Module 6: Monitoring Challenges Beyond Traditional Aspects of Education

Module overview – objectives, topics and learning outcomes

With the international community's current global and universal education agenda, the fundamental question arises; how to promote universality globally? Many different interpretations take place around the world on what is common and collective and questions arise as to what is an identity? What is public participation? What is a citizen's duty? These issues have to be addressed while respecting individuality versus community; rights versus responsibilities; and traditions versus progress.

Ensuring children, youth and adults have the means to partake in today's societies requires giving them equal reading, writing and calculating skills; equal technological skills; equal access to school resources; and equal understanding of the brickwork of the social, economic and natural environment we live in.

Education is finally to take up its moral and functional purpose globally. This is about equipping learners from an early age and throughout life, with knowledge, skills, attitudes and the behaviour they need to be informed, engaged and empathetic citizens.

The various themes are expressed by various targets and their indicators under Sustainable Development Goal (SDG) 4. For example, Target 4.3 on Technical Vocational Education

and Training (TVET) and Higher Education, or Target 4.7 thematizing the widest range of topics for sustainable development and global citizenship.

Other themes, such as education in emergency situations, or disability are indirectly addressed through collecting data on migrants and refugees, learners with disabilities (Target 4.5), or measuring the quality of learning environments (Target 4.a).

A problem in developing a national education indicator framework results from the very nature of the wide range of themes to address. Countries struggle with uniform definitions for certain topics such as digital literacy skills, or global citizenship and this can be influenced by socio-cultural interpretations and other country-specific contexts.

In consequence, challenges arise regarding measuring these themes. Therefore, this module discusses multiple themes as one encounters them in SDG 4-Education 2030. The aim is to provide a brief, but common knowledge base when planning education; making policies for it; or designing a national education indicator framework.

This module will examine some of the key challenges of the SDG 4-Education 2030 Agenda and provide an overview of other critical topics on which to take action to ensure the achievement of an inclusive and equitable quality education and the promotion of lifelong learning opportunities for all.

The following topics are addressed in this module so the reader will gain a better understanding of their complexity:

- Learning Assessments;
- Technical Vocational Education and Training;
- Education for Sustainable Development and Global Citizenship;
- Learning environments; specifically, emergency settings and disability.

After completing the module, the learner will have acquired the following learning outcomes:

- An understanding of the thematic areas critical to achieving SDG 4;
- The means to explore more information and data pertinent to the stated areas that are critical for SDG 4 monitoring.

1 Learning achievements

The education community has called out a crisis in learning worldwide. Nine in ten children and adolescents in low-income countries have been found to lack basic literacy and numeracy skills by the time they completed primary and lower secondary education[1]. The Asia-Pacific is no exception and many young people in this region are not equipped with the essential skills necessary for life and the highly competitive labour market in the 21st century. It is irrefutable that learning achievements need to be monitored to ensure that as a civilization we actually advance in our development.

An assessment of learning achievements refers to a methodological measurement of achieving the intended learning objectives of an individual, or among populations. The assessment can focus on specific curriculum areas; use a variety of assessment methods, such as written, oral and practical tests and examinations, projects and portfolios; and be administered during, or at the end of an educational programme. The following section provides an introduction to the different types of learning assessments and this will enable the user of this module to understand their different characteristics.

1.1 The Principles of Good Practice in Learning Assessments

Large-scale learning assessments are conducted for a range of reasons, including:

- To establish and describe the knowledge and skills of a particular population (sample, or census) in a learning domain;
- To monitor progress in learning outcomes over time, or between grades;
- To investigate associations between achievement and contexts in which learning takes place;
- To quantify differences in learning outcomes between sub-populations (e.g. girls and boys);
- To report, in the case of census-based assessments, school, or individual level results.

[1] UNESCO, 2018: Paving the Road to Education: A target-by-target analysis of SDG 4 for Asia and the Pacific. Bangkok, UNESCO, access: https://unesdoc.unesco.org/ark:/48223/pf0000265912

National level learning assessments involve the development of national strategies for large-scale assessments, education data and the commitment to building assessment and statistical capacity.

International, or cross-national level learning assessments involve a participatory approach to the development of international standards and methodologies, the provision of diagnostic tools and guidelines. The GP-LA is a statement of principles, designed to be advisory for developing and implementing assessment programmes.

To help countries with developing large-scale learning assessments, the 'Principles of Good Practice in Learning Assessment' serve as the conceptual framework to evaluate the quality of large-scale assessments and data. They provide support to the diagnosis of country level capacity to develop, implement and use data from large-scale assessments.

The Principles are built around six key quality concepts for learning assessments and are as follows:

1. Fitness for purpose;
2. Clarity and consistency of purpose;
3. Objectivity and independence;
4. Transparency and accountability;
5. Technical rigour;
6. Ethicality and fairness.

For more information, see:

Principles of Good Practice in Learning Assessment[2]

1.2 Assessment types

SCHOOL-BASED ASSESSMENT refers to a student assessment regularly organized and administered by each educational institution established in a country. Assessment tools are generally designed by the teaching staff of the institution. The results are used to provide direct feedback to students and parents, to regulate the classroom and to improve the teaching-learning process. In some countries, scores to these assessments count (weight on the final total score) for the graduation, or the selection of students.

[2] UIS and ACER, 2017: Principles of Good Practice in Learning Assessment. UNESCO Institute for Statistics and Australian Council for Educational Research, access: http://uis.unesco.org/sites/default/files/documents/principles-good-practice-learning-assessments-2017-en.pdf

PUBLIC EXAMINATIONS are an exit, or end-point standardized exam that is generally established by a central federal/state examination board in a given country in order to promote, select, or provide a certification to all candidates who qualify. Also eligible are those who have formally, or informally learned and covered the curriculum of a formal education programme as part of the requirements for graduation. The public examination is generally administered each year – to everyone who registers, regardless of age. Unlike national assessments, extensive student background data is rarely collected during public examinations.

HOUSEHOLD-BASED ASSESSMENT refers to a learning assessment administered in the household where the targeted population is randomly selected in the home using the national household list. The Multiple Indicator Cluster Survey (MICS) 6 is an example that can assess children and young people (between the ages of five to 17) regarding their early learning achievements in reading and mathematics at the level corresponding to primary education or Grades 2 and/or 3 – irrespective of their schooling status. The Literacy Assessment and Monitoring Programme (LAMP) is another household-based literacy and numeracy assessment instrument that can be applied to youth and adult populations. A more cost-efficient version is the adapted Mini-LAMP to better serve the needs of lower- and middle-income countries in support of Target 4.6[3].

NATIONAL ASSESSMENT is an assessment of student learning outcomes at a particular age, or education level, or grade and provides feedback on a limited number of measures which are considered significant in the context of the national education system. A national assessment is generally administered to a sample of students and collects background information from students, teachers and parents to inform policymaking at the national, sub-national and local levels. The National Assessment of Student Learning Outcomes (ASLO), or the National Assessment of Student Achievement (NASA) are such an example to assess competencies in mathematics and the national language[4].

CROSS-NATIONAL ASSESSMENT is an assessment that applies to more than one national education system. A cross-national assessment uses its own assessment framework, standards and guidelines in administration and reporting, and it is specifically designed to be applied in more than one country for the purpose of comparing results across countries. These tend to be costly.

