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

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

Definition:

Percentage of schools by level of education (primary, lower secondary and upper secondary education) with access to the given facility or service.

Electricity: Regularly and readily available sources of power (e.g. grid/mains connection, wind, water, solar and fuel-powered generator, etc.) that enable the adequate and sustainable use of ICT infrastructure for educational purposes.

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

Computers for pedagogical use: Use of computers to support course delivery or independent teaching and learning needs. This may include activities using computers or the Internet to meet information needs for research purposes; develop presentations; perform hands-on exercises and experiments; share information; and participate in online discussion forums for educational purposes. A computer is a programmable electronic device that can store, retrieve and process data, as well as share information in a highly-structured manner. It performs high-speed mathematical or logical operations according to a set of instructions or algorithms. Computers include the following types:

- A desktop computer usually remains fixed in one place; normally the user is placed in front of it, behind the keyboard;
- A laptop computer is small enough to carry and usually enables the same tasks as a desktop computer; it includes notebooks and netbooks but does not include tablets and similar handheld devices; and

- A tablet (or similar handheld computer) is a computer that is integrated into a flat touch screen, operated by touching the screen rather than using a physical keyboard.

Adapted infrastructure is defined as any built environment related to education facilities that are accessible to all users, including those with different types of disability, to be able to gain access to use and exit from them. Accessibility includes ease of independent approach, entry, evacuation and/or use of a building and its services and facilities (such as water and sanitation), by all of the building's potential users with an assurance of individual health, safety and welfare during the course of those activities.

Adapted materials include learning materials and assistive products that enable students and teachers with disabilities/functioning limitations to access learning and to participate fully in the school environment. Accessible learning materials include textbooks, instructional materials, assessments and other materials that are available and provided in appropriate formats such as audio, braille, sign language and simplified formats that can be used by students and teachers with disabilities/functioning limitations.

Basic drinking water is defined as a functional improved drinking water source on or near the premises and water points accessible to all users during school hours. An improved drinking water source is a water delivery point that by the nature of its design protects the water from external contamination, particularly of fecal origin. Examples of improved drinking water facilities include piped water, protected wells, tubewells and boreholes, protected springs and rainwater, purchased bottled water and tanker-trucks. Unimproved water sources include unprotected wells and springs and surface water (e.g. rivers, lakes).

Basic sanitation facilities are defined as functional improved sanitation facilities separated for males and females on or near the premises. Improved sanitation facilities include a pit latrine with slab, a ventilated improved pit latrine, a flush toilet, a pour-flush toilet or a composting toilet. Unimproved facilities include a pit latrine without a slab, hanging toilets and bucket toilets.

Basic handwashing facilities are defined as functional handwashing facilities, with soap and water available to all girls and boys.

Purpose:

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

Calculation method:

The number of schools in a given level of education with access to the relevant facilities is expressed as a percentage of all schools at that level of education.

$$PS_{n,f} = \frac{S_{n,f}}{S_n}$$

where:

$PS_{n,f}$ = percentage of schools at level **n** of education with access to facility **f**

S_n,f = schools at level **n** of education with access to facility **f**

S_n = total number of schools at level **n** of education

Interpretation:

A high value indicates that schools have good access to the relevant services and facilities. Ideally each school should have access to all these services and facilities.

Type of data source:

Administrative data.

Disaggregation:

By level of education.

Data required:

Number of schools at each level of education with and without access to the given facilities.

Data sources:

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

Limitations and comments:

The indicator measures the existence in schools of the given service or facility but not its quality or operational state.

4.a.2 Percentage of students experiencing bullying in the last 12 months

Definition:

Percentage of students who, during a school year, experienced bullying.

Purpose:

This indicator provides information on the extent of self-reported violence and bullying in schools.

Calculation method:

The number of students in a given level of education reporting that they have experienced any bullying is expressed as a percentage of all students at the same level of education.

$$PEB_n = \frac{EB_n}{E_n}$$

where:

PEB_n = percentage of students in level **n** of education experiencing bullying

EB_n = students in level **n** of education experiencing bullying

E_n = total enrolment in level **n** of education

Interpretation:

A high value indicates a large number of students at the given level of education are experiencing bullying in or near school and thus that the school is not a safe environment in which to promote learning.

Type of data source:

School-based surveys.

Disaggregation:

By sex and level of education and others as available.

Data required:

The number of students in each level of education reporting that they have experienced any bullying and the total number of students in the same level.

