The Statistics Division of the United Nations Department of Economic and Social Affairs (UNSD) prepares the annual The Sustainable Development Goals Report, also known as the glossy report, based on storyline inputs submitted by UN international agencies in their capacity as mandated custodian agencies for the SDG indicators. However, due to space constraints, not all information received from custodian agencies is able to be included in the final glossy report. Therefore, in order to provide the general public with all information regarding the indicators, this ‘Extended Report’ has been prepared by UNSD. It includes all storyline contents for each indicator as provided by the custodian agencies and is unedited. For instances where the custodian agency has not submitted a storyline for an indicator, please see the custodian agency focal point information linked for further information.
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 ................................................................. 2

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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

Learning has stagnated implying a loss in Africa due to COVID-19

The COVID-19 pandemic has disrupted education around the world, forcing countries to respond by providing remote learning, adapting curricula and assessments, and developing ways to support the health and well-being of students, teachers, and families.

But the concern is that, despite these efforts, children’s learning has been severely affected.

Before the onset of COVID-19, available data from across Africa showed that most children could not read or understand a simple age-appropriate text. Only 29% of African learners in the early grades were proficient in reading, compared to 57% of those in developing countries. Data for SDG indicator 4.1.1, dealing specifically with learning proficiency, confirm that the learning process is particularly weak across most of Africa, compared to the rest of the world.

Yet, in Africa and elsewhere, the available SDG 4.1.1 trend data point to steep improvements; for instance, in recent years, Africa has seen an improvement of 4.3 percentage points a year in the percentage of lower primary children proficient in reading, while an annual improvement of 3.0 percentage points has been found in developing countries outside Africa. However, these estimates are imputed from a small sample of countries. The reality is that most low- and lower-middle-income countries do not carry out robust learning assessments.

The impact of the pandemic on learning across the world has been devastating. Learning losses are largely due to losses in contact time with teachers. It is estimated that by year 2022, Africa’s learners will have lost one school year or more on average since the start of the pandemic. Evidence specific to Africa is beginning to emerge on what this means for learning proficiency, though far more evidence is needed.

Comparisons between reading proficiency levels before the pandemic and in 2021 showed there was no difference in the proportion of students who met the Minimum Proficiency Level (MPL) in Burkina Faso, Burundi, Côte d’Ivoire, Senegal and Zambia as measured by the Monitoring Impact on Learning Outcomes (MILO) project, developed by the UNESCO Institute for Statistics (UIS).

Students on track to achieving the MPLs may have possibly been less impacted due to mitigation strategies and the different distance learning mechanisms put in place to offset the learning disruption generated by the COVID-19 pandemic. They may also have lessened the impact on reading and mathematics outcomes but not necessarily for other unassessed school subjects.

However, the main reason for this apparent stagnation in learning is that learning outcomes would most likely have continued to improve had it not been for the pandemic. Improving the measurement of existing indicator definitions must be prioritized; the challenge is to continue to improve data collection and reporting practices to build a national ownership of SDG 4.1.1 statistics.

Additional resources, press releases, etc. with links:
- [https://milo.uis.unesco.org/](https://milo.uis.unesco.org/)
- [https://tng.uis.unesco.org/](https://tng.uis.unesco.org/)

Storyline author(s)/contributor(s): Silvia Montoya, UNESCO-UIS

Custodian agency(ies): UNESCO-UIS
Indicator 4.1.2: Completion rate (primary education, lower secondary education, upper secondary education)

While 6 in 10 young people complete secondary school, progress had slowed down before COVID-19.

Globally, the completion rate reached 87% in primary, 77% in lower secondary and 58% in upper secondary education in 2020. These estimates are based on children, adolescents and youth aged 3 to 5 years above the official graduation age. Completion rates are 5 percentage points higher in primary and lower secondary education and 3 percentage points higher in upper secondary education, once late completers are taken into account. Still, this means that the aspiration of universal primary education that predates this agenda remains unfulfilled. In sub-Saharan Africa, barely two in three children complete primary school in time, although eventually three in four do.