CITIZEN-LED ASSESSMENT is an assessment that is citizen driven and accountable to the public. It aims at improving competencies, as in literacy and numeracy, among a population typically using an innovative approach. The Annual Status of Education Report (ASER) and Uwezo are citizen-led household-based assessments and are conducted for a representative sample of targeted households (e.g., children between the ages of five to 16, who could be in school, or out-of-school). These assessments are usually conducted within a country, but can also be applied cross-nationally and therefore be adapted and used in another country. The

[3] For more information, see Mini-LAMP for Monitoring Progress towards SDG 4.6.1, access: http://uis.unesco.org/sites/default/files/documents/mini-lamp-monitoring-progress-sdg4.6.1-2018-en.pdf

[4] For an example on the National Assessment of Student Learning Outcomes for Lao PDR, access: http://nada.uis.unesco.org/nada/en/index.php/catalogue/126; for the National Assessment of Student Achievement - Grade 3 and Grade 5 for Nepal, access: http://nada.uis.unesco.org/nada/en/index.php/catalogue/102

cognitive data and household information collected are used for the monitoring of progress of a target population over time in-country and to ensure accountability. Comparability of one assessment with another might be limited, depending on the methodological approach.

1.3 Examples of cross-national assessments

A comprehensive list of cross-national assessments are listed below. These provide immediate indicators for application.

ASER: This is an annual, citizen-led nationwide survey of the ability of children (in school, or out-of-school), aged six to 16 years-of-age, to read simple text and complete basic arithmetic.

For more information, see: **http://www.asercentre.org/**

EGMA: The Early Grade Mathematics Assessment (EGMA), developed by RTI International and supported by USAID and the World Bank, is used to assess the acquisition of basic numeracy among primary school children in low-income countries.

For more information, see: **https://shared.rti.org/content/early-grade-mathematics-assessment-egma-toolkit**

EGRA: The Early Grade Reading Assessment (EGRA), developed by RTI International and supported by USAID and the World Bank, is used to assess the acquisition of reading among primary school children in low-income countries.

For more information see: **https://shared.rti.org/content/early-grade-reading-assessment-egra-toolkit-second-edition**

ICCS: The International Civic and Citizenship Study (ICCS) is an on-going, comparative research programme of the Inter-national Association for the Evaluation of Educational Achievement (IEA). It investigates the ways in which young people are prepared to undertake their roles as citizens. ICCS reports on students' knowledge and understanding of concepts and issues related to civics and citizenship, as well as their value beliefs, attitudes, and behaviour.

For more information see: **http://iccs.iea.nl/index.php?id=48**

ICILS: The International Computer and Information Literacy Survey (ICILS) was designed to respond to students' readiness and preparation for study, work and life in the digital age. The study measures international differences in students' computer and information literacy (CIL). This type of literacy refers to students' ability to use computers to investigate, create and communicate in order to participate effectively at home, at school, in the workplace and in the community.

For more information see: **http://www.iea.nl/icils**

LLECE: The Latin American Laboratory for Assessment of the Quality of Education (LLECE) is a network of national education quality assessment directors from Latin America and the Caribbean established to produce information and knowledge that enrich education policymaking. LLECE conducts SERCE and TERCE cross-national assessments of Grades 3 and 6 in reading, mathematics and science and reports on the state of education quality in the region.

For more information see: **http://www.unesco.org/new/en/santiago/education/education-assessment-llece/**

PASEC: The programme d'Analyse des Systèmes Educatifs de la Confemen (PASEC), or the Education Systems Analysis Programme, established by the Conférence des Ministres de l'Éducation des pays Africains et Malgache (CONFEMEN) supports the performance of education systems in Francophone Africa in order to assist in the elaboration and monitoring of educational policies. Since 2012, PASEC has been implementing international comparative assessments to better meet the needs of countries. PASEC cover Grades 2 and 5/6 in the assessment of language and mathematics.

For more information see: **http://www.pasec.confemen.org/**

PILNA: The Pacific Islands Literacy and Numeracy Assessment (PILNA) is the regional assessment for the Pacific Islands. In 2015 it was administered to Grades 4 and 6 in 13 Pacific Islands. The regional assessment was the collaboration of Pacific Ministers for Education and their ministries, with the support of the New Zealand Aid Programme.

For more information see: **https://www.spc.int/resource-centre/publications/pacific-islands-literacy-and-numeracy-assessment-pilna-2018-0**

PIRLS: The Progress in International Reading Literacy Study (PIRLS) is one of the core cycles of studies for the International Association for the Evaluation of Educational Achievement (IEA). PIRLS assesses students at Grade 4. PIRLS enables participating countries to make evidence-based decisions for improving educational policy.

For more information see: **http://timssandpirls.bc.edu/index.html**

PISA: The Programme for International Student Assessment (PISA) is a triennial international survey which aims to evaluate education systems worldwide by testing the skills and knowledge of 15-year-old students. Students take a two-hour test and are assessed in science, mathematics, reading, collaborative problem solving and financial literacy.


For more information see: **https://www.oecd.org/pisa/aboutpisa/**

SACMEQ: The Southern and Eastern Africa Consortium for Monitoring Education Quality undertakes integrated research and training activities that build the technical capacity of 16 regional ministries of education in order to monitor and evaluate the conditions of schooling and the quality of their own education systems. SACMEQ assess students at Grade 6 in reading.


For more information see: **http://www.sacmeq.org/**

SEA-PLM: The South East Asia Primary Learning Metrics is a regional assessment aimed at setting a common approach to assessing learning outcomes for primary Grade 5 students. It includes background questionnaires that gather key data from students, parents, teachers and school principals. It is administered in repeating cycles by Association of Southeast Asian Nations (ASEAN) and Southeast Asian Ministers of Education Organization (SEAMEO) member countries. It includes a set of metrics that can in time also include younger and older children. It is an assessment framework that is specifically developed to suit the context of its member countries.


For more information see: **http://www.seaplm.org/seaplm**

TIMSS: The Trends in International Mathematics and Science Study (TIMSS) is the other core cycle of studies for IEA – the International Association for the Evaluation of Educational Achievement. TIMSS assesses students at Grades 4 and 8. TIMSS enables participating countries to make evidence-based decisions for improving educational policy.


For more information see: **http://timssandpirls.bc.edu/index.html**

UWEZO: Uwezo is an annual, large scale citizen-led assessment that aims to improve competencies in literacy and numeracy among children aged six to 16 years in Kenya, Tanzania and Uganda.


For more information see: **http://www.uwezo.net/**

1.4 Leaving no one behind when monitoring learning

While government-run schools and government-aided private schools are likely to provide data to the collection of education data, data on learning may not be captured from all populations – namely those not in school, those in hard to reach and remote places, or schools for marginalized populations that do not fall under governmental oversight.

In many countries of the Asia-Pacific region, there are many populations considered as ethnic minorities and those living in tracts that are difficult to reach and these often go hand in hand. The types of schools that function in such places are few and far between. Some of them may even be government-run, but by specialized departments, such as departments for the welfare of tribal people/indigenous people.

It is very possible that countries have a considerable number of drop-out, remote, ethnic, or disability populations that may not have access to education due their various circumstances. We may want to ask: Does the country know how many there are? Where are they located? What are the reasons for their inability to participate in education?

Each country having population groups, or schools that fall under similar conditions should check whether data is collected by any department and whether such data can be accessed by the education department, or ministry.

Once we have more clarity on whether education data regarding these populations is captured at all, some effort will need to go into developing learning assessments for these populations. The typical learning assessments are aimed at populations in *school* with *governmental oversight*. Testing these children will require monitoring instruments that are not typically administered in school; household surveys may find suitable applications to capture learning achievements.

Additionally, the typical learning assessment is designed in the national language. Ethnic minorities, however, are known to rely on their mother tongue which is not always the national language. That circumstance adds to the difficulty of assessing their skills, when they are not proficient enough in the national language. When translating a test into their first language, the very formulation of the test question may change, resulting in the test becoming either easier, or more difficult to understand. In either case, it can distort the learning achievement score considerably.

Though censuses are expected to cover all such groups, in practice, there may be exceptions due to difficult terrain/geographic location of the groups being inaccessible, or such locations being inaccessible due to conflict. Household surveys, if administered correctly, can help track and monitor such groups.