Data sources:

Possible sources for this indicator are the Global School-based Student Health Survey (GSHS) developed by the World Health Organization (WHO) and the US Center for Disease Control and Prevention (CDC) in collaboration with UNICEF, UNESCO, and UNAIDS, and the Health Behaviour in School-aged Children study (HBSC) also administered by the World Health Organization. GSHS and HBSC are both school-based surveys conducted primarily among students aged 13-17 years (GSHS) and students aged 11, 13 and 15 years (HBSC). GSHS covers mainly developing countries while the HBSC covers Europe and North America.

Limitations and comments:

The indicator is based on the self-reporting by students of their experiences of bullying in or near school. There may be instances when some students feel sufficiently intimated that they do not report incidents that have taken place thus resulting in an over-estimate of the safety of the school environment.

4.a.3 Number of attacks on students, personnel and institutions

Definition:

Number of violent attacks, threats or deliberate use of force in a given time period (e.g. the last 12 months, a school year or a calendar year) directed against students, teachers and other personnel or against education buildings, materials and facilities, including transport. The indicator focuses on attacks carried out for political, military, ideological, sectarian, ethnic or religious reasons by armed forces or nonstate armed groups.

Attacks on education include the following sub-categories:
- Attacks on schools: targeted violent attacks on preschool, kindergarten, primary, and secondary school buildings or infrastructure by state military forces or non-state armed groups in the form of arson; suicide, car, or other bombs aimed at a school; or artillery fire directed at a school. In addition, this category includes indiscriminate attacks that result in the damage or destruction of school infrastructure as well as explosions that occur in close proximity to a school.
- Attacks on students, teachers, and other education personnel: killings, injuries, torture, abductions, forced disappearances, or threats of violence, including coercion or extortion involving violent threats directed towards students and education staff who work at the primary and secondary levels. Since it is sometimes difficult to identify why a teacher or school staff member is killed if the assassination occurs outside of school, this category also includes such attacks in cases where there is an established pattern of that kind of violence. The category of attacks on students, teachers, and other education personnel also includes cases where police or state security forces violently repress student protests that either occur at school, or, if they occur off-campus, focus on education-related policies and laws.
- Military use of schools and universities: cases in which armed forces or non-state armed groups take over schools or universities as bases, barracks and temporary shelters to house soldiers or fighters, fighting positions, weapons storage facilities, detention and interrogation centers, or for other military purposes.
- Recruitment of children at schools or along school routes: cases in which armed forces or nonstate armed groups use schools or school routes as locales for recruiting children under the age of 18 into their fighting forces in violation of international standards.
- Sexual violence by parties to the conflict: incidents of sexual abuse and harassment perpetrated at schools or universities or along school routes.
- Attacks on higher education: include targeted violent attacks on universities in the form of bombings, airstrikes, arson, or other means, as well as targeted killings, abductions, or threats directed at university students, faculty, or staff. The category includes cases of violent repression of student protests that either occur at institutions of higher education, or, if they occur off-campus, focus on education-related policies and laws.

Purpose:

The indicator is a broad measure of the safety of learning environments, particularly in relation to armed conflict and political violence.

Available data for global tracking are presently collected from reporting by a wide variety of stakeholders, including national and international NGOs working at the country-level and national and international media reports.

Calculation method:

The indicator is calculated based on the reported number of incidents in which students, education personnel or educational facilities are attacked, as defined above.

Interpretation:

A higher value indicates a large number of attacks on education are reported more frequently. In some cases, only multi-year information is available. In these cases, the total for the multi-year period is replicated across years, with a footnote indicating that it is not comparable to other annual totals.

Type of data source:

In-depth review and assessment of information on attacks on education from multiple sources.

Disaggregation:

Information is not currently disaggregated.

Data required:

Information on the numbers and types of attacks on students, education personnel and educational infrastructure.

Data sources:

This indicator is based on data compiled by the Global Coalition to Protect Education from Attack (GCPEA) for its report *Education under Attack*. Information from three types of data sources: reports released by UN agencies, development and humanitarian NGOs, human rights organizations, government bodies, and think tanks; media reports; and information shared with GCPEA by staff members of international and national organizations working in the countries profiled in this study.

Limitations and comments:

This indicator compiles information from different sources that are subject to different levels of verification. Furthermore, the sources of data vary considerably from country to country, which are determined in part by whether a country has any established mechanisms for monitoring and reporting. See *Education under Attack 2018*, pp. 20-23, for more detail.