Progress has slowed down in upper secondary completion between 2015–2020 and 2010–2015, from 1.3 to 0.8 percentage points per year. It slowed down in Central and Southern Asia and, especially, in Eastern and South-eastern Asia, although the latter was still the fastest growing region, as the upper secondary completion rate increased from 63% in 2015 to 71% in 2020, or twice as fast as the global rate. Upper secondary completion rates accelerated in the last five years in Latin America and the Caribbean (reaching 63% in 2020) and in Western Asia and Northern Africa (reaching 57% in 2020). Growth was slowest in the regions closest (e.g. Northern America and Europe) and furthest (e.g. sub-Saharan Africa) from the target of universal completion.

Globally, girls’ completion rates exceed boys’ by two percentage points at all levels of education. Female completion rates first equaled male completion rates in 2011 in primary education, in 2012 in lower secondary education and in 2013 in upper secondary education. At upper secondary level, the gender gap at the expense of boys is between 8 and 10 percentage points in the Caribbean, South America, Eastern Asia and South-eastern Asia. It remains at the expense of girls by between 2 and 4 percentage points in Central Asia, Southern Asia and sub-Saharan Africa.

All these statistics are projected up to the start of the pandemic. Available information does not allow yet an estimation of the impact of COVID-19 on completion. Globally, schools were closed, at least partially, for 55% of school days between March 2020 and October 2021, with large differences between countries: some kept their schools closed throughout this period, while others did not close them at all. Face-to-face and phone surveys suggest that while dropout may not have increased upon school reopening, repetition has grown, which means increased dropout may simply have been postponed.

Additional resources, press releases, etc. with links:
• [https://education-estimates.org/completion/](https://education-estimates.org/completion/)

Storyline author(s)/contributor(s): Manos Antoninis, Global Education Monitoring Report, UNESCO

Custodian agency(ies): UNESCO-UIS
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 aged 24–59 months who are developmentally on track in health, learning and psychosocial well-being, by sex

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

Over the years preceding the COVID-19 pandemic, participation in pre-primary education has progressed in several regions, but the last two years into the pandemic may halt this progress.

Early schooling is recognised to stimulate children’s readiness for school and foster their future learning experience, yet participation in organised learning (one year before the official primary entry age) remains far from being universal. In 2020, three out of every four children (75%) globally participated in such learning, but participation is uneven across regions. The enrolment rate was 95% in Latin America and the Caribbean, and 93% in Europe and Northern America. On the other hand, about one-half or nearly of all children participated in this type of learning programme in sub-Saharan Africa (49%), Northern Africa and Western Asia (52%), Landlocked Developing Countries (49%), and Least Developed Countries (52%). Gender parity was achieved in every region, with, on average, girls and boys equally participating in organized learning one year before the official primary entry age.

The last two years into the COVID-19 pandemic may have worsened the participation in pre-primary, as early childhood education and early grades school children – especially from low- and middle-income countries, are the most affected by education disruption according to any scenario, suggesting a much more dramatic effect on these pupils cohort for which early schooling needed for preparedness to school is denied. In most countries, early education facilities and schools were partially or fully closed to up to more than a full school year, and remote learning was proposed, among others, as a mitigation measure, but limitations to this new learning mode were so challenging that in many countries, remote learning at those early ages was close to the loss of the whole school year. The longer-term impacts of COVID-19 on children’s learning and on equity are expected to be considerable but still largely unknown.


Note: This indicator refers to participation in the year before entering primary education. For example, it measures participation in early childhood or primary education for children aged 5 years in countries with primary entry at age 6.
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

Only a small fraction of youth and adults participate in organized learning in many countries.

The average participation rate in formal and non-formal education and training for the 67 countries with available data between 2016 and 2018 is 24%. However, there is a large variance around this figure. In a third of countries with data, participation rates are less than 5%, and in approximately one sixth of countries, less than 1% are participating in organised learning. Countries with the lowest participation rates tend to be lower income countries situated in Sub-Saharan Africa, Central America, and South and South East Asian sub-regions. On the other side of the distribution, participation rates exceed 50% in the top sixth of countries. Those with high rates are typically located within North America and Europe, with the highest rates generally among Western and Northern Europe sub regions.