To bring about prosperity to a country and its population requires capturing all of the populations with comparable accuracy – leaving no one behind. Only when everyone has been captured regarding his, or her learning achievements can we reflect on the true national picture. Smoother national education statistics for a nicer picture is not the aim of the Education 2030 Agenda.

1.5 A culture of testing – a word of advice

In many countries in the Asia-Pacific region, high-stakes examinations have become the means for controlling access to better schools, higher education and greater life opportunities. Learners are expected to cope with a world that is highly competitive, stressful and test-focused and they are pressured to obtain high scores in tests and exams based on knowledge acquired through memorization.

This fact, however, comes at the expense of other relevant skills that are needed to navigate in an increasingly complex world, such as empathy, interdisciplinary thinking, critical and systematic thinking, self-evaluation and appreciation of diversity, among others. Rote learning and assessing can hardly instil, nor measure these essential human aptitudes.

Our students today are constantly preparing for examinations, their parents are constantly concerned about their children's academic success and the resulting pressure on students leads to stress, anxiety and depression – with consequences for health, as well as school violence and even suicide among primary school children.

If we look up news reports, we would find that this is a relatively recent phenomenon for many countries in the world that emphasize *passing exams* at all costs.

The irony of this tragedy is that research has signalled the crucial relationship between happiness and educational quality; schools that prioritize learner well-being have the potential to be more effective, with better learning outcomes and greater achievements in a learner's life[5].

In simple terms, students learn better when they enjoy being at school without fear of punishment from teachers and parents. Every assessment should serve the student to **identify his or her strengths and weaknesses so as to provide talent nurturing and/or learning support – but not to administer fear and failure.**

[5] UNESCO, 2018: The culture of testing: sociocultural impacts on learning in Asia and the Pacific. Bangkok, UNESCO, access: https://unesdoc.unesco.org/ark:/48223/pf0000261955

2 Education and Training for Work

In order to participate productively in society, in addition to the basic competencies acquired in basic education, youth and adults require skills that are relevant for today's ever-changing labour markets. This topic is primarily addressed through Target 4.3 on participation in TVET and/or higher education, as well as through Target 4.4 on equipping young people with the relevant skills for work.

The expected achievements under these targets are not difficult to comprehend:

1. *Equal access* to *quality* TVET and higher education (Target 4.3);
2. Relevant *skills* that translate into finding and keeping *decent employment* (Target 4.4).

It is significant that TVET is commonly neglected as providing essential skills in the acquisition of not just work-specific skills, but also transferable skills, such as critical thinking, problem-solving, creativity, teamwork, communication, conflict resolution, entrepreneurship and finally, basic but essential ICT skills for the 21st century, to increase young people's abilities to adapt to the fast-changing demands of the labour market. TVET has vast potential that has yet to be capitalized on by most countries.

2.1 The principles of Technical and Vocational Education and Training

TVET is a diverse sector; it comprises formal, non-formal and informal learning. It takes place across a wide range of settings including schools, public and private vocational centres and institutes, higher education institutions and workplaces – in both the formal and informal economies.

TVET also has a multitude of very different institutional arrangements, organizational approaches and regulations. For the purposes of monitoring Target 4.3 and 4.4, there is a need for evidence-based policymaking in TVET and the use of valid and robust monitoring and evaluation instruments for the measurement of the indicators and their outcomes.

Table 1: The typology of TVET provision

1. Institution-based training	(i) Provided by the formal education system.	(a) Under the supervision of the ministry of education.	
		(b) Outside the supervision of the ministry of education.	
	(ii) Provided outside the formal education system	(a) Public.	
		(b) Non-public.	For profit.
			Not for profit.
2. Workplace-based training	(i) Pre-employment training.	(a) Modern apprenticeship.	
		(b) Traditional apprenticeship.	
	(ii) In-service training.		
3. Combination of multiple types of training (e.g. sandwich programmes, dual systems)			

Source: Inter-Agency Working Group (IAWG) on TVET Indicators, 2014. Proposed indicators for assessing technical and vocational education and training - Working Document, **access:** https://unesdoc.unesco.org/ark:/48223/pf0000260674

2.2 Proposed measurement approaches in TVET

TVET faces methodical measurements challenges resulting from its fragmented provision. This fragmentation includes the following:

- Vague or absent definitions of TVET programmes;
- Underdeveloped monitoring indicators;
- Unstandardized mechanisms to collect, process and aggregate data;
- The incapacity to link labour market studies to TVET demand and supply requirements.

It is indispensable to map existing TVET data and their sources before making any decision about monitoring this education sector. An Inter-Agency Working Group (IAWG) on TVET analysed data availability for TVET and co-developed a conceptual framework on TVET indicators. The framework is built around interrelated components of 'relevance', 'access and participation', 'quality' and 'finance' to aid with establishing a systematic measuring of TVET[6]. Each of the components defines indicators to monitor TVET (see Table 2). Policymakers

[6] For the framework, see the Inter-Agency Working Group (IAWG) on TVET Indicators, 2014. Proposed indicators for assessing technical and vocational education and training – Working Document, access: https://unesdoc.unesco.org/ark:/48223/pf0000260674

and stakeholders will have to combine priorities related to the components of relevance, equity and quality, providing the needed financial support within the context of institutional settings, governance and timelines prescribed.

The following table lists the proposed indicators by component and data availability. While they are not officially part of SDG 4 to date, these indicators are helpful in designing, planning and monitoring national TVET policies and programmes.

Table 2: Indicators and data availability in TVET

	INDICATORS		
AREA	**DATA READILY AVAILABLE**	**DATA NOT READILY AVAILABLE**	**DATA OFTEN NOT AVAILABLE**
1. Financing	1.1 Spending on formal TVET.	1.2 Total TVET spending per student.	1.3 Proportion of companies providing apprenticeships and other work-based types of pre-employment training (by company size). 1.4 Spending on apprenticeships and other types of training as a proportion of labour costs (by company size).
2. Access and participation	2.1 Enrolment in school-based TVET by gender as a percentage of total enrolment in the formal education system. 2.2. Enrolment by type of TVET programme.	2.6 Typology of admission policies to formal school-based TVET. 2.7 Transition paths from upper secondary to TVET education.	2.3 Work-based learning participation rate. 2.4 Equity. 2.5 Unsatisfied demand for TVET. 2.8 Policies on articulation with schooling/higher education.
3. Quality	3.1 Student–teacher ratio in formal TVET and in general programmes. 3.2 Completion rate in TVET programmes and in general programmes.	3.3 Proportion of apprentices completing registered programmes (by trade, age and gender). 3.4 Proportion of qualified teachers in TVET and in general programmes.	3.5 Relevance of quality assurance systems for TVET providers. 3.6 Investment in training of teachers and trainers. 3.7 Utilization of acquired skills in the workplace. 3.8 ICT training activities as a proportion of TVET. 3.9 Satisfaction of employers with TVET graduates.

4. Relevance	4.1 Labour force participation rate (by gender, age, and level of education). 4.2 Employment–population ratio (by gender, age and level of educational attainment). 4.3 Unemployment rate (by gender, age and level of educational attainment). 4.4 Employment status (by gender, age and level of educational attainment). 4.5 Employment shares by sector (by gender, age and level of educational attainment). 4.6 Employment shares by occupation (by gender and age). 4.7 Literacy (by gender and age).	4.8 Informal employment rate (by gender, age and level of educational attainment). 4.9 Time-related unemployment rate (by gender, age and level of educational attainment).	4.10 Working poverty rate (by gender and age). 4.11 Average real earnings by occupation and industry (by gender and age). 4.12 Hard-to-fill vacancies (by occupation). 4.13 Net job creation. 4.14 Number of young people outside the labour force. 4.15 Discouraged workers (by gender and age).

