in high-income (OECD) countries as well.

Disaggregation

Data are available by age, sex, place of residence, wealth quintiles and other background characteristics. When used in conjunction with a module on child disability, data can also be disaggregated by disability status.

Comments and limitations

Existing data collection mechanisms are already in place for many countries to monitor this indicator although the ECDI in itself is a fairly new measure of child development.

Gender equality issues

As this indicator is disaggregated by sex, it is well-suited for analysis of gender equality issues.

Data for global and regional monitoring

UNICEF has estimates for the percentage children under the age of five who are developmentally on track in health, learning and psychosocial well-being by country and for some (flexible) regional groupings with sufficient population coverage. Comparable data are currently available for approximately 60 countries.

Supplementary information and references

UNICEF website on child developmental status data:

<http://data.unicef.org/ecd/development-status.html>

UNICEF 2014 brochure – Early Childhood Development: A Statistical Snapshot - Building Better Brains and Sustainable Outcomes for Children:

http://data.unicef.org/corecode/uploads/document6/uploaded_pdfs/corecode/ECD_Brochure_2014_197.pdf

Responsible entities

UNICEF

Indicator 4.2.2: Participation rate in organized learning (one year before the official primary entry age), by sex

No metadata received on the current indicator formulation.

Target 4.3 By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

Indicator 4.3.1: Participation rate of youth and adults in formal and non-formal education and training in the last 12 months, by sex

From UNESCO:

Definition and method of computation: The percentage of youth and adults in a given age range (e.g. 15-24 years, 25-64 years etc.) participating in formal or non-formal education or training in a given time period (e.g. last 12 months). Ideally, the indicator should be disaggregated by types of programme such as TVET, tertiary education, adult education and other relevant types and cover both formal and non-formal programmes.

Rationale and interpretation: The indicator measures youth and adults' access to education and training for a recent time period.

Sources and data collection: Household surveys which collect retrospective data on the participation of young people and adults in education or training programmes in a specified period in the recent past (usually the last 12 months).

Comments and limitations: The indicator measures the percentage of youth and adults who had access to education and training but not the amount of training received. More work is needed to ensure consistent definitions of adult education across surveys, and to clarify the comparability of different forms of adult education. Capturing the diversity of adult education and training, both formal and non-formal, represents a challenge in ensuring the comparability of this indicator across countries.

Gender equality issues: The indicator will be disaggregated by sex, age group, type of programme and other relevant characteristics enabling a more thorough analysis of the disparities between the sexes.

Data for regional and global monitoring: Cross-nationally comparable data are currently available from the European Union's Adult Education Survey (AES) for c30 countries in Europe. Further work is required to develop a set of questions to be applied in labour force or other surveys globally, as well as to harmonise the questions already existing in several national household surveys on adult education attendance. This is expected to take 1-3 years to achieve.

Supplementary information: None

References: None

Target 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.

Indicator 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill

From UNESCO:

[Adapted from ITU's metadata submission regarding this indicator which was also proposed for measuring Target 5.b.]

Definition and method of computation: The percentage of youth (aged 15-24 years) and adults (aged 15 years and above) that have undertaken certain computer-related activities in a given time period (e.g. last three months). Computer-related activities to measure ICT skills are as follows:

- Copying or moving a file or folder
- Using copy and paste tools to duplicate or move information within a document
- Sending e-mails with attached files (e.g. document, picture, video)
- Using basic arithmetic formulae in a spreadsheet
- Connecting and installing new devices (e.g. a modem, camera, printer)
- Finding, downloading, installing and configuring software
- Creating electronic presentations with presentation software (including text, images, sound, video or charts)
- Transferring files between a computer and other devices
- Writing a computer program using a specialized programming language

A *computer* refers to a desktop computer, a laptop (portable) computer or a tablet (or similar handheld computer). It does not include equipment with some embedded computing abilities, such as smart TV sets, and devices with telephony as their primary function, such as smartphones.

Most individuals will have carried out more than one activity and therefore multiple responses are expected. The tasks are broadly ordered from less to more complex.

Rationale and interpretation: 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.

Sources and data collection: Household surveys which collect data on the use of selected ICT skills.

Comments and limitations: This indicator is relatively new but based on an internationally agreed definition and methodology, which have been developed under the coordination of International Telecommunications Union (ITU), through its Expert Groups and following an extensive consultation process with countries. It is also one of the Partnership on Measuring ICT for Development's Core List of Indicators, which was endorsed by the UN Statistical Commission in 2014.