Only a sixth of countries with recent data have achieved gender parity in participation rates. Gender disparities do not have a clear pattern, with females disadvantaged in approximately half of countries with data, and males disadvantaged in the other half. Even within the same region or income group, the extent and pattern of gender inequality appears to vary widely. However, among countries with low overall participation rates, fewer females appear to participate in education compared to males.

Data do not yet allow for comparison of participation rates in formal and non-formal learning following the COVID-19 pandemic. Yet there are reasons to expect potentially large impacts. As with school aged children, provision of post-secondary education has been significantly disrupted by the pandemic. Similar if not greater disruption can be expected to affect non-formal adult education programmes. Moreover, participation may be significantly more affected in lower income countries without the digital infrastructure to facilitate remote learning. The pandemic may also be expected to take a toll on the provision of organized learning in the workplace - an important component of non-formal education.

Additional resources, press releases, etc. with links:

- Has COVID disrupted the postsecondary pipeline? Link: https://www.brookings.edu/blog/up-front/2021/10/14/has-covid-disrupted-the-postsecondary-pipeline/
- Adult learning and education and COVID-19. UIL. UNESCO Institute for Lifelong Learning Link: https://unesdoc.unesco.org/ark:/48223/pf0000374536

Storyline author(s)/contributor(s): Alasdair McWilliam, UIS

Custodian agency(ies): UNESCO-UIS
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

Low ICT skills remain a barrier to meaningful participation in a digital society

Insufficient skills are often mentioned as an impediment to effective ICT use. Because self-reporting of individuals’ ICT skills may be subjective, ICT skills are measured based on whether an individual has recently performed a particular activity that requires a certain level of skills. In only 12% of the countries for which data are available, more than 70% of individuals reported having carried out one of the activities that compose basic skills in the last three months, such as sending an e-mail with an attachment. 70% is considered the minimum threshold to categorise a country as “meaningfully” connected. For standard skills, such as creating an electronic presentation with presentation software, this threshold sits at 50%, which was achieved in only 15% of countries with data. Finally, in only 14% of the countries had more than 10 per cent of individuals written a computer program using a specialized programming language in the last three months. The available data indicates that there are large differences in skill levels between different age groups, and between occupations, but relatively smaller differences between men and women, especially at younger ages.

Additional resources, press releases, etc. with links:


Storyline author(s)/contributor(s): Martin Schaaper, ITU

Custodian agency(ies): UNESCO UIS, ITU
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

Inequalities in educational participation and outcomes remain persistent

Education disparities in indicator 4.5.1 are measured by the parity indices: the ratio between population subgroups, adjusted to be symmetrical around 1.00 (equality). Parity ratios at the global and regional level tend to be relatively equal. However, at the country level parity indices tend to be more unequal, but cancel each other out at the regional level. For example, the global parity ratio for the participation rate in organised learning (one year before the primary entrance age) was 1.00 in 2019 – meaning that 100 girls were attending organised learning for every 100 boys. Yet among the 169 countries with recent data, only 61% had reached gender parity, with a parity index between 0.97 and 1.03.

Despite progress in increasing access to education, inequalities between socioeconomic groups remain persistent. In addition the participation rate for pre-primary aged children, gender inequalities are evident in completion rates, where approximately half of countries with data have not achieved parity. Moreover, parity ratios tend to widen at higher levels of education. For example, the proportion of countries meeting gender parity in completion rates decreases between primary, lower secondary and upper secondary age groups. Although the share of countries in which gender inequalities are against girls or boys tends to be approximately equal, the most extreme gender inequalities in participation are often to the disadvantage of girls. In countries with data on learning outcomes indicators, patterns however can differ among learning outcomes indicators. For example, in countries exhibiting gender inequalities in minimum proficiency levels, these tend to be to the disadvantage of boys in most countries in respect to reading, although the distribution is centered around 1.00 for mathematics proficiency.