Source: Inter-Agency Working Group (IAWG) on TVET Indicators, 2014. Proposed indicators for assessing technical and vocational education and training – Working Document, **access:** https://unesdoc.unesco.org/ark:/48223/pf0000260674

Area 1: Finance

TVET financing is largely determined by the rules and regulations through which financial resources are collected, allocated and managed. It largely depends on the economic situation and the resources available and also on the priorities of decision-makers involved in the various types of TVET with regard to relevance, equity and quality and on the trade-offs that stem from those priorities. This component also relates to the capacity of the system to ensure that resources are equitably and efficiently allocated.

Area 2: Access and participation

This area refers to the extent to which various types of TVET promote equity and inclusion and the implications on the expansion of learning opportunities for excluded groups. This is examined through the lens of access and participation. While this component focuses on the important social aims of TVET, it is simultaneously strongly related to the relevance dimension since it prioritizes the need to increase the number of people who have viable and effective opportunities to benefit from high-quality TVET, leading to positive labour market outcomes.

Area 3: Quality

This area relates to the policy options that produce a TVET system that is focused on the teaching and learning process and its effectiveness. It is a measure of the quality of any TVET programme that it is effectively conducted and relevant in terms of meeting skill needs. The availability of high-quality facilities and equipment is also fundamental to the provision of high-quality TVET. Equally importantly, this component reflects the capacity of systems to innovate and the way in which the teaching and learning process is a site of innovation itself, for example in terms of the rapid changes in the use of ICT. In addition, this component relates to the existence of a systematic approach to quality assurance to support practitioners and policy-makers in improving the quality of training provision and also to guide students in making choices.

Area 4: Relevance

This relates to the responsiveness of TVET to labour market needs and requirements. The relevant policy areas to be considered here relate to market links to TVET programmes and outcomes of TVET programmes. This component reflects the assumption that the primary and key role of TVET is to raise skill levels and to help to address skill needs at all levels in today's complex and changing labour markets. Relevance also entails having the mechanisms and available capacity to understand the transition from school to work and from all types of TVET programmes to capture labour market signals and to anticipate emerging skill needs and the extent to which these inform TVET provision.

For more information material on TVET, see:

UNESCO-UNEVOC International Centre for TVET[7]

[7] The UNESCO-UNEVOC International Centre for TVET, access: https://unevoc.unesco.org/go.php

3 Education for Sustainable Development and Global Citizenship

In order to prepare learners for the 21st century, there is a need for an interdisciplinary approach in which the tutoring transverses across a wide range of competencies – irrespective of whether this relates to the training of lawyers, doctors, farmers, clerks, dentists, politicians, or accountants.

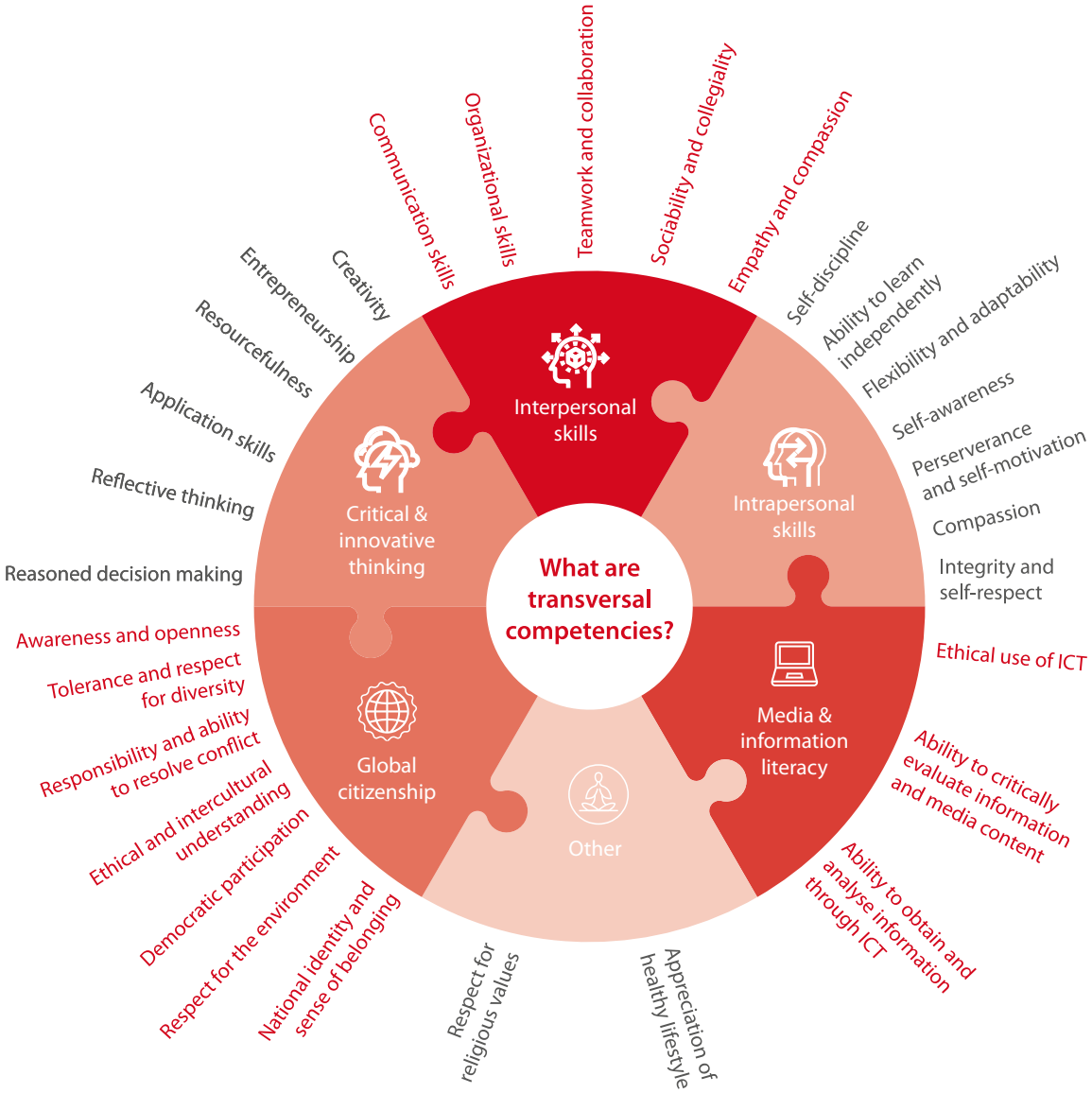
People need competencies that allow them to take action on sustainability issues as informed global citizens. As transversal competencies can be numerous, the following figure on transversal competencies, as they are commonly promoted in education policy and practice, provides a structured insight into what these competencies entail.

We can see that the above figure displays transversal skills that address essential aspects of sustainable development and global citizenship, as they relate to Target 4.7 of SDG 4. Target 4.7 on skills and knowledge for sustainable development has a wide, if not the widest, range of concepts and addresses a range of topics for education to cover and it serves as a moral purpose of education.

Due to this wide range, Target 4.7's global indicator required time to come to a common understanding on which topics, through education for sustainable development and global citizenship, should be monitored. Countries contested believed common definitions, as cultural traditions influence a common understanding. Accordingly, this has resulted in difficulties in developing a consensual monitoring framework. Likewise, the reporting at the country level has not yet taken on board the thematic indicators.

To date, the Technical Cooperation Group (TCG) on Education Indicators has developed a set of internationally-comparable indicators for facilitating the monitoring of SDG 4-Education 2030. This indicator framework is comprised of the global indicator and its sub-components, as well as the thematic indicators that the countries may use to monitor, based on their national context, policy priorities, technical capacities and data availability.