The indicator is based on the responses provided by interviewees regarding certain computer-related activities that they have carried out in a reference period of time. However, it is not a direct assessment of skills nor how or if those activities were undertaken effectively.

Gender equality issues: The indicator will be disaggregated by sex and other relevant characteristics enabling a more thorough analysis of the disparities between the sexes.

Data for regional and global monitoring: By 2015, data for this indicator were available for only 3 developing countries although OECD countries have been collecting data for this indicator for a number of years. Since this indicator was only added to the Partnership's Core List of Indicators in 2014, more countries are expected to collect data in the near future.

Supplementary information: None

References: [ITU Manual for Measuring ICT Access and Use by Households and Individuals 2014](#)

Target 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.

Indicator 4.5.1: Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated

From UNESCO:

Definition and method of computation: Parity indices require no additional data than the specific disaggregations of interest. They are simply the ratio of the indicator value for one group to that of the other. Typically, the likely more disadvantaged group is the numerator. A value of exactly 1 indicates parity between the two groups.

Rationale and interpretation: The further from 1 the parity index lies, the greater the disparity between the two groups of interest (but see the **comments and limitations** section for further information).

Sources and data collection: The sources are the same as for the underlying indicators for this goal.

Comments and limitations: The indicator is not symmetrical about 1 but a simple transformation can make it so (by inverting ratios that exceed 1 and subtracting them from 2). This will make interpretation easier.

Gender equality issues: Gender parity indices are one type of parity index which will be calculated. It is also possible to calculate a sex-based parity index for other disaggregations by dividing the female value of the disaggregation of interest (e.g., rural females) by the male value (e.g. urban males) to better analyse multiple disparities.

Data for regional and global monitoring: The availability of parity indices for regional and global monitoring is the same as for the underlying indicators for this goal.

Supplementary information: None

References: None

Target 4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, and achieve literacy and numeracy.

Indicator 4.6.1: Percentage of population in a given age group achieving at least a fixed level of proficiency in functional (a) literacy and (b) numeracy skills, by sex

From UNESCO:

Definition and method of computation: The percentage of youth (aged 15-24 years) and of adults (aged 15 years and above) who achieve or exceed a given level of proficiency in (a) literacy and (b) numeracy.

Rationale and interpretation: The indicator is a direct measure of the skill levels of youth and adults in the two areas.

Sources and data collection: This indicator is collected via skills' assessment surveys of the adult population.

Comments and limitations: The measurement of youth and adult skills requires some form of direct assessment. Using household surveys to measure learning can be costly and difficult to administer, and may underestimate learning in areas that are critical to daily life but are harder to assess in standardised approaches. The result may be inaccurate representations of what youth and adults know and can do, especially in relation to applying skills that may vary across contexts.

Gender equality issues: The indicator will be disaggregated by sex and other relevant characteristics enabling a more thorough analysis of the disparities between the sexes.

Data for regional and global monitoring: Currently data are available for 33 mostly high-income countries from OECD's Programme for the International Assessment of Adult Competencies (PIAAC). Similar information is available for (urban areas of) 13 low- and middle-income countries from the World Bank's STEP Skills Measurement Program. These data sources are not directly comparable, but can be used to generate nationally- and regionally-specific estimates of the degree to which adults possess basic skills.

Considerable work is required to develop a cost-effective module that can be integrated into national and international surveys. This is expected to take 3-5 years to achieve (i.e., by 2020).

Supplementary information: None

References: None

From OECD:

Definition and method of computation

Assessment of the proficiency of adults (16-65 year olds) in the domains of literacy, numeracy and problem solving in technology-rich environments. One hour cognitive assessment plus a background questionnaire of around 30-45 minutes.

Rationale and interpretation

Provide estimates of the level and distribution of key information processing skills among the adult population and better understand the links between these skills and their antecedents and outcomes.

Sources and data collection

Non-institutionalised adults (aged 16-65 years) resident in the country. Minimum sample size = 5,000.

Disaggregation

Disaggregated analysis available by performance, age group, socio-economic status, gender, employment status, occupation, country of origin, language spoken at home, etc.

Comments and limitations

Participating countries and economies are mostly high income countries.