Beyond gender, disparities tend to be starker by other socio-economic factors, such as those by location and wealth. For example, among countries with recent data, only a sixth reached parity between rural and urban areas for lower-secondary completion, and almost no countries reached parity between the poorest and richest households. For reading proficiency levels, the share of countries meeting parity in location and wealth disparities is less than 10% and 5%, respectively. For the small number of countries with data on literacy proficiency, disparities between the genders are limited, but no country had closed the gap between poor and rich households.

The COVID-19 pandemic has severely disrupted education provision on multiple levels. Although data do not yet allow a clear account of the impact, declines as learning outcomes are anticipated. In addition to lowering or inhibiting progress on average, the pandemic can be expected to have a distributional impact in which the most marginalised populations are further disadvantaged. In the context of remote learning, children from poorer backgrounds are less likely to have the ICT facilities to participate, or a home environment conducive to learning. Available evidence shows that although the impact on the pandemic on average learning outcomes is mixed, most studies find that learning outcomes among students from disadvantaged backgrounds were negatively affected. This evidence generally originates from OECD countries. Recent studies organised by UNESCO on the pandemic-related learning loss in six sub-Saharan African countries, however, did not find a similar dynamic among disadvantaged students during the pandemic.

Additional resources, press releases, etc. with links:
- Impact of COVID-19 lockdowns on adolescent pregnancy and school dropout among secondary schoolgirls in Kenya. Link: https://gh.bmj.com/content/7/1/e007666
- Keeping girls in the picture during and after the COVID-19 crisis. Paris, UNESCO Link: https://unesdoc.unesco.org/ark:/48223/pf0000375772

Storyline author(s)/contributor(s): Alasdar McWilliam, UIS
Custodian agency(ies): UNESCO-UIS
Target 4.6: By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy

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

Custodian agency(ies): UNESCO-UIS
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 4.7.1/12.8.1/13.3.1: 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

More efforts needed to fully mainstream ESD and GCED in national education systems

In primary and secondary education, around 90 per cent of countries report that Education for Sustainable Development (ESD) and Global Citizenship Education (GCED) are at least partially mainstreamed in national education laws and policies, curricula, teacher education or student assessment, but only 15 per cent report high levels of integration in all four areas. Much lower rates of mainstreaming are reported in technical and vocational education (57 per cent) and in adult education (51 per cent).

There are regional differences with particularly high rates reported in Eastern and South-Eastern Asia and in Latin America and the Caribbean (Figure 1).

Countries are more likely to have fully mainstreamed ESD and GCED in education laws and policies and in student assessment (40 per cent of countries) than in curricula (2 per cent) or teacher education (10 per cent).

A recent global survey of primary and secondary teachers found that one in four teachers do not feel ready to teach themes related to sustainable development, global citizenship and peace. Despite this a majority (80 per cent) are keen to learn more but while training in ESD and GCED is available, it is not always sufficient to meet teachers’ needs.

Overall, more efforts are needed to ensure that ESD and GCED are mainstreamed throughout national education systems so that learners can acquire the skills necessary to take action on sustainable development, global citizenship and peace and contribute positively to the well-being of their communities.

Figure 1: Mainstreaming of ESD and GCED in national education systems by SDG regions in the period 2017-2020 (percentage of responding countries)

More efforts needed to fully mainstream ESD and GCED in national education systems

Storyline author(s)/contributor(s): Alison Kennedy, UNESCO

Custodian agency(ies): UNESCO
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 offering basic services, by type of service

Basic school infrastructure is far from universal, with large disparities between countries.

Adequate school infrastructure is essential for enabling children to safely attend school and to facilitate a conducive learning environment. However, universal access to basic services such as electricity, drinking water and basic sanitation facilities is far from a reality. Approximately a quarter of primary schools globally do not have access to basic services such as electricity, drinking water and basic sanitation facilities. Availability of computers for pedagogical process, access to the internet and provision of disability adapted infrastructure is even lower, with less than half of primary schools having access on average. Among lower-secondary and upper-secondary school, a somewhat higher proportion of schools have higher access to basic facilities, likely reflecting economies of scale associated with comparatively larger student bodies at these levels.

Poorer countries, and particularly those from the Least Developed Countries (LDCs), fall substantially behind richer counterparts as well as the global average. Although access to basic sanitation, electricity and ICT facilities are near universal in More Developed countries (MDCs), in LDCs approximately half of primary school do not have access to basic sanitation facilities, and approximately a quarter to one third do not have access to Internet, computers and electricity. Disability adapted facilities – necessary for the participation of some of the most marginalised students – are particularly limited, with only one fifth of primary schools in LDCs with access.

Yet remaining challenges in expanding access to basic infrastructure should not negate progress made over time. Since 2012, for example electricity access among primary schools has increased by over 10 percentage points at the global level. Although provision of sanitation facilities has been stagnant since 2015, estimates suggest that access to computers and provision of disability adapted facilities grew by almost 5 percentage points.

Adequate school infrastructure and facilities can be considered as key components to mitigate transmission of COVID-19 and its health impacts, and are crucial in overcoming the disruption of the pandemic to education, while keeping students and teaching staff safe. Handwashing facilities have a role to play in preventing surface transmission. Given that the virus primarily spreads through respiratory droplets and airborne particles, investments in electricity provision alongside development of dependent ventilation and air filtration systems are also necessary to reduce transmission. Developing adequate school infrastructure to mitigate disease transmission is not a quick win. However, with the threat of new variants of the virus over the medium and longer term, combined with the risk of further entrenching associated inequalities within and between countries, investments in relevant facilities and infrastructure, together with monitoring of infrastructure coverage, should be firmly on the agenda.

Additional resources, press releases, etc. with links:


Storyline author(s)/contributor(s): Alasdair McWilliam, UIS

Custodian agency(ies): UNESCO-UIS
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

ODA for scholarships declines in 2020, likely due to the COVID-19 pandemic

Official development assistance for scholarships amounted to USD 1.55 billion in 2020. This represents a decline of 7.5% from 2019, likely owing to limited travel (including for schooling and education) induced by the COVID-19 pandemic. EU Institutions, France, Japan, and Saudi Arabia accounted for 64.4% of this total. The largest recipient regions were Asia and Africa and largest beneficiary countries were Indonesia, Moldova, China, and India.

Storyline author(s)/contributor(s): Yasmin Ahmad, OECD

Custodian agency(ies): OECD
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: Proportion of teachers with the minimum required qualifications, by education level

One crucial step toward the goal of quality education for all is getting enough trained teachers into classrooms. Based on the latest data available, sub-Saharan Africa faces the biggest challenge, with the lowest percentages of trained teachers in pre-primary (57%), primary (67%) and secondary education (61%) among all regions. The highest proportions of trained teachers among the respective regional teaching workforce are found in Central Asia with 88% for pre-primary education, and 97% for both primary and secondary education (no regionally representative data are available for Europe and Northern America).

In every region with available data, pre-primary education has the lowest percentage of trained teachers, compared to primary and secondary education, except in Latin America and the Caribbean where the opposite is observed. Since national teacher education programmes differ widely in terms of content, duration and qualification levels, national minimum teacher qualifications and training standards also vary. Comparative data on minimum required qualifications of teachers should therefore be interpreted with caution.

COVID-19 pandemic severely disrupted education and critically affected the teaching workforce in most countries of the World. Mitigating measures to maintain access to education and pursue learning during this unprecedented global crisis relied, among other measures, on adapting teachers to new pedagogical concepts and methods of teaching, for which most of them may not have been properly prepared. After two years into the COVID-19 pandemic, the full extent of the impact of this crisis on the teaching workforce, teacher education, and on the proportion of teachers with the minimum required qualifications is yet to be known.

![Figure 4.c.1: Proportion of teachers with the minimum required qualifications, by region, in pre-primary, primary and secondary education (%), 2020 or latest year available](image)


Notes:
* : data for pre-primary, primary and secondary refer to 2019.
** : data for secondary refer to 2019.
Regional estimates are not available for Eastern and South-Eastern Asia, Oceania, and Europe and Northern America. Regional estimates for pre-primary education are not available for Southern Asia and the world.

Storyline author(s)/contributor(s): Olivier Labet, UNESCO-UIS

Custodian agency(ies): UNESCO-UIS