Figure 1: Transversal competencies by six domains



Source: UNESCO, 2016: Assessment of transversal competencies: policy and practice in the Asia-Pacific region. Paris and Bangkok, UNESCO, **access:** https://unesdoc.unesco.org/ark:/48223/pf0000246590

Table 3: Indicator framework for Target 4.7

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		
Provision	**4.7.1**	Extent to which global citizenship education and education for sustainable development are mainstreamed in national education policies, curricula, teacher education and student assessment.
	4.7.2	Percentage of schools that provide life skills-based HIV and sexuality education.
	4.7.3	Extent to which the framework on the World Programme on Human Rights Education is implemented nationally (as per UNGA resolution 59/113).
Knowledge	**4.7.4**	Percentage of students of a given age group (or education level) showing adequate understanding of issues relating to global citizenship and sustainability.
	4.7.5	Percentage of secondary education students showing proficiency in knowledge of environmental science and geoscience.

Note: The highlighted indicator in the lighter coloured box is to be monitored and reported on at the global level.

Source and details: UIS, 2018: Metadata for the global and thematic indicators for the follow-up and review of SDG 4 and Education 2030, **access:** http://uis.unesco.org/sites/default/files/documents/sdg4-metadata-global-thematic-indicators-en.pdf

The UIS Metadata for the global and thematic indicators of SDG 4 have included definitions and calculations for the 4.7 indicators[8]

The global indicator of Target 4.7 is defined as the extent to which countries mainstream global citizenship education (GCED) and Education for Sustainable Development (ESD), including climate change education, human rights and gender equality in their education systems, specifically in policies, curricula, teacher education and student assessment.

That it is difficult for all countries to articulate all the indicators under target 4.7 is appreciated. It has been noted that wherever such attempts have been made, they have tended to serve more as 'global signposts' rather than quantitative indicators of the target. GCED and ESD, as the means to deliver Target 4.7, need to be contextualized in every country and be reflected in national education policy priorities with quantifiable targets set at the national level.

Both ESD and GCED need to be translated to the individual country contexts to be in tune with the education commitments, legal frameworks, policy support and human-material-financial resources. The planning and programming will have to be worked out on that basis. Once this

[8] UIS, 2018: Metadata for the global and thematic indicators for the follow-up and review of SDG 4 and Education 2030, access: http://uis.unesco.org/sites/default/files/documents/sdg4-metadata-global-thematic-indicators-en.pdf

is conceptualized, the identification data sources can follow to monitor progress and become part of a national education indicator framework. Some of these indicators could also be cross-cutting ones across other sectors. To provide a basic understanding of ESD and GCED, the following sections summarize the principles behind the two global education approaches.

3.1 Understanding Global Citizenship Education

The concept of Global Citizenship Education (GCED) assumes importance in the context of developing country specific measurements for SDG 4 target 7. GCED refers to a sense of belonging to a broader community and common humanity. It emphasizes political, economic, social and cultural interdependency and interconnectedness between the local, the national and the global spheres of human existence.

The conceptual dimensions of GCED identify three local socio-cultural dimensions that influence the impact of GCED on the learner. These are the cognitive, socio-emotional and behavioural dimensions[9].

- **COGNITIVE:** To acquire knowledge, understanding and critical thinking about global, regional, national and local issues and the interconnectedness and interdependency of different countries and populations.
- **SOCIO-EMOTIONAL:** To have a sense of belonging to a common humanity, sharing values and responsibilities, empathy and solidarity and respect for differences and diversity.
- **BEHAVIOURAL:** To act effectively and responsibly at local, national and global levels for a more peaceful and sustainable world.

It is important to note that these core conceptual dimensions of GCED – with the learning objectives – are subject to local socio-cultural dimensions that influence the one delivery of GCED and learning. For example, the curricula developed at the national or sub-national levels may be strongly influenced by local cultural, ethnic or linguistic identities.

For more information material, see:

UNESCO Global Citizenship Education portal[10]

[9] UNESCO Global Citizenship Education, access: https://en.unesco.org/themes/gced

[10] UNESCO, 2015: Global Citizenship Education, Topics and Learning Objectives. Paris, UNESCO, access: https://unesdoc.unesco.org/ark:/48223/pf0000232993

3.2 Understanding Education for Sustainable Development

ESD may be construed as an integral part of quality education, inherent in the concept of quality education. It is holistic and transformational in nature and it addresses learning content and outcomes, pedagogy and the learning environment. Its focus is on learning making informed decisions and responsible actions for environmental integrity, economic viability and a just society, for present and future generations, while respecting cultural diversity.

To deliver ESD, the pedagogical approaches need to become action-oriented and transformative, supportive of self-directed learning, participation and collaboration, problem-orientation, inter-and-trans-disciplinary and the linking of formal and informal learning.

ESD is characterized by the following:

- **LEARNING CONTENT:** Integrating critical issues, such as climate change, biodiversity, disaster risk reduction (DRR) and sustainable consumption and production (SCP) into the curriculum.
- **PEDAGOGY AND LEARNING ENVIRONMENTS:** Designing teaching and learning in an interactive, learner-centred way that enables exploratory, action-oriented and transformative learning, as well as rethinking learning environments.
- **SOCIETAL TRANSFORMATION:** Empowering learners of any age, in any education setting, to transform themselves and the society they live in to greener economies, with learners equipped with skills for 'green jobs' and motivated to adopt sustainable lifestyles.
- **LEARNING OUTCOMES:** Stimulating learning and promoting core competencies, such as critical and systemic thinking, collaborative decision-making and taking responsibility for present and future generations to be empowered to assume active roles to resolve local and global challenges as contributors to a more just, peaceful, tolerant, inclusive, secure and sustainable world.

It is important to note that ESD can develop cross-cutting key competencies for sustainability that are relevant to all SDGs. Similarly, ESD can also develop specific learning outcomes needed to work on achieving a particular SDG[11].

For more information, see:

UNESCO Education for Sustainable Development portal[12]

[11] For more information on ESD, see the Global Action Programme on Education for Sustainable Development, access: https://en.unesco.org/gap

[12] UNESCO Education for Sustainable Development, access: https://en.unesco.org/themes/education-sustainable-development

3.3 Monitoring ESD and GCED

In October 2018, the UNESCO Institute for Statistics (UIS) updated UIS Metadata for the global and thematic indicators for the follow-up and review of SDG 4 and Education 2030 which includes a **preliminary** methodology on measuring Target 4.1's indicator 4.7.1: *Extent to which (i) global citizenship education and (ii) education for sustainable development, including gender equality and human rights, are mainstreamed at all levels in: (a) national education policies (b) curricula (c) teacher education and (d) student assessments*.

The indicator has been created with the intention to go beyond the level of the mere mention of GCED and ESD in policy, curricula and teacher education and student assessments. The indicator is based on an evaluation of reports submitted by countries to UNESCO as part of the monitoring process for the 1974 Recommendation concerning Education for International Understanding, Co-operation and Peace Education relating to Human Rights and Fundamental Freedoms that occurs every four years[13]. These reports describe how countries are mainstreaming global citizenship education and education for sustainable development in their education policies and systems.

To put it simply, countries respond to selected questions by means of a standardized questionnaire on four components, as defined in the indicator. These components are:

a. National education policy;

b. Curricula;

c. Teacher education;

d. Student assessments.

The curricula component is further sub-divided into two sub-components: (i) curricular content; and (ii) curricula resources. The score for each question is standardized by applying a Min-Max procedure in order to range between 0 and 100.

For each component of this indicator, the simple mean is calculated from the questions scores within the same component. The results for all responding countries are then divided into approximate terciles (country groupings) to give the following categories for reporting:

- Upper tercile = Making strong progress;
- Middle tercile = Progress is under way;
- Bottom tercile = Has more room for progress.

Results are reported for each component, or sub-component separately but are not combined into an overall score on the grounds that strong progress in one component does not compensate for weak progress in another.

[13] For more information on the 1974 Recommendation, access: http://portal.unesco.org/en/ev.php-URL_ID=47528&URL_DO=DO_TOPIC&URL_SECTION=201.html

Box 1: Example evaluation for integration of ESD and GCED relevant concepts in student learning assessments

Question 15a. Are the principles and topics mentioned in Q7 (peace and non-violence, human rights and fundamental freedoms, cultural diversity and tolerance and human survival and well-being) included generally in student assessments/examinations?

Answer 15a. 1= yes, 0 = no or no information.

Question 15b. If yes, please indicate which of the following dimensions of learning were included in the last student assessment/examinations. (Please tick all that apply)

Answer 15b. One point is awarded for each box which is ticked, except (e) and (f).

- **a.** *knowledge;*
- **b.** *skills and competencies;*
- **c.** *values and attitudes;*
- **d.** *behaviours;*
- **e.** *none;*
- **f.** *no information available.*

Source: UIS, 2018: Metadata for the global and thematic indicators for the follow-up and review of SDG 4 and Education 2030, **access:** http://uis.unesco.org/sites/default/files/documents/sdg4-metadata-global-thematic-indicators-en.pdf

For the details on SDG 4 indicator 4.7.1, see:

Metadata for the global and thematic indicators for the follow-up and review of SDG 4 and Education 2030[14]

14 UIS,2018: Metadata for the global and thematic indicators for the follow-up and review of SDG4 and Education 2030,access: ttps://bangkok.unesco.org/content/latest-metadata-global-and-thematic-indicators-follow-and-review-sdg-4-and-education-2030

4 Learning Spaces

It seems appropriate at this point to consider that SDG 4 also wants to monitor the spaces where education takes place. Target 4.a establishes the goal to build and upgrade education facilities that are child, disability and gender-sensitive and provide safe, non-violent, inclusive and effective learning environments for all. With terms of gender, non-violence and effective learning, the relevance of learning spaces that reflect the just discussed concepts of monitoring learning outcomes is important for acquiring aspired values and competencies.

Target 4.a has three indicators, whereas the global indicator is further characterized by three sub-components of electricity and the resulting opportunities for ICTs; water, sanitation and hygiene (WASH) access facilities; and adequately adapted buildings for learners with disabilities.

The two remaining thematic indicators reflect on making schools welcoming to learners and teachers, highlighting the school as being a mutual responsibility for integrated learning that is free of discrimination and violence.

Table 4: Indicator framework for Target 4.a

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		
Resources	**4.a.1**	Proportion of schools with access to basic drinking water, single-sex basic sanitation facilities and basic handwashing facilities.
		Proportion of schools with access to electricity, Internet for pedagogical purposes and computers for pedagogical purposes.
		Proportion of schools with adapted infrastructure and materials for students with disabilities.
Environment	**4.a.2**	Percentage of students experiencing bullying, corporal punishment, harassment, violence, sexual discrimination and abuse.
	4.a.3	Number of attacks on students, personnel and institutions.

Note: The highlighted indicators in the lighter coloured box are to be monitored and reported on at the global level.

Source and details: UIS, 2018: Metadata for the global and thematic indicators for the follow-up and review of SDG 4 and Education 2030, **access:** http://uis.unesco.org/sites/default/files/documents/sdg4-metadata-global-thematic-indicators-en.pdf

The UIS Metadata for the global and thematic indicators of SDG 4 have included definitions and calculations for the 4.a indicators[15].

[15] UIS, 2018: Metadata for the global and thematic indicators for the follow-up and review of SDG 4 and Education 2030, access: http://uis.unesco.org/sites/default/files/documents/sdg4-metadata-global-thematic-indicators-en.pdf

4.1 Integrating disability in monitoring education

Disability results from the interaction of a person's functioning and their environment. That is, a person may have an impairment – for example they cannot move their legs – but disability also arises from barriers in the environment that prevent a person from participating in society, or in the case of education; from attending and succeeding in school. Therefore, the focus is not solely on a learner's impairment, but also on the barriers in the school environment that prevent them from quite literally physically accessing an education[16].

What matters with receiving an education is a learner's functioning. That means, what he, or she is capable of doing, not what condition he, or she may have. For example, some children with cerebral palsy have great difficulty walking or speaking, but some only have minor difficulties. Some have cognitive delays and some have no cognitive delays whatsoever.

Simply knowing a diagnosis of impairment does not provide much information on their capacity to carry out learning activities. Information is needed, not on medical diagnoses but on the nature of the impairment and understanding the difficulties to perform a task in school.

Removing the barriers, and providing access support and services in school is the obvious step at hand. Yet removing barriers includes attitudinal and institutional barriers, including the lack of capacity of the education system to understand and address the needs of children with disabilities. In addition, medical rehabilitation, assistive devices, speech therapy, physical therapy and counselling should accompany access to education.

There is a challenge in producing internationally comparable data on persons with disabilities due to the varying definitions and understanding of the term 'disability' across the world. This situation has led to obstacles of:

- Priorities in collecting disability not being consistent over time;
- Collection methods not being consistent and thus incomparable;
- The degrees of disaggregation varying.

To address the aim of producing globally comparable data, the Washington Group on Disability Statistics was established in 2001. The Washington Group developed a set of questions for use in household surveys and censuses to collect information on persons with a disability. The questions are based on the presence of difficulties in the six core functional domains of seeing, hearing, walking, self-care, cognition and communication. Respondents then answer on a four-category scale to each of the six domains as to whether they have no difficulty; some difficulty; a lot of difficulty; or whether they cannot perform in any of the six domains at all.

[16] Technical Guidance- Guide for Including Disability in Education Management Information Systems, UNICEF Education Section, Programme Division February 2016.

Figure 2: The six function domains and the four-scale evaluation of disability

Using the disability model by the Washington Group, a person is considered to have a disability if the respondent is unable to perform, or perform with a lot of difficulty for at least one of the six functional areas.

The Washington Group suggested some questions and categorization helped countries to collect data better and it was possible to translate this into many local languages for better administration of survey questionnaires.

For more information, see:

Washington Group on Disability Statistics[17]

Box 2: A quick history lesson on disability

At the time of the Millennium Development Goals (MDGs), persons with disabilities were not referenced in the agenda. They were excluded from many important initiatives and funding streams around the world. This glaring gap was addressed in the formulation of the 2030 Agenda and SDG 4. Including the topic of disability presents a great opportunity for governments and all stakeholders to recognize the notion of equity in the quest for leaving no one behind.

As early as in 1948, the United Nations Universal Declaration of Human Rights (Article 2 and 26) proclaimed that everyone has the right to education without distinction of any kind. The Convention on the Rights of the Child (1989) was the first treaty developed specifically to uphold the rights of children. It was followed later by the United Nations General Assembly's Special Session on Children (2002) with increased concerns for specific rights of minority groups, including children with disabilities. Articles 1 and 2 of the Convention both state that all rights apply 'to every human being' under the age of 18 years and prohibits discrimination on a number of grounds including that of disability.

Sources: The Universal Declaration of Human Rights, **access:** http://www.un.org/en/universal-declaration-human-rights/; Convention on the Rights of the Child, **access:** https://www.ohchr.org/en/professionalinterest/pages/crc.aspx

[17] The Washington Group on Disability Statistics, access: http://www.washingtongroup-disability.com/

4.1.1 Integration disability statistics in household surveys

One of the most popular surveys that has started using the Washington Group questions is the Demographic Health Survey (DHS) which is discussed in the module on household surveys (Module 4). The survey contains a module that allows the collection of disability data based on the internationally-comparable short set of questions developed by the Washington Group.

Figure 3: Excerpt from the DHS questionnaire module on disability

	IF AGE 5 OR OLDER					
LINE NO.	DISABILITY					
	26	27	28	29	30	31
	Does (NAME) wear glasses or contact lenses to help them see?	I would like to know if (NAME) has difficulty seeing even when wearing glasses or contact lenses. Would you say that (NAME) has no difficulty seeing, some difficulty, a lot of difficulty, or cannot see at all? 1 = NO DIFFICULTY SEEING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT SEE AT ALL 5 = DON'T KNOW	I would like to know if (NAME) has difficulty seeing. Would you say that (NAME) has no difficulty seeing, some difficulty, a lot of difficulty, or cannot see at all? 1 = NO DIFFICULTY SEEING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT SEE AT ALL 5 = DON'T KNOW	Does (NAME) wear a hearing aid?	I would like to know if (NAME) has difficulty hearing even when using a hearing aid. Would you say that (NAME) has no difficulty hearing, some difficulty, a lot of difficulty, or cannot hear at all? 1 = NO DIFFICULTY HEARING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT HEAR AT ALL 5 = DON'T KNOW	I would like to know if (NAME) has difficulty hearing. Would you say that (NAME) has no difficulty hearing, some difficulty, a lot of difficulty, or cannot hear at all? 1 = NO DIFFICULTY HEARING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT HEAR AT ALL 5 = DON'T KNOW

	IF AGE 5 OR OLDER			
LINE NO.	DISABILITY			
	32	33	34	35
	I would like to know if (NAME) has difficulty communicating when using his/her usual language. Would you say that (NAME) has no difficulty understanding or being understood, some difficulty, a lot of difficulty, or cannot communicate at all? 1 = NO DIFFICULTY SEEING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT SEE AT ALL 5 = DON'T KNOW	I would like to know if (NAME) has difficulty remembering or concentrating. Would you say that (NAME) has no difficulty remembering or concentrating, some difficulty, a lot of difficulty, or cannot remember or concentrate at all? 1 = NO DIFFICULTY SEEING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT SEE AT ALL 5 = DON'T KNOW	I would like to know if (NAME) has difficulty walking or climbing steps. Would you say that (NAME) has no difficulty walking or climbing steps, some difficulty, a lot of difficulty, or cannot walk or climb steps at all? 1 = NO DIFFICULTY HEARING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT HEAR AT ALL 5 = DON'T KNOW	I would like to know if (NAME) has difficulty washing all over or dressing. Would you say that (NAME) has no difficulty washing all over or dressing, some difficulty, a lot of difficulty, or cannot wash all over or dress at all? 1 = NO DIFFICULTY HEARING 2 = SOME DIFFICULTY 3 = A LOT OF DIFFICULTY 4 = CANNOT HEAR AT ALL 5 = DON'T KNOW

By introducing a module on disability to existing household surveys, data gaps with regard to disability can be greatly minimized as they make it possible to analyse various aspects of exclusion linked to personal and household characteristics, including those related to disability.

For the questionnaire module in the DHS, see:

DHS Questionnaire Modules[18]

[18] DHS Questionnaire Modules, access: https://dhsprogram.com/What-We-Do/Survey-Types/DHS-Questionnaires.cfm

4.1.2 Integrating disability statistics in EMIS

As we already know, an EMIS collects, aggregates and reports education data in established cycles. Given the education system embeddedness on data collection of the EMIS, it makes sense to capitalize on its function to capture children by their specific background and be able to gain insights into learners with disabilities.

The Washington Group's suggested questions can be adapted and utilized in an EMIS as they can be in household surveys. The UNICEF Guide for Including Disability in Education Management Information Systems provides examples of how disability-specific questions can be formulated and integrated within an EMIS.

Figure 4: Example of recommended questions for an EMIS form for children with disabilities

Table 2a: Recommended questions for EMIS form for children with disabilities

Compared with children of the same age, how many children enrolled in school have difficulties in the following areas (a child can be counted in more than one area):

	Vision		Hearing		Gross Motor (e.g., walking or climbing steps)		Fine Motor (e.g., writing or fastening clothes)		Intellectual		Communication (understanding and being understood by others)		Behaviour and socialization	
	Some difficulty	A lot of difficulty	Some difficulty	A lot of difficulty	Some difficulty	A lot of difficulty	Some difficulty	A lot of difficulty	Some difficulty	A lot of difficulty	Some difficulty	A lot of difficulty	Some difficulty	A lot of difficulty
Boys														
Girls														
TOTAL														

How many children enrolled in school have difficulties in the following number of areas, as recorded above

	1 area	2 areas	3 areas	4 areas	5 areas	6 areas	All 7 areas	TOTAL
Boys								
Girls								
TOTAL								

Source: UNICEF, 2016: Guide for Including Disability in Education Management Information Systems. Technical Guidance, **access:** http://training.unicef.org/disability/emergencies/downloads/UNICEF_guide-for-including-disability-in-education-management-information-systems.pdf

For detailed guidance on including disability questions in an EMIS, see:

Guide for Including Disability in Education Management Information Systems[19]

[19] UNICEF, 2016: Guide for Including Disability in Education Management Information Systems. Technical Guidance, access: http://training.unicef.org/disability/emergencies/downloads/UNICEF_guide-for-including-disability-in-education-management-information-systems.pdf

4.1.3 Disability requirements in other Sustainable Development Goals

To highlight the significance of collecting disability data, Figure 5 provides an overview of some of the SDGs that require data related to disability. When setting up inter-ministerial, or inter-departmental data collection mechanisms, this will facilitate in accessing disability data for those involved and feed into mutual monitoring and evaluation efforts. You may want to contact the relevant governmental bodies as they correspond to the following SDGs and their targets.

Figure 5: Examples of disability references in other SDGs

SDG 1: No Poverty	**Target 1.3: Implement nationally appropriate social protection systems and measures for all, including floors and by 2030 achieve substantial coverage of the poor and the vulnerable.**
1.3.1: Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable.	
SDG 8: Decent Work and Economic Growth	**Target 8.5: By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.**
8.5.1: Average hourly earnings of female and male employees, by occupation, age and persons with disabilities.	
SDG 10: Reduced Inequalities	**Target 10.2: By 2030, empower and promote the social, economic and political inclusion of all, irrespective of age, sex, disability, race, ethnicity, origin, religion or economic or other status.**
10.2.1: Proportion of people living below 50 per cent of median income, by age, sex and persons with disabilities.	
SDG 11: Sustainable Cities and Communities	**Target 11.2: By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.** **Target 11.7: By 2030, provide universal access to safe, inclusive and accessible, green and public spaces, particularly for women and children, older persons and persons with disabilities.**
11.2.1: Proportion of population that has convenient access to public transport, by sex, age and persons with disabilities. 11.7.1: Average share of the built-up area of cities that is open space for public use for all, by sex, age and persons with disabilities.	
SDG 16: Peace	**Target 16.7: Ensure responsive, inclusive, participatory and representative decision-making at all levels**
16.7.1: Proportions of positions (by sex, age, persons with disabilities and population groups) in public institutions (national and local legislatures, public service, and judiciary) compared to national distributions. 16.7.2: Proportion of population who believe decision-making is inclusive and responsive, by sex, age, disability and population group.	

Source: Adapted from UN DESA, 2016: Disability in the SDGs Indicators (March 2016) **access:** http://www.un.org/disabilities/documents/2016/SDG-disability-indicators-march-2016.pdf

Wherever 'vulnerable groups' are mentioned in the SDGs, this addresses persons with disabilities, too, because of the 2030 Agenda's overarching principle of **leaving no one behind**.

The International Disability and Development Consortium (IDDC), the UN and the International Disability Alliance (IDA) have developed an SDG indicators advocacy toolkit to help address the collection of relevant data with comparable indicators for all the SDGs.

For more information, see:

Disability Indicators: SDG Advocacy Toolkit[20]

4.2 Monitoring education in emergency situations

When talking about education contexts and here in particular about learning spaces, education in emergency situations tends to receive little attention. However, countries across the globe as well as in the Asia-Pacific region have to deal with a rising number of children and youth who live in acute and protracted crises, or conflict-affected areas.

In 2014, UNHCR (United Nations High Commissioner for Refugees) estimated that 51.2 million people were living as refugees, or internally displaced peoples globally. Of these, 10.7 million people were newly displaced in 2014 due to conflict and/or persecution – the largest scale of displacement ever recorded[21].

The Education 2030 Agenda highlights that displaced refugee and stateless children and youth must be accounted for in the next 15 years of education sector planning, development and monitoring at the sub-national, national, regional and international levels. Governments require robust and responsive strategies to ensure quality education reaches the affected. Partnerships to address education in emergencies are key.

Remember!

You should familiarize yourself about the marginalized and vulnerable groups in your country including refugees and internally displaced populations and people affected by natural disasters and ensure that suitable indicators are developed to monitor their progress in getting access to a continued and quality education.

[20] The International Disability and Development Consortium Disability Indicators: SDG Advocacy Toolkit, access: https://www.infontd.org/resource/sdg-advocacy-toolkit-disability-indicators

[21] UNHCR, 2014: War's Human Cost – Global Trends 2013. Geneva, UNHCR.

4.2.1 Understanding emergencies

Education in emergencies relates to situations of crisis to which count primarily situations of violence, natural disasters and public health pandemics. As a consequence of such situations, affected communities suffer hardships and in most cases destruction of property that forcefully leads to migration and refuge seeking.

ARMED CONFLICT: Though armed conflicts generally traumatize entire populations in the region of such conflicts, they particularly do so in respect of children, women, the disabled and the very old. In the case of children, they leave deep and lasting scars in their young minds and bodies that can remain longer than the period of such violence. Even in cases where the children do not experience such violence directly, they may become orphans, experience sexual abuse or exploitation, suffer landmine injuries, or death, or be forced to join in the fighting. Even when the conflict subsides, they may still have to fight disease, inadequate shelter and limited, or no access to basic essential services. Such conflicts directly affect children's learning as they often interrupt the children's attendance in schools due to reasons of insecurity, non-availability of teachers, or due to attacks being directed at schools and teachers. Armed conflicts are also reported to be a leading cause of world hunger now.

Remember!

Even though education in emergencies focuses specifically on children, further special attention may be needed to address gender issues that may exacerbate already prevailing gender discrimination, if any, against girls in the community. Such discrimination may be cultural and institutional barriers to girls' education that exists even before an emergency. Suitable action may be needed to identify and address such gender barriers in an emergency situation.

NATURAL DISASTERS: Natural disasters include the rapid-onset of storm surges, earthquakes, floods and tsunamis. In such cases, again, children may witness, or directly experience mass destruction of life and property, displacement from homes, develop fear-psychosis of possible repeated disasters, suffer other psycho-social distress and may be left with no structured activities because of the temporary closure of schools. In cases of slow-onset of disasters, such as drought, the displacement of populations can happen, resulting in conflicts between host communities and the displaced populations because of competition for scarce resources. In both the systems, the education system may be burdened by large class sizes, shortages of teachers, issues related to medium of instruction, inadequate supply of materials and damaged infrastructure.

EPIDEMICS AND PANDEMICS: Health emergencies can have a devastating impact on education and its functioning. HIV/AIDS and human influenza pandemic are instances in point. These can result in emergency situations like increased teacher attrition and absenteeism, student absenteeism, drop-outs, stigmatized orphans often getting excluded from schools and schools being shut down in cases of pandemics for months at a time. The preparation of alternative measures, such as home and distance learning are essential in these situations.

4.2.2 Delivering education in emergencies

When parental or the wider social networks and support systems erode during such crises, girls and boys may become household breadwinners and they are forced into seeking unsafe employment to support siblings, or other community members. Adopted adult roles removes them from a protective environment for which they have not been prepared. These circumstances affect children, adolescents and youth physically, psychologically, socially and intellectually.

Providing education is the best response for young people affected by crises and displacement. Advocacy and communication help mobilize donors, governments, partners and affected populations to quickly establish educational activities. UNICEF, UNESCO, UNRWA and other agencies support education in emergencies.

4.2.3 Measurement challenges in education in emergencies

Education activities in emergencies vary greatly according to the nature of the crisis and context of the country. A good education response should do the following:

- Deliver tangible results and aim to maintain children's educational continuity;
- Be flexible in terms of timing, location and methods used;
- Build the capacity of teachers to help children cope with the mental, physical and psychosocial impact of an emergency;
- Focus efforts on groups of marginalized children, such as displaced children, those from ethnic minority communities, girls, children with disabilities, younger children and former child soldiers;
- Find ways to address community tensions and enhance integration;
- Engage governments, local NGOs, or communities as partners.

However, without accurate data on displaced and vulnerable populations *and* on education provision, planning education in emergencies is ineffective and resource-intensive. These populations are often invisible in national education sector plans and therefore, their education is under-funded, or has no budget allocation. Reliable data is critical for monitoring purposes for policy makers and planners[22].

In emergency situations, monitoring should provide high frequency and a broad coverage of information. A high number of humanitarian and aid workers descending upon the emergency-affected areas make coordination and standardization of data collection difficult when not organized centrally. Therefore, the following provides guidance in dealing with collection information in emergency situations.

[22] For the information education, migration and refuge, see: UNESCO, 2018: Global Education Monitoring Report 2019. Migration, displacement and education: Building bridges, not walls. Paris, UNESCO. Access: https://en.unesco.org/gem-report/report/2019/migration

Components to monitor education in emergencies

- Location of learning spaces and the physical settings and facilities;
- Number and location of children out-of-school;
- Reconstruction/rehabilitation of learning spaces;
- Distribution, receipt and use of supplies, including pre-packaged kits;
- Satisfaction of students and teachers with services and resources.

Indicators for monitoring education programmes

- Number of pupils enrolled/attending schools, disaggregated by gender and age;
- Percentage of participation of affected students, based on the proportion of participants to non-participants;
- Factors that may prevent, or limit participation (gender, caste, ethnicity, religion, language, domestic chores, disabilities, etc);
- Ratio of children to teachers in each class;
- Number and characteristics of teachers and paraprofessionals, disaggregated by sex;
- Level of teacher training;
- Age and level-appropriateness of activities for participants;
- Existence of school feeding in learning spaces (if appropriate);
- Availability of water and sanitation near learning spaces;
- Feedback from all stakeholders on material, content and conditions of the programmes, measured through formal feedback forms, or less formal feedback sessions with students, teachers and parents.

For more information, see:

Inter-agency Network for Education in Emergencies[23]

[23] Inter-agency Network for Education in Emergencies, access: http://www.ineesite.org/

5 Final Thoughts

There is a need for better coordination and cooperation among various ministries and the national statistical office regarding data collection. The above digression brings into clear focus that data relating to educational interventions and outcomes from the various sectors can be collected and collated only with close coordination and cooperation.

Partnerships across sectors; the development of necessary policies; the development of necessary indicators; inducting systematic data collection; and engaging local stakeholders, particularly civil society and communities are pre-requisites for monitoring these challenging areas.

It is important to remind ourselves at this point about the new vision of the Education 2030 Agenda while doing this exercise. The targets set against this goal have been inspired by a humanistic vision of education and development based upon human rights and dignity; social justice; inclusion; protection; cultural-linguistic-and-ethnic diversity; shared responsibility and accountability.

It is, therefore, necessary to keep the following concepts in mind:

- Human rights (in particular the right to education);
- Social justice;
- Inclusiveness;
- Protection of vulnerable groups;
- Cultural diversity;
- Ethnic diversity;
- Linguistic diversity;
- Shared responsibility;
- Accountability;
- Public good;
- Peace and tolerance;
- