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Background Information on Education Statistics in the UIS Database

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1 Objective

This document serves as a reader's guide to help data users understand and interpret the education data disseminated by the UIS. It presents the following information:

- The list of symbols accompanying data.
- The annual data release cycles.
- The data sources used by the UIS and their updates, including population and economic data used to calculate education indicators.
- Specific country notes.
- The production process for learning assessment-based indicators.

The following symbols are used:

- ...Data not available.
- Category not applicable.
- Magnitude nil or negligible.
- (+) National estimation.
- (‡) UIS estimation (For regional averages: partial imputation due to incomplete country coverage, ranging from 33% to 60% of population, depending on the indicator).

2 Data releases

As of September 2018, the UIS has moved to one education data release in September of each year, with new national and regional data. National data are also updated in February, completing the UIS publication of educational data for the round of surveys conducted in the previous reference year.

This release includes data collected from UIS surveys of national authorities, data processed from household surveys and learning assessments, and data collected from UIS partners. The release includes an update of country level data as well regional averages for selected SDG 4 indicators and Other Policy Relevant Indicators.

UIS data can be accessed in the following ways:

- [SDG 4 Data Explorer](#) on SDG 4 indicators provides easy to navigate dashboards organized by country or indicator and the possibility to download a long format database. In this release two tabs have been added for regional averages and country profiles that include ISCED mappings.
- [Global Education Observatory](#) is an easy-to-use gateway to education data for the seven benchmark indicators, including interactive visualizations that can be disaggregated by sex, region, and country. Data on COVID-19 is also available, as are links to other databases allow the users to access a wide array of information on equity in education (WIDE), SDG 4 indicators (SCOPE), and education levels (PEER/ISCED).
- [UIS data portal](#), which houses internationally comparable data on all levels of education for more than 200 countries and territories. This includes country-level data as well as regional averages for Other Policy Relevant Indicators.

- [Bulk data download service](#) (BDDS), which enables access to all UIS databases in comma-separated values (CSV) format. The BDDS files include both SDG 4 data and Other Policy Relevant Indicators data.
- [SDG 4 data resources](#), which contains resources to visualize SDG data, benchmark data, and the repositories of national publications with administrative data on education and educational expenditure data.

Metadata for SDG 4 indicators is available at: <http://tcg.uis.unesco.org/methodological-toolkit/metadata/>

Stay informed of the latest data releases by signing up for the UIS email alert service at: <http://uis.unesco.org>

Note: As of 23 June 2020, the UIS SDMX API has reached its End-of-Life (EOL) and is no longer up-to-date with the latest UIS datasets.

3 Data sources

To produce internationally comparable education indicators, the UIS uses the main sources of data listed below. These data sources differ in their coverage as well as the timing and way in which they are collected:

- **Administrative data** are based on information usually available from educational management information systems (EMIS) used by ministries of education for management and planning purposes and are typically updated on an annual basis. EMIS should typically cover many types of educational paths and levels, including early childhood education (ECE), basic education and secondary general education, higher education, and technical and vocational education and training (TVET). Most international monitoring of previous global development agendas (Education For All and the Millennium Development Goals) was based on administrative data produced by countries and compiled by international organizations on school EMIS, which has since been expanded. Although some administrative data, such as school feeding programmes and teachers' salaries, are usually available from non-EMIS sources in education ministries, these should ideally be linked to EMIS.
- **Household surveys** are an important source of data on access, participation, completion, literacy and educational attainment. Surveys differ in terms of coverage, frequency, objectives and questionnaire design. In contrast to administrative data, they are collected less frequently, and by a variety of organizations and countries. Household survey data are usually available from non-EMIS sources outside of ministries but should also ideally be linked to EMIS.
- **Learning assessments** include national school-based assessments designed to measure specific learning outcomes at a particular age or grade considered relevant for national policymakers. They encompass cross-national initiatives (either regional or global) that are based on a common, agreed-upon framework and follow similar procedures to yield comparable data on learning outcomes. Assessment data can be collected from households. Skills surveys (ICT, literacy, etc.) can also provide relevant information on the adult population. Learning assessments can be used to provide non-cognitive information as well, such as on home language, school infrastructure, students experiencing bullying and teachers' professional development.

- **Financial and expenditure data** contain information on different sources of income and expenditure, including government spending on education. This source commonly encompasses data on the construction and maintenance of schools, teacher salaries and household spending on education, such as supplies, transport and other costs. Some administrative data are typically available from non-EMIS sources within ministries but should ideally be linked to EMIS (e.g., school feeding programmes and teacher salaries), depending on how a country organizes their data.
- **Population data** are important as a source of population estimates (the number of persons by age and sex in a country). The UIS uses population estimates from the United Nations Population Division (UNPD), and national population data for a limited number of countries.

4 Overview of SDG indicators available

TABLE 1. SUMMARY OF EDUCATION SDG INDICATORS DATA DIMENSIONS RELEASED

Indicator	Indicator description			
	Is the indicator being reported for the first time? (Y/N)	Total number of countries for which the indicator is reported	Range of years for which data are available for the indicator	Dimensions of disaggregation
FFA	No	201	1970–2021	.
1.a.2	No	206	1970–2021	.
4.1.0	No	116	2000–2020	Sex
4.1.1	No	160	1995–2021	Sex, school location (urban/rural), socio-economic status (SES), immigrant status, language of the test at home
4.1.2	No	164	1996–2020	Sex, location (urban/rural), wealth and disability
4.1.3	No	212	1970–2021	Sex
4.1.4	No	215	1970–2021	Sex, location (urban/rural), wealth and disability
4.1.5	No	204	1970–2021	Sex
4.1.6	No	219	2014–2020	Subject (reading/mathematics)
4.1.7	No	219	1970–2021	Free and compulsory education
4.2.1	No	78	2010–2020	Sex
4.2.2	No	205	1970–2021	Sex, location (urban/rural), wealth
4.2.3	No	89	2005–2019	Sex, location (urban/rural), wealth
4.2.4	No	223	1970–2021	Sex
4.2.5	No	220	1970–2021	Free and compulsory education
4.3.1	No	109	1994–2020	Sex
4.3.2	No	210	1970–2021	Sex, location (urban/rural), wealth
4.3.3	No	204	1970–2021	Sex
4.4.1	No	108	2014–2020	ICT skills, sex
4.4.2	No	31	2012–2017	Sex
4.4.3	No	199	1950–2021	Sex, location (urban/rural)

Indicator	Indicator description			
	Is the indicator being reported for the first time? (Y/N)	Total number of countries for which the indicator is reported	Range of years for which data are available for the indicator	Dimensions of disaggregation
4.5.1	No	226	1950–2021	Sex, location (urban/rural), wealth and disability
4.5.2	No	126	2013–2019	Sex, location (urban/rural), SES (wealthiest/poorest)
4.5.3	No	81	2020–2020	.
4.5.4	No	205	1970–2021	.
4.5.5	No	40	2010–2020	.
4.6.1	No	51	2006–2017	Sex, SES, native status
4.6.2	No	176	1962–2021	Sex, location (urban/rural)
4.6.3	No	12	2008–2011	Sex
4.7.1	No	69	2020–2020	.
4.7.2	No	73	2000–2021	.
4.7.4	No	23	2016–2016	Sex, SES, location (urban/rural)
4.7.5	No	42	2015–2019	Sex, SES, location (urban/rural)
4.7.6	No	3	2020–2020	Thematic aspect (teaching and learning, assessment and accountability, enabling environment)
4.a.1	No	168	2000–2021	.
4.a.2	No	152	2003–2019	Sex, location (urban/rural), SES (wealthiest/poorest)
4.a.3	No	101	2013–2021	.
4.b.1	No	150	2006–2020	.
4.c.1	No	161	1970–2021	Sex
4.c.2	No	161	1970–2021	.
4.c.3	No	152	1970–2021	Sex
4.c.4	No	151	1970–2021	.
4.c.5	No	42	2009–2021	.
4.c.6	No	95	1970–2021	Sex
4.c.7	No	94	2013–2019	Sex

5 UIS surveys on education

The UIS collects education statistics in aggregate form from official administrative sources at the national level. Collected information encompasses data on the structure of national educational programmes, access, participation, progression, teacher's statutory compensation, school infrastructure, completion, literacy, educational attainment, and human and financial resources. These statistics cover formal education in public (or state) and private institutions (early childhood education, primary and secondary schools, and colleges, universities and other tertiary education institutions), and special needs education (both in regular and special schools).

These data are gathered annually by the UIS and its partner agencies through the following three major surveys that can be downloaded from the UIS website at <http://uis.unesco.org/en/uis-questionnaires>.

5.1 UIS Survey of Formal Education

The UIS education questionnaires are sent to UNESCO countries annually. The questionnaires are based on international standards, classifications, and measures that are regularly reviewed and modified by the UIS to address emerging statistical issues and improve data quality.

The Survey has the following four questionnaires:

- **UIS/ED/ISC11: National Education Systems.** This questionnaire collects information on the national education programmes and their classifications according to the 2011 revision of the [International Standard Classification of Education \(ISCED 2011\)](#).
- **UIS/ED/A: Students and Teachers (ISCED 0-4).** This questionnaire collects internationally comparable data on formal education at the early childhood, primary, secondary and post-secondary non-tertiary levels, necessary for the evaluation and monitoring of education systems worldwide. The data collected include the number of students disaggregated by education level, by type of institution, programme orientation, sex, age and grade; and data on classroom teachers by level of education and by training and qualification status, as well as their statutory salaries. The questionnaire also collects data on the number of schools with ICT services, basic hygiene facilities and the provisioning of life skills-based HIV and sexuality, as well as the number of schools with adapted infrastructures and materials for students with disabilities.
- **UIS/ED/B: Educational Expenditure (ISCED 0-8).** This questionnaire collects internationally comparable expenditure data on formal education from early childhood to tertiary education. Data are disaggregated by source of funding (Government, International and Private), destination of funding, by level of education, and by type of transaction and nature of expenditure.
- **UIS/ED/C: Students and Teachers (ISCED 5-8).** This questionnaire collects internationally comparable data on tertiary education. The data collected include the number of students by level of education, sex, and age; and the number of graduates by level of education and field of education. The questionnaire also collects the number of academic staff and the number of internationally mobile students.

In addition to questionnaires, the survey also provides guidelines to countries respondents to support quality data reporting.

Annual timeline of the 2022 Survey of Formal Education:

- Mail-out: 19 January 2022.
- Deadline for the submission of the non-finance data: 31 March 2022.
- Deadline for the submission of finance data: 30 April 2022.
- Formal reminders: 27 April 2022.
- Deadline for data submission to guaranty data inclusion in the September 2022 data release: 30 June 2022.
- Indicator review and validation: mid-July to mid-August 2022.
- Main data release: September 2022.
- Deadline for late data submission or updates for inclusion in the March 2023 data refresh: 2 January 2023.

5.2 UOE Survey of Formal Education

The UIS, the OECD and Eurostat (UOE) have jointly administered this annual data collection since 1993. The UOE questionnaire compiles data from high- and middle-income countries that are generally members or partner countries of the OECD or Eurostat. The UOE survey gathers more detailed education statistics.

5.3 UIS Survey on Literacy and Educational Attainment

The UIS gathers attainment data through its biennial literacy and educational attainment survey, which is sent to all UNESCO countries. The questionnaires collect internationally comparable data used to calculate literacy and attainment rates as well as mean years of schooling. The data are derived from national population censuses and sample household surveys, including labour force surveys.

The UIS supplements literacy and educational attainment data provided by countries by calculating indicators based on information obtained from population censuses and international survey programmes such as the Multiple Indicator Cluster Survey (MICS) and the Demographic and Health Survey (DHS). The UIS also applies methodologies, such as the Global Age-specific Literacy Projections Model (GALP), to produce literacy estimates for years with missing data and to produce regional and global averages.

6 Dynamic templates: Indicators with data collected from national sources

The UIS has recently piloted an innovative and straight-forward approach to collect administrative and finance education data to support countries in the production of high-quality internationally comparable SDG 4 data and indicators.

The new approach is based on entering publicly available raw data into dynamic templates that automatically produce the related 23 indicators: 16 SDG 4 indicators and 7 OPRI indicators – or, put differently, 21 indicators on students, teachers, and schools, and 2 indicators on education expenditure.

This process allows countries to directly validate the indicators instantly generated and check their consistency over time. It also enables them to immediately view what indicators are missing, what data are needed to produce them and then to work on filling these data gaps. The templates are an excellent tool for capacity-building as they present the methodology of calculation of each indicator in detail, increasing countries' ownership of the produced data and indicators.

An interesting feature of the templates is that they offer countries the possibility of calculating population-based indicators either by using UNPD population or national population. They also let countries compare the indicators produced by the template with the ones previously published by the UIS. Last but not least, the metadata collected in the templates may serve as a basis for a comprehensive inventory of all publicly available national publications and data sources.

6.1 Dynamic templates, workflows and data points produced

Administrative data template

The template collects data for 13 years (2010 to 2022) on students, teachers and schools. It is automatically prefilled with population data from UNPD, ISCED mapping data on the national education system (theoretical entrance age and duration of the national education programmes), and with indicator figures available at the UIS for comparison purposes. Indicators are automatically calculated with the indicator formulas embedded in the template.

The template includes the following:

- Metadata sheet: It presents the definition, calculation method and formula, and data required for every indicator; allows the comparison of UIS published indicators with the ones produced in the template from national data; and enables the selection of the source of population data (UNPD or national).
- Data source sheet: It compiles the names and links of all the national publications from which data were extracted and used to populate the template.
- Six sheets to collect students' data for each level of education from early childhood to tertiary education: data are disaggregated by age and sex in all sheets; the sheets on primary and secondary general programmes also include data disaggregated by grade and data on repeaters.
- A sheet to collect teachers' data from pre-primary to upper secondary education: data are disaggregated by sex and status of teachers (trained/qualified).

- A sheet to collect data on basic services in schools from primary to upper secondary education: electricity, internet and computers for pedagogical purposes, infrastructure and materials for students with disabilities, basic drinking water, single-sex basic sanitation facilities, basic handwashing facilities and life skills-based HIV and sexuality education.
- Two sheets with population data (national sources and UNPD): In the same sheets, the school-age population is calculated based on the population data and the national education system data (age of entry into a level, duration of level, split or calendar year) should the country be interested in inputs their own national population estimates.
- Fourteen sheets which contain the embedded formulas for the calculation of the SDG 4 and OPRI indicators (See **Tables 2** and **3**).

Finance data template

The finance template collects data for 11 years (2012 to 2022) on government expenditure on education and total government expenditure. The template is prefilled with GDP data from the World Bank and with indicator figures available at the UIS for comparison purposes. Indicators are automatically calculated with the indicator formulas embedded in the template. The template allows the calculation of two indicators: 1.a.2 Proportion of total government spending on essential services (education) and Government expenditure on education as a percentage of GDP.

In addition to a metadata sheet, the template includes only one sheet of data – ‘Educational expenditure’. It is enough to provide data for only two data points in this sheet to get the indicators: total government expenditure on all sectors (including education) and total government expenditure on education. The information is presented for all levels of education combined from early childhood to tertiary and for all levels of government combined – central, regional, and local. It is optional to provide information for each level of education separately and by source (ministry of finance or other ministries). The data can be provided based on the revised estimates/budget or actual expenditure. The sheet allows the comparison between the indicators produced and the ones published by the UIS.

Tables 2 and 3 present the SDG 4 and OPRI indicators and variables in the administrative data and finance templates.

TABLE 2. SDG 4 INDICATORS AND VARIABLES IN THE ADMINISTRATIVE DATA AND FINANCE DATA TEMPLATES

Variables for SDG indicators	Administrative data template														Finance data template	
	4.1.3	4.1.4	4.1.5	4.2.2	4.2.4	4.3.2	4.3.3	4.7.2	4.a.1	4.c.1	4.c.2	4.c.3	4.c.4	4.c.6	1.a.2	% GDP
National education system	x	x	x	x	x	x	x	x	x	x	x	x	x	x		
Population data	x	x		x	x	x	x									
Enrolment by sex	x	x	x	x	x	x	x				x		x			
Enrolment by age		x	x	x			x									
Enrolment by grade	x		x													
Repeaters by sex and grade	x															
Teachers by sex										x		x		x		
Trained teachers by sex										x	x					
Qualified teachers by sex												x	x			
Newly recruited teachers by sex														x		
Schools by type of facility								x	x							
Educational expenditure															x	x
Total government expenditure															x	
Gross domestic product (GDP)																x

TABLE 3. OPRI INDICATORS AND VARIABLES IN THE ADMINISTRATIVE DATA TEMPLATE

Variables for OPRI indicators	Administrative data template						
	Number of students	Gross enrolment ratio	Total net enrolment rate	Out-of-school children	Enrolment by programme orientation	Number of teachers	Percentage of female teachers
National education system	x	x	x	x	x	x	x
Population data		x	x	x			
Enrolment by sex	x	x	x	x	x		
Enrolment by age			x	x			
Enrolment by programme orientation					x		
Teachers by sex						x	x

Template workflows

The following workflows are implemented to produce globally comparable data:

1. Design and development of the two dynamic templates.
2. Completion of both templates with data and metadata published by countries.
3. Production of a database with data and metadata for all covered countries.
4. Creation of repositories for the official data sources available at the country level:
 - Repository of education expenditure reports:
<https://tcg.uis.unesco.org/data-resources/repository-education-budgets/>
 - Repository of education indicators report:
<https://tcg.uis.unesco.org/data-resources/repository-education-indicators/>
5. Curation of compiled data to remove outliers.

Data points from the templates

Tables 4 and 5 show the number of data points for SDG 4 indicators and Other Policy Relevant Indicators (OPRI) by SDG region derived from the templates. These data points are included in the September 2022 data release additional to the data produced by the UIS Education Formal Questionnaire.

TABLE 4. NUMBER OF DATA POINTS FOR SDG 4 INDICATORS BY REGION DERIVED FROM THE ADMINISTRATIVE DATA AND FINANCE DATA TEMPLATES

SDG Region	SDG 4 indicators														Finance data template	
	Administrative data template															
	4.1.3	4.1.4	4.1.5	4.2.2	4.2.4	4.3.2	4.3.3	4.7.2	4.a.1	4.c.1	4.c.2	4.c.3	4.c.4	4.c.6	% GDP	1.a.2
Asia (Eastern and South-eastern)	408	960	372	171	775	198	72	45	460	518	158	408	122	164	44	66
Asia (Central and Southern)	145	324	114	27	472	90	0	12	398	220	58	153	50	59	53	53
Africa (sub-Saharan)	141	977	85	30	940	52	0	1	166	119	44	119	52	0	173	222
Oceania	111	290	103	33	387	6	0	3	96	148	27	128	24	51	36	37
Latin America and the Caribbean	83	513	77	13	435	65	0	0	15	91	12	3	0	0	163	203
Northern America and Europe	0	74	0	9	33	0	0	0	8	0	0	58	28	0	30	35
Asia (Western)	0	18	0	0	12	0	0	0	0	0	0	0	0	0	9	26
Africa (Northern)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	9
World	888	3156	751	283	3054	411	72	61	1143	1096	299	869	276	274	523	651

TABLE 5. NUMBER OF DATA POINTS FOR OPRI INDICATORS BY REGION DERIVED FROM THE ADMINISTRATIVE DATA TEMPLATE

SDG Region	Other Policy Relevant Indicators (OPRI)						
	Distribution of enrolment by programme orientation	Gross enrolment ratio	Number of students	Number of teachers	Out-of-school children	Percentage of female teachers	Total net enrolment rate
Asia (Eastern and South-eastern)	432	1559	1548	769	885	252	549
Asia (Central and Southern)	237	801	851	482	366	159	218
Africa (Sub-Saharan)	630	1211	1835	403	1360	67	776
Oceania	87	409	592	282	321	88	184
Latin America and the Caribbean	29	442	557	184	667	37	400
Northern America and Europe	0	88	29	42	110	13	71
Asia (Western)	0	13	18	0	18	0	12
Africa (Northern)	0	0	0	0	0	0	0
World	1415	4523	5430	2162	3727	616	2210

6.2 Validation of data and statistics in the Templates: Asia Pacific first phase

The first round of piloting of the new education templates was conducted in South and West Asia (Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka); Southeast Asia (Brunei Darussalam, Cambodia, Lao PDR, Thailand, Timor-Leste, Malaysia and Philippines); East Asia (Mongolia); the Pacific (Fiji and Micronesia).

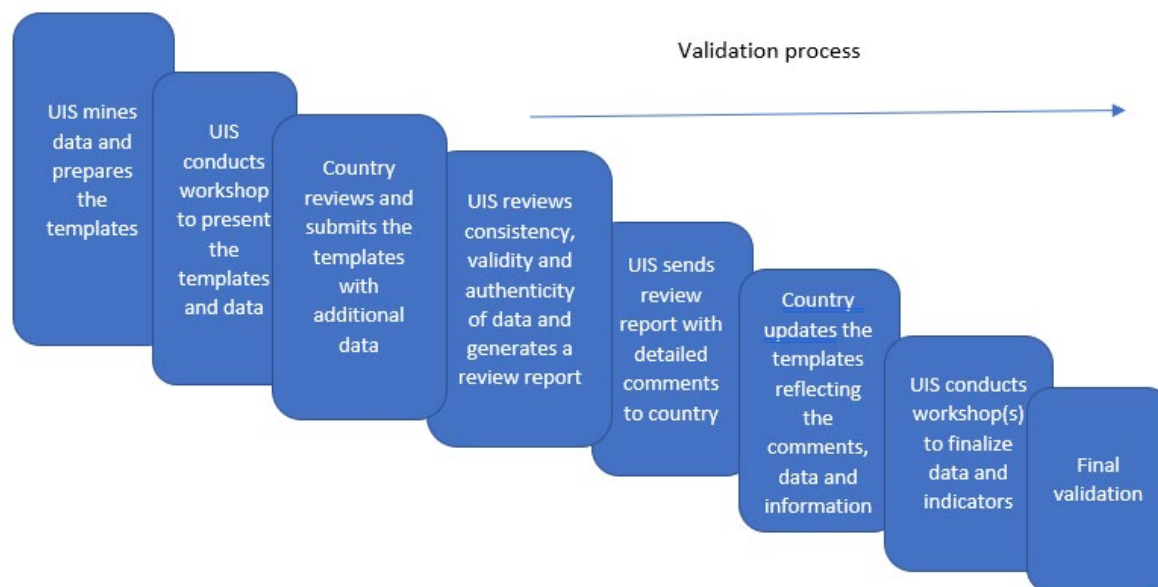
It is necessary that the data inputted in the templates through data mining and data provided by country focal points are validated properly with countries. In this regard, a team in UIS carefully reviewed the templates submitted by the countries and checked the consistency of the data and statistics with historical data and metadata. In addition, the team also ran a series of data checks to ensure data quality and validity. Based on this validation process, a review report was prepared with detailed comments and suggestions on the data provided and sent to the countries to provide more data and explanation, including data sources, reference documents, and available metadata at the national level, as pointed out in the review.

Countries reviewed the review report and provided additional data and information. Follow-up meetings (at least one meeting) were organized to review the updated data and statistics in the template. Based on the discussion, countries provided additional data, revised previous submissions and information, and finalized the template in consultation with their senior officials.

The UIS Regional Field Network is critical in the efficient and quality validation process. During the validation process, UIS field offices closely worked with country focal points to compile data from various sources and ensure the data provided are accurate and valid. UIS field offices were regularly

in touch with country focal points through various channels to support completing the templates and their validation.

FIGURE 1. UIS VALIDATION PROCESS



7 Household surveys

7.1 UIS produced indicators

For the indicators listed below, some national values **are calculated by the UIS from household survey** and population census data. Observations derived from survey and census data are identified as such in the UIS database.

- SDG Indicator 4.3.1: Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex.
- SDG Indicator 4.3.2: Gross enrolment ratio for tertiary education, by sex.
- SDG 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.
- SDG Indicator 4.5.4: Education expenditure per student by level of education and source of funding.

7.2 Household survey datasets aggregated from partners

Two data sets are produced by partners and aggregated in the UIS database: the data set from ECLAC and the data set from GEMR.

7.2.1 ECLAC (Economic Commission for Latin America and the Caribbean)

The indicators below produced by ECLAC based on household surveys were aggregated in the database:

- SDG Indicator 4.1.2: Completion rate (primary education, lower secondary education, upper secondary education).
- SDG Indicator 4.1.4: Out-of-school rate (1 year before primary, primary education, lower secondary education, upper secondary education).
- SDG Indicator 4.2.2: Participation rate in organized learning (one year before the official primary entry age), by sex.
- SDG Indicator 4.3.2: Gross enrolment ratio for tertiary education, by sex.
- OPRI indicator 'Total Net Attendance Rate'.

ECLAC produced a dataset with the following indicators¹:

- Completion rates (CR) by level of education (ISCED 1, 2 and 3).
- Net attendance rates (NAR) by level of education (ISCED 1, 2 and 3).
- Total net attendance rates (TNAR) by level of education (ISCED 2 and 3).
- Out-of-school rate (OOSR) by level of education (ISCED 1, 2 and 3).
- Participation rate in organized learning one year before the official primary entry age.
- Gross enrolment ratio for tertiary education.

All indicators are disaggregated by sex, income quintiles, urban and rural areas, and include the corresponding parity indexes for the respective dimensions.

Countries processed by ECLAC include: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. The latest available data corresponds to year 2020, except in Honduras and Panama (2019), and Guatemala, Nicaragua and Venezuela (2014).

Changes in the ECLAC indicator dataset since January 2020

In January 2020, ECLAC delivered a dataset with the indicators listed above, with information until 2019. Since then, newly available household surveys have been added for 2019 and 2020, the calculation of some indicators has been corrected, and data for some countries have been modified, due to updates or corrections in the household survey databases.

- Completion rates (all countries): The calculation of the indicator now excludes missing observations (formerly they were considered as cases of non-completion).
- Bolivia: Changes in quintile classification due to corrected information on household income, 2016–2018.
- Brazil: Changes in the survey weights 2016–2018. Change in calculation of years of schooling, 2001–2015.
- Mexico: Changes in quintile classification due to corrected information on household income, 2016–2018.
- Uruguay: Changes in quintile classification due to corrected information on household income.

¹ This section was prepared by ECLAC.

- Dominican Republic: Change to annual survey, 2016–2018.
- Panama: Change from survey of second semester to survey from first semester, 2014–2018.

Note on comparability of data for 2020

Surveys collected in 2020 were subject to special conditions for the collection of data, due to the pandemic and the restrictions that it implied for mobility and face-to-face interviews. During this period, most countries were able to implement the surveys using telephone interviews but faced changes in the survey sample and higher non-response rates or used modified questionnaires. These changes may affect the comparability of data with previous years.

Some examples include:

- Bolivia: Change in the way of collecting information on school attendance. Also, increased the number of observations of missing data.
- Colombia: March and April have less observations in attendance and level of education than last year.
- El Salvador: This survey did not collect information between April and June.

7.2.2 Global Education Monitoring Reporting

The indicators below were aggregated in the UIS release database ²:

- SDG Indicator 4.1.2: Completion rate (primary education, lower secondary education, upper secondary education).
- SDG Indicator 4.1.4: Out-of-school rate (1 year before primary, primary education, lower secondary education, upper secondary education).
- SDG Indicator 4.1.5: Percentage of children over-age for grade (primary education, lower secondary education).
- SDG Indicator 4.2.2: Participation rate in organized learning (one year before the official primary entry age), by sex.
- SDG Indicator 4.2.4: Gross early childhood education enrolment ratio in (a) pre-primary education and (b) early childhood educational development.
- SDG Indicator 4.6.2: Youth/adult literacy rate.

Table 6 summarizes the data coverage from ECLAC and GEMR databases:

² Data are downloaded from the World Inequality Database on Education website (<https://www.education-inequalities.org/>), consulted on 16 August 2022.

TABLE 6. SUMMARY OF ECLAC AND GEMR INDICATORS COVERAGE

Indicators		Source		Countries (#)
		ECLAC	GEMR	
SDG4	4.1.2	2000–2020	1996 and 2000–2019	149
SDG4	4.1.4	2000–2020	2000–2019	118
SDG4	4.1.5		2000–2019	103
SDG4	4.2.2	2000–2020	2005–2019	106
SDG4	4.3.2	2000–2020		18
SDG4	4.6.2		2000–2017 and 2019	90
OPRI	Total Net Attendance Ratio	2000–2020		18

Finally, over 30,000 data points to report against SDG Indicator 4.1.2 on completion rates have been added using the Adjusted Bayesian Completion Rates [estimation model](#) using household survey data produced by the GEMR.

A minority of household surveys contain information on the disability status of respondents. Currently 18 surveys provide disaggregated disability data for completion rates and out-of-school rates, where possible.

8 Labour force surveys: Indicator 4.3.1

The SDG 4.3.1 indicator is calculated based on the household-based survey data compiled by the Department of Statistics of the International Labour Organisation (ILO), which maintains a global database on national Labour Force Surveys or other relevant household surveys that cover labour market. The ILO database contains information on educational attendance of the working-age population aged 15 years and above, disaggregated by sex and by four main age groups: 15-24 years old, 25-54 years old, 55-64 years old, and 64 years and above. The variable of interest, educational attendance, classifies the working-age population into three mutually exclusive and exhaustive groups: (1) attending school; (2) not attending; (3) not elsewhere classified. The SDG Indicator 4.3.1 is calculated for the age group 15-64 since the educational attendance estimates for most countries are zero for the age group 65 years and above.

From 2010 to 2020, there are 185 countries for which the ILO database on educational attainment contains data for at least one year. Table 2 contains detailed information on the data sources used by countries, national acronyms, and ILO acronyms. For 131 countries, the data source for SDG Indicator 4.3.1 is Labour Force Survey (LFS); for 31 countries, the data source is Household Income and Expenditure Survey (HIS); for 14 countries, the data source is Household Survey (HS); for 4 countries, the data source is Population Census. The number of data points added to the UIS database for SDG Indicator 4.3.1 is 4,008 for the age-group 15-64 years old (See Table 1). These data points include the participation rate in formal and non-formal education by sex (total, female, male) and the corresponding adjusted gender parity index.

The UIS **March 2023 Data Refresh** is expected to include, in addition to data for the age-group 15-64 years, the disaggregation for the age-groups 15-24 years, 25-54 years, and 55-64 years, and by sex.

TABLE 7. NUMBER OF SDG 4.3.1 DATA POINTS ADDED FOR THE PERIOD 2010–2022 BY SDG REGION

SDG region	No. of new data points	Previous no. of data points	No. of countries added for the first time	Total No. of countries	No. of countries with SDG 4.3.1 estimates
Africa (Northern)	56	30	-	8	3
Africa (Sub-Saharan)	464	118	24	51	41
Asia (Central and Southern)	200	27	8	14	10
Asia (Eastern and South-Eastern)	416	70	3	18	13
Asia (Western)	244	48	4	18	10
Latin America and the Caribbean	828	218	7	49	25
Northern America and Europe	1,716	222	3	58	39
Oceania	84	19	9	24	14
Total	4,008	752	58	240	155

Included in the UIS database are:

- 24 countries of sub-Saharan Africa: Benin, Botswana, Burkina Faso, Cameroon, Chad, Comoros, Djibouti, Equatorial Guinea, Gambia, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Madagascar, Niger, Nigeria, Seychelles, Somalia, South Sudan, Togo, Uganda, United Republic of Tanzania, and Zimbabwe.
- 8 countries of Central and Southern Asia: Afghanistan, Bangladesh, Bhutan, India, Iran (Islamic Republic of), Kyrgyzstan, Nepal, and Pakistan.
- 3 countries of Eastern and South-Eastern Asia: Democratic People's Republic of Korea, Philippines, Republic of Korea.
- 4 countries of Western Asia: Armenia, Jordan, Lebanon, and Saudi Arabia.
- 7 countries of Latin America and the Caribbean: Brazil, Colombia, Costa Rica, Haiti, Jamaica, Saint Lucia, and Suriname.
- 3 countries of North America and Europe: Belarus, Kosovo, and Montenegro.
- 9 countries of Oceania: Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, New Caledonia, Palau, Tonga, Tuvalu, and Vanuatu.

TABLE 8. NATIONAL DATA SOURCES AND THE RESPECTIVE ACRONYMS

National Acronym	Data source name	ILO Acronym	Number of countries
CENSUS	Population Census	Census	4
CMPHS	Continuous Multi-Purpose Household Survey	LFS	1
CPS	Current Population Survey	LFS	1
EAPS	Economically Active Population Survey	LFS	1
ECAM	Household Survey	HS	1
ECE	Continuous Employment Survey	LFS	2
ECH	Continuous Household Survey	HIES	2
ECVM	Living Standards Survey	HIES	2
ECVMAS	Households Living Conditions Survey after the Earthquake	HIES	1
EDAM	Djiboutian Household Survey	HS	1
EFT	Labour Force Survey	LFS	1
EH	Household Survey	HIES	1
EHCVM	Harmonized Survey on Household Living Conditions	HIES	3
EHM	Household Sample Survey	LFS	1
EHPM	Household Survey of Multiple Purposes	HS	1
EICV	Integrated Household Survey on Living Conditions	HIES	1
EMICOV	Monitoring Survey of the Modular and Integrated Survey of Household Living Conditions	HIES	1
EML	Labour Force Survey	LFS	1
EMNV	National Household Survey on Measuring Living Conditions	HIES	1
EMOP	Continuous Household Employment Survey	LFS	1
ENAO	National Household Survey	HS	2
ENCFT	Continuous National Labour Force Survey	LFS	1
ENE	National Employment Survey	LFS	1
ENEI	Monthly Employment and Income Survey	LFS	1
ENEMDU	National Survey on Employment, Unemployment and Underemployment	LFS	1
ENES	National Employment Survey	LFS	1
ENESI	Survey 1-2-3, Employment, informal sector and household's living conditions	LFS	6
ENFT	National Labour Force Survey	LFS	1
ENOE	National Occupation and Employment Survey	LFS	1
ENPE	National Population and Employment Survey	LFS	1
ENSE	National Survey on the Employment Situation	LFS	1
EPA	Labour Force Survey	LFS	1
EPH	Permanent Household Survey (Urban)	LFS	2
EPHPM	Continuous Multi-Purpose Household Survey	HS	1
ERIESI	Regional Integrated Survey on Employment and the Informal Sector	LFS	3
ESPA	Labour Force Survey	LFS	1
EULFS	EU Labour Force Survey	LFS	31

National Acronym	Data source name	ILO Acronym	Number of countries
EUS	Employment, Unemployment Survey	LFS	1
GEIH	Integrated Household Survey	LFS	1
GHS	General Household Survey	HS	1
HBS	Household Budget Survey	HIES	1
HIES	Household Income and Expenditure Survey	HIES	12
HSES	Household Socio-Economic Survey	HIES	2
IE	Employment Survey	LFS	1
HIS	Integrated Household Survey	HS	3
LCS	Living Conditions Survey	HIES	1
LFS	Labour Force Survey	LFS	62
LMPS	Labour Market Panel Survey	LFS	1
LSS	Living Standards Survey	HIES	1
MTHS	Multi-Topic Household Survey	HS	1
NHBS	National Household Budget Survey	HIES	1
NHIES	Household Income and Expenditure Survey	HIES	1
NLFS	National Labour Force Survey	LFS	1
NSS	National Sample Survey	HS	1
PLFS	Periodic Labour Force Survey	LFS	1
PNAD	National Household Sample Survey	HS	1
PNADC	Continuous National Household Sample Survey	HS	1
QLFS	Quarterly Labour Force Survey	LFS	1
QUIBB	Core Welfare Indicators Questionnaire	HIES	2
SES	Socio Economic Survey	HIES	1
SLC	Survey on Living Conditions	HIES	2

9 Learning assessments and integration of data sources

Some national values are calculated/compiled by the UIS and/or its partners from learning assessments while other data sources are flagged with footnotes to identify the data sources in the UIS database. The indicators calculated and their metadata are:

- SDG Indicator 4.1.0: Proportion of children/young people prepared for the future, by sex. This release includes aggregated data for Indicator 4.1.0 (mathematics) or the proportion of children/young people prepared for the future for mathematics.
- SDG 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.
- SDG Indicator 4.1.6: 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.
- SDG Indicator 4.2.1: Proportion of children aged 24-59 months who are developmentally on track in health, learning and psychosocial well-being, by sex.
- SDG Indicator 4.2.3: Percentage of children under 5 years experiencing positive and stimulating home learning environments.
- SDG Indicator 4.4.1: Proportion of youth and adults with information and communications technology (ICT) skills, by type of skill.
- SDG Indicator 4.4.2: Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills.
- SDG 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.
- SDG Indicator 4.5.2: Percentage of students in a) early grades, b) at the end of primary, and c) at the end of lower secondary education who have their first or home language as language of instruction.
- SDG Indicator 4.5.3: Existence of funding mechanisms to reallocate education resources to disadvantaged populations.
- SDG Indicator 4.6.1: Proportion 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.
- SDG Indicator 4.7.4: Percentage of students in lower secondary education showing adequate understanding of issues relating to global citizenship and sustainability.
- SDG Indicator 4.7.5: Percentage of students in lower secondary showing proficiency in knowledge of environmental science and geoscience.
- SDG Indicator 4.7.6: Extent to which national education policies and education sector plans recognize a breadth of skills that needs to be enhanced in national education systems.

- SDG Indicator 4.a.1: Proportion of schools offering basic services, by type of service.
- SDG Indicator 4.a.2: Percentage of students experiencing bullying in the last 12 months in a) primary, and b) lower secondary education.
- SDG Indicator 4.c.5: Average teacher salary relative to other professions requiring a comparable level of qualification.
- SDG Indicator 4.c.7: Percentage of teachers who received in-service training in the last 12 months by type of training.

For more information on the data production cycle of these SDG 4 Indicators, please refer to: http://tcg.uis.unesco.org/wp-content/uploads/sites/4/2020/08/CN_LOS_DataProduction-.pdf

10 Regional averages in the September 2022 data release

The September 2022 data release includes time series regional averages from 1990 to 2020. The calculation of regional estimates for 2021 based on administrative data has been deferred because of insufficient coverage of countries with reported data and to allow the use of an improved methodology of aggregation of national education data to regional and global estimates. For more details about the current UIS methodology of regional average calculation, see: <https://tcg.uis.unesco.org/wp-content/uploads/sites/4/2020/10/TCG-7-I-2-UIS-methodology-for-aggregation-of-national-education-data-to-regional-and-global-estimates.pdf>.

Regional averages for out-of-school rates based on data from administrative source are not provided in this release. The UIS and the Global Education Monitoring Report have developed a new methodology to harmonize information from Education Management Information Systems (EMIS) and Household Surveys, the two main data sources used to produce out-of-school rates.

The resulting newly estimated figures, which include rates and numbers of out-of-school by country and by SDG regions, were released on 1 September 2022 on [VIEW](#). The new methodology is outlined in the joint [Policy Paper / Fact Sheet](#).

Moreover, the release includes new data on **learning outcomes indicators**:

- **Regional averages for Indicator 4.1.1** in all levels and domains **from 2000 to 2022** produced by the UIS team.
- **Regional Averages for Indicator 4.1.2** aggregated from the GEMR team **from 2000 to 2022** and available at <https://education-estimates.org/completion/>
- **Regional averages for Indicator 4.1.0**, or the proportion of children/young people prepared for the future, from **2000 to 2020**, that need regional averages for learning and completion are also included in the September 2022 data release.

11 External data sets: Indicators aggregated from partner agencies

11.1 External data sets: Inputs to indicators

The UIS compiles data for some Sustainable Development Goal 4 indicators directly from partner organizations, such as:

OECD

- **SDG Indicator 4.5.5:** Percentage of total aid to education allocated to least developed countries.
- **SDG Indicator 4.b.1:** Volume of official development assistance flows for scholarships by sector and type of study.

Global Coalition to Protect Education from Attack

- **SDG Indicator 4.a.3:** Number of attacks on students, personnel and institutions.

Global Education Monitoring Report (GEMR)

- **SDG Indicator 4.5.3:** Existence of funding mechanisms to reallocate education resources to disadvantaged populations.

UNESCO Section for Education for Sustainable Development (Division for Peace and Sustainable Development, Education sector)

- **SDG Indicator 4.7.1:** Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies; (b) curricula; (c) teacher education and (d) student assessment.

11.2 External data sets: Inputs to estimate indicators

11.2.1 Population estimates

The main source of population estimates is from the following reference: United Nations, Department of Economic and Social Affairs, Population Division (2019). *World Population Prospects: The 2019 Revision*, (<https://population.un.org/wpp/Download/Standard/Population/>). Where UN Population Division (UNPD) estimates are not available or where population issues have arisen, national data or UIS estimates are used.

Summary of population data sources

The UN Population Division (UNPD) is the standard source of population data at the UIS. For 14 countries, population data from a different source are used to generate more precise indicator values. The exceptions, summarized in **Table 9**, can be classified as follows:

- No UNPD population estimates are available. This is the case for some small countries (Liechtenstein, Monaco).

- Population data by UNPD represent a geographically larger area than education data. Without adjustment, this would lead to an underestimation of population-based indicators. Countries in this group include Azerbaijan, Cyprus, Republic of Moldova and Serbia.
- Analysis by the UIS revealed important inconsistencies between education data and UNPD population estimates by single year of age that affected the accuracy of population-based indicators. This applies to the remaining countries listed in the table below.

Process for exceptions to the use of UNPD population data for UIS education statistics

The 8th meeting of the Technical Cooperation Group on the Indicators of SDG 4 (TCG) in November 2021 agreed a process for the exception to using UNPD data. Countries may request the UIS to use national data to calculate population-based indicators rather than World Population Prospects estimates from the UNDESA Population Division (UNPD). To facilitate country requests, UIS will develop and make available the required guidance and format for countries to submit the necessary data and metadata to the UIS.

Next update of the population data

UNPD has revised its estimation method for national population figures and has released updated World Population Prospects based on improved new methodology in July 2022 (details available at <https://www.un.org/development/desa/pd/events/expert-group-meeting-methods-world-population-prospects-2021-and-beyond>).

In order to properly assess the impact of the methodological changes introduced in the 2022 Revision of WPP on the calculation of education indicators and to implement the new policy of use of national population data, the update of population data has been deferred to the March 2023 Data Refresh.

TABLE 9. SOURCES OF POPULATION DATA FOR UIS INDICATOR CALCULATION

Source of population data	No. of countries	Criteria used
United Nations Population Division (UNPD): World Population Prospect 2019, released in June 2019	196	UNPD is the main source of population data used by the UIS for all countries, with the exception of the countries below in this column.
Eurostat population database	9	Countries for which education data do not cover certain areas but UNPD data do (up to 2020): - Azerbaijan (excluding Nagorno-Karabakh) - Cyprus (excluding areas not under the control of the national government) - Serbia (excluding Kosovo) Small European countries for which the UNPD did not provide data (up to 2021): - Liechtenstein
		Countries with important inconsistencies between education data and UNPD data that make indicator values implausible. Following recurrent objections from countries, it was decided to use national data instead of UNPD data for the following countries (up to 2020): - France - Ireland - Latvia - Lithuania
National data collected through UOE data collection	2	Countries with important inconsistencies between education data and UNPD data that make indicator values implausible. Following recurrent objections from countries, it was decided to use national data instead of UNPD data for the following countries: - Brazil (1999–2020) - United States of America (1998–2019)
National statistical offices submitting data directly to the UIS	4	Countries with important inconsistencies between education data and UNPD data that make indicator values implausible. Following recurrent objections from countries, it was decided to use national data instead of UNPD data for the following countries: - Dominican Republic (1950–2039) - Monaco (2016–2021) - Republic of Moldova (excluding Transnistria) (2013–2020) - San Marino (small country – 2017–2020) - Singapore (2016–2020)

Note: Data for countries with a population under 90,000 inhabitants provided by the UN Population Division (UNPD) should be used with caution as the annually interpolated population by age and sex based on 5-year periods and 5-year age groups can only provide crude approximations, especially since key demographic determinants of population change are often unavailable for these small countries.

12 Economic statistics

Data on economic indicators, such as gross domestic product (GDP) and purchasing power parity (PPP), are World Bank estimates as of June 2022. For countries where GDP estimates are not published by the World Bank, data are obtained from the December 2021 release by the United Nations Statistics Division (UNSD). This data release uses the Purchasing Power Parities (PPP) conversion factor, GDP (local currency unit per international dollar), of the most recent World Bank International Comparison Program of 2017. Data on total general government expenditure (all sectors) come from the April 2022 release of the International Monetary Fund's (IMF) World Economic Outlook database.

13 Methodological notes for education survey data

13.1 Countries that reported data that could not be released

Tables 10 and 11 below present a summary of the number of countries for which data were reported but not released, grouped by key causes for the Education Surveys.

TABLE 10. FORMAL EDUCATION SURVEY – SUMMARY OF CAUSES PREVENTING THE PUBLICATION OF DATASETS

Issues preventing the publication of parts of datasets recently received for reference years 2020 and 2021	Number of countries
Trend is not consistent and no explanation available	28
Inconsistency between population estimate and the submitted enrolment data	17
Coverage issues	7
Questionnaires submitted too late to be included in the release	3

Note: the table includes only countries where the data received is not published. There are new data being published for 128 countries.

TABLE 11. LITERACY AND EDUCATION ATTAINMENT SURVEY – SUMMARY OF REASONS PREVENTING PUBLICATION OF REPORTED DATA

Questionnaire	Reason for non-processing and publication of data	Number of questionnaires affected
UIS_ED_AT_2021	Duplicate submission to previous rounds	13
	Incomplete data submission/data quality concerns	4
	Response received too late to process	1
UIS_ED_LIT_2021	Duplicate submission to previous rounds	9
	Incomplete data submission/data quality concerns	6
	Proxy literacy measure based on educational attainment and therefore not eligible for dissemination	7

13.1.1 Methodological notes: Non-finance indicators

Education data and indicators are based on the [International Standard Classification of Education \(ISCED\) 2011](#). ISCED 2011 was implemented starting with the 2014 education data collection and covers the entire formal education system, including both formal initial education programmes and formal adult education programmes. For the years before 2014, the UIS Survey of Formal Education did not cover formal adult education programmes. Data for countries involved in the UOE data collection did not cover formal adult education programmes for the years 2004-2012. These limitations should be taken into consideration when comparing time series data.

Prior to 2018, data for SDG Indicator 4.3.3 *Participation rate in technical and vocational programmes (15- to 24-year-olds), by sex* do not include enrolment in technical and vocational short-cycle tertiary programmes (ISCED 5) as the UIS only collected data up to ISCED level 4 – although the indicator covers all technical and vocational programmes. As of 2018, the UIS started collecting and incorporated enrolment at the ISCED 5 level in the calculation of this indicator. On average, participation rates are approximately 1.6% higher with inclusion of the ISCED 5 programmes. Caution is required when comparing this indicator over time.

There are cases where an indicator should not exceed a maximum theoretical value (e.g. the adjusted net enrolment rate) but inconsistencies between demographic and school data may have resulted in the indicator exceeding the theoretical limit. In these cases, “capping” has been applied, while maintaining the same gender ratio. For more details, please refer to the definition of capping in the [UIS Glossary](#).

Since the September 2020 data release, the UIS has replaced all parity indices, including the gender parity index, by adjusted parity indices. Adjusted parity indices are limited to a range of 0 to 2, are symmetrical around 1, and are therefore easier to interpret. Unadjusted parity indices, which were disseminated previously, have no upper bound and are not symmetrical around 1.

13.1.2 Methodological notes: Education finance indicators

Expenditure on early childhood education or from international sources – both of which are often comparatively small – have been treated as negligible in cases where data were in fact missing. In these cases, the totals may be underestimated.

The number of students considered in the calculation of SDG Indicator 4.5.4 on initial funding per student is the number of full-time and part-time students.

Following the approval of the TCG and the IAEG-SDG on the new metadata multiple sources have been used to report for two benchmark indicators, Framework for Action, Government expenditure on Education as % of GDP; and global Indicator 1.a.2, Government expenditure on Education as % Total Government Expenditure. More information in the [metadata document](#).

14 Country notes

Azerbaijan: Education data for the years 1998 to 2018 do not cover Nagorno-Karabakh, whereas the 2019 Revision of the World Population Prospects data do. The population data used for the calculation of indicators were provided by national authorities and exclude Nagorno-Karabakh.

Belgium: Due to the change in how internationally mobile students are defined, as of 2013 in Belgium, the historical trend of inbound mobile students needs to be interpreted with caution.

Bolivia, Plurinational State of: Population-based indicators should be interpreted with caution due to concerns regarding the coherence between national enrolment data and population estimates from the 2019 Revision of the World Population Prospects.

The rate of out-of-school adolescents of lower secondary (ISCED 2) and upper secondary (ISCED 3) age does not include data on students enrolled in tertiary education (ISCED 5 to 8). This means that the number of out-of-school youth could be overestimated.

Brazil: Due to concerns regarding the coherence between national enrolment data and the population estimates from the 2019 Revision of the World Population Prospects, population data were provided by the *Instituto Nacional de Estudos e Pesquisas Educacionais Anísio Teixeira* (INEP).

A break in the time series of pre-primary and primary indicators occurs in 2013 due to the following changes in the national education system:

- The duration of pre-primary education changed from 3 years to 2 years.
- The entry age to primary education changed from 7 years to 6 years and the duration from 4 years to 5 years.

In 2022, there was a change in the methodology used to calculate the Brazilian Population Projections and for this reason the population data for years 2012 to 2019 have been revised by the country. Those changes have been implemented for the September 2022 data release. Source: *Instituto Brasileiro de Geografia e Estatística* (IBGE), Continuous National Household Sample Survey, Second trimester.

China: Two Special Administrative Regions – Hong Kong and Macao – are reported separately from data for China. The country asked the UIS not to publish data derived from PISA as this only covers four provinces (Beijing, Shanghai, Jiangsu, and Guangdong).

Cyprus: Education data for Cyprus do not cover areas that are not under control of the national government, whereas the 2019 Revision of the World Population Prospects data do. The population data used for the calculation of indicators were provided by national authorities and only cover the population living in government-controlled areas.

Czechia: On the basis of Article 33 of the Charter of Fundamental Rights and Freedoms, which is part of the Constitution of the Czech Republic, citizens have the right to free education at basic and secondary schools (ISCED levels 1 to 3), regardless of whether they are studying longer than the standard period of study, including in cases where a citizen is studying a second (third, fourth, ...) programme at secondary school. The 13 years of free education published by the UIS show the theoretical ideal passage through the education system. It would be stated quite correctly that free education at ISCED levels 1 to 3 is not limited.

Dominican Republic: The National Statistical Office has revised the population estimates and projections that are not yet reflected in the Revision of the World Population Prospects.

Ecuador: The source of the education data used is the *Archivo Maestro de Instituciones Educativas* (AMIE). Indicators were calculated with a capping factor and with national population estimates. Therefore, indicators for Ecuador are not comparable with the data officially published by the country.

Estonia: The country has an integrated pre-primary education programme. Pupil's age is used as a proxy to disaggregate data for early childhood educational programmes between ISCED level 1 and ISCED level 2. Enrolment of children aged 2 years and younger is mapped as ISCED level 1 and enrolment of children aged 3 years and older is mapped as ISCED level 2. The number of repeaters since 2008 are calculated with a different methodology than the one used before. Therefore, the time series are not comparable. For 2013, the ages for enrolment in Early Childhood Education were calculated as of 1 September and not as of 1 January as in later years.

France: There is a change in methodology in 2006 and 2013 that limits the comparability of time series for SDG Indicator 4.3.3 *participation rate in technical and vocational programmes (15- to 24-year-olds), by sex*.

Germany: Starting from the year 2009, there is no concept of repeaters in grades 1 to 2 of primary education. This explains a decrease in 2009 in the time series "Percentage of repeaters in primary education".

Japan: Please note "because there is a gap of 1.7% to 5% for Japan for SDG 4.1.4 (primary) among years when national population estimates or United Nations population estimates are used to calculate this indicator, therefore comparing the indicators' values across years should be done with caution."

Please note: "since the number for SDG 4.1.4 (secondary) in 2019 marks a bigger gap between national population estimates and United Nations population estimates than other years, therefore comparing the indicators values between years should be done with caution."

Kazakhstan: As of 2020, the structure of the national education system has changed. The entrance age to primary education was set at 6 years old since the reference year 2020 (the school year 2019/2020). Consequently, the theoretical ages in effect starting in 2020 are 6 to 9 years for primary education, 10 to 14 years for lower secondary education, and 15 to 16 years for upper secondary education. Breaks in the time series between 2019 and 2020 can be explained by the change in the education structure.

Malaysia: Data from SEA-PLM 2019 for SDG Indicator 4.5.2 Percentage of students in a) early grades, b) at the end of primary, and c) at the end of lower secondary education who have their first or home language as language of instruction is not published as per country request to SEAMEO.

Mexico: A break in the time series of pre-primary indicators occurs in 2014 due to the following changes in the national education system:

- The entry age to pre-primary education changed from 4 to 3 years.
- The duration of pre-primary education changed from 2 to 3 years.

Norway: The country has an integrated early childhood education programme. Pupils' ages are used as a proxy to disaggregate data for early childhood educational programmes between ISCED level 1 and ISCED level 2. Enrolment of children up to 2 years of age is mapped to ISCED level 1 and enrolment of children aged 3 years and older is mapped to ISCED level 2.

Palestine: Education data do not cover East Jerusalem, whereas the 2019 Revision of the World Population Prospects data do. Population-based indicators may be underestimated and therefore should be interpreted with caution.

Peru: The country asked the UIS to not publish data for PISA 2015 and 2018.

Republic of Moldova: Education data do not cover Transnistria, whereas the 2019 Revision of the World Population Prospects data do. The population data used to calculate indicators were provided by national authorities and exclude Transnistria. Additionally, as of 2014, information provided by the country has been revised to use usual residential population.

Russian Federation: As of 2015, information provided by the Russian Federation includes statistical data for the Autonomous Republic of Crimea and the city of Sevastopol, Ukraine, temporarily occupied by the Russian Federation. The population data used for the calculation of indicators were provided by the UN Population Division and do not cover the Autonomous Republic of Crimea and the city of Sevastopol.

Serbia: Education data do not cover Kosovo, whereas the 2019 Revision of the World Population Prospects do. The population data used for the calculation of indicators were provided by Eurostat and exclude Kosovo.

Singapore: Education data starting from 2016 refer to residents (citizens and permanent residents) with local addresses and those were away from Singapore for a cumulative period of less than 6 months in the past 12 months prior to the reference date (end of June each year). The data should only be used for the purpose of computing education indicators and should not be compared against other population data published by the Singapore government.

Ukraine: Education data do not cover Crimea and the part of Donbass that has not been under government control since 2015, whereas the 2019 Revision of the World Population Prospects do. Population data excluding these areas are not available for the moment. Consequently, the UIS is not able to produce indicators from 2015 onwards.

United Republic of Tanzania: Education data do not cover Zanzibar, whereas the 2019 Revision of the World Population Prospects data do. The population of Zanzibar is approximately 3% of the total population of the United Republic of Tanzania. Population-based indicators are underestimated and should therefore be interpreted with caution.

United States of America: Policies on free/compulsory education may vary by state/subnational unit. Free education at ISCED level 2 is offered for one year in the majority of states and, in some cases, a second year of pre-Kindergarten is also free. Therefore, free/compulsory education estimates are a valid representation of the US average but vary by state.

15 UIS Resources

Technical Cooperation Group for Education 2030 Indicators (TCG): <http://tcg.uis.unesco.org>

Global Education Observatory: <http://geo.uis.unesco.org>

UIS education glossary: <http://uis.unesco.org/en/glossary?wbdisable=true>

UIS survey page: <http://uis.unesco.org/uis-questionnaires>