Gender equality issues

All measures can be disaggregated across gender, differences can be analysed and studied in detail.

Data for global and regional monitoring

33 countries have implemented PIAAC.

Supplementary information

See PIAAC technical report and policy publications

References

PIAAC website: <http://www.oecd.org/site/piaac/>

Target 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.

Indicator 4.7.1: Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies, (b) curricula, (c) teacher education and (d) student assessment

No metadata received on current indicator formulation.

Target 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.

Indicator 4.a.1: Proportion of schools with access to: (a) electricity; (b) the Internet for pedagogical purposes; (c) computers for pedagogical purposes; (d) adapted infrastructure and materials for students with disabilities; (e) basic drinking water;(f) single-sex basic sanitation facilities; (g) basic handwashing facilities (as per the WASH indicator definitions)

From UNESCO:

Definition and method of computation: The percentage of schools by level of education (primary, lower secondary and upper secondary) with access to the given facility or service.

Internet for pedagogical purposes is defined as Internet that is available for enhancing teaching and learning and is accessible by pupils.

Internet for pedagogical purposes is defined as a worldwide interconnected computer network, which provides pupils access to a number of communication services including the World Wide Web and carries e-mail, news, entertainment and data files, irrespective of the device used (i.e. not assumed to be only via a computer) and thus can also be accessed by mobile telephone, tablet, PDA, games machine, digital TV etc.). Access can be via a fixed narrowband, fixed broadband, or via mobile network.

Basic drinking water is defined as a functional drinking water source (MDG 'improved' categories) on or near the premises and water points accessible to all users during school hours. Basic sanitation facilities are defined as functional sanitation facilities (MDG 'improved' categories) separated for males and females on or near the premises. Basic handwashing facilities are defined as functional handwashing facilities, soap (or ash) and water available to all girls and boys. The component on adapted infrastructure and materials is yet to be developed.

Rationale and interpretation: The indicator measures access in schools to key basic services necessary to ensure a safe and effective learning environment for all students.

Sources and data collection: Administrative data from schools and other providers of education or training.

Comments and limitations: The indicator measures the existence in schools of the given service but not its quality or operational state.

Gender equality issues: Adequate access to single-sex toilets and hand-washing facilities is vital for ensuring a safe environment especially for girls in school.

Data for regional and global monitoring: Cross-nationally comparable data on electricity are available for c95 countries, for Internet access for c70 countries and for water and sanitation for c100 countries. Further efforts will be required to apply the WASH definitions fully and extend coverage to more countries. This is expected to take 1-3 years (i.e. by 2018). Major preparatory work will be required to develop an approach on the assessment of school conditions for people with disabilities. This is expected to take 3-5 years (i.e. by 2020).

Supplementary information: None

References: WASH targets and indicators post-2015: recommendations from international consultations. Geneva: Water Supply and Sanitation Collaborative Council (2014).
http://www.wssinfo.org/fileadmin/user_upload/resources/post-2015-WASH-targets-factsheet-12pp.pdf

For Computers and Internet for pedagogical purposes, see [*Guide to Measuring Information and Communication Technologies \(ICT\) in Education, UIS Technical Paper No. 2.*](#)

Target 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.

Indicator 4.b.1: Volume of official development assistance flows for scholarships by sector and type of study

From OECD:

Definition and method of computation

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.

Rationale and interpretation

ODA is the accepted measure of international development co-operation. The data thus cover official international assistance to provide education places for developing country nationals in donor country educational institutions.

Sources and data collection

Data are compiled by the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development from returns submitted by its member countries and other aid providers. Data can be accessed [here](#).

Disaggregation

The data can be disaggregated by provider and recipient country, and essentially concern grants.

Comments and limitations

The data only address international concessional flows provided by governments. Detailed, internationally comparable data on scholarships for developing country nationals provided by universities, colleges, foundations, NGOs and other sources is generally lacking.

Gender equality issues

Most scholarship programmes take account of gender issues in selecting students, but generalised data on the breakdown by sex of beneficiaries is not available.

Data for global and regional monitoring

Data are available for essentially all high-income countries, and for an increasing number of middle-income aid providers.

Supplementary information

See [Aid to education](#) data.

References

OECD, 2015 [Aid to Education](#)

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.

Indicator 4.c.1: Percentage of teachers in: (a) pre-primary; (b) primary; (c) lower secondary; and (d) upper secondary education who have received at least the minimum organized teacher training (i.e. pedagogical training) pre-service or in-service required for teaching at the relevant level in a given country

From UNESCO:

Definition and method of computation: The percentage of teachers by level of education taught (pre-primary, primary, lower secondary and upper secondary) who have 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. The indicator should be calculated separately for public and private institutions.

Rationale and interpretation: Teachers play a key role in ensuring the quality of education provided. Ideally all teachers should receive adequate, appropriate and relevant pedagogical training to teach at the chosen level of education and be academically well-qualified in the subject(s) they are expected to teach. This indicator measures the share of the teaching work force which is pedagogically well-trained.

Sources and data collection: Administrative data from schools and other organized learning centres.

Comments and limitations: It is important to note that national minimum training requirements can vary widely from one country to the next. This variability between countries lessens the usefulness of global tracking because the indicator would only show the percent reaching national standards, not whether teachers in different countries have similar levels of training. Further work would be required if a common standard for teacher training is to be applied across countries.

Gender equality issues: The indicator will be disaggregated by sex enabling a more thorough analysis of the disparities between the sexes.

Data for regional and global monitoring: Data have been collected for a number of years and are currently available for about 100 countries.

Supplementary information: None

References: None

From OECD:

Definition and method of computation

Teachers (ISCED 2 level) were asked to indicate whether they had participated in any of the following activities 12 months prior to the survey:

- Courses/workshops (on subject matter or methods and/or other education-related topics).
- Education conferences or seminars (where teachers and/or researchers present their research results and discuss education problems).
- Observation visits to other schools.
- Observation visits to business premises, public organisations, or non-governmental organisations.
- In-service training courses in business premises, public organisations or non-governmental organisations.
- Qualification programmes (e.g. a degree programme).
- Participation in a network of teachers formed specifically for the professional development of teachers.
- Individual or collaborative research on a topic of professional interest.

- Mentoring and/or peer observation and coaching as part of a formal school arrangement

Rationale and interpretation

To provide policy-relevant analysis on teachers' participation in professional development activities through a robust indicator.

To support the relevance and quality of career-long opportunities for professional development because of its impact on teachers' skills and students' achievement gains.

Sources and data collection

International target population: Lower secondary education teachers and leaders of mainstream schools.

Target sample size: 200 schools per country; 20 teachers and 1 school leader in each school. School samples: Representative samples of schools and teachers within schools.

Target response rates: 75% of the sampled schools, together with a 75% response rate from all sampled teachers in the country. A school is considered to have responded if 50% of sampled teachers respond.

Separate questionnaires for teachers and school leaders, each requiring between 45 and 60 minutes to complete.

Disaggregation

- By type and intensity
- By teacher and school characteristics
- By reported financial cost
- By lack of support
- By other types of barriers

Comments and limitations

A difference should be made between access to professional development activities and the participation rate in professional development activities

Gender equality issues

Data are disaggregated by gender. Overall slightly greater participation for women (largest difference in favour of female teachers in Italy and Slovak Republic); in favour of male teachers the highest rate Abu Dhabi (UAE); in some countries equal participation.

Data for global and regional monitoring

34 countries participate in TALIS 2013:

- • 24 OECD countries: Alberta (Canada), Australia, Chile, Czech Republic, Denmark, England (United Kingdom), Estonia, Finland, Flanders (Belgium), France, Iceland, Israel, Italy, Japan, Korea, Mexico, Netherlands, Norway, Poland, Portugal, Slovak Republic, Spain, Sweden, United States.
- • 10 Partner Economies: Abu Dhabi (United Arab Emirates), Brazil, Bulgaria, Croatia, Cyprus, Latvia, Malaysia, Romania, Serbia, Singapore.
- For TALIS 2018, the country coverage is expected to be wider than 2013

Supplementary information

OECD (2014), TALIS 2013 Technical Report, TALIS, OECD Publishing, Paris.

OECD (2009), Creating Effective Teaching and Learning Environments: First Results from TALIS, TALIS, OECD Publishing, Paris.

DOI: <http://dx.doi.org/10.1787/9789264068780-en>

References

OECD (2014), TALIS 2013 Results: An International Perspective on Teaching and Learning, TALIS, OECD Publishing, Paris.

DOI: <http://dx.doi.org/10.1787/9789264196261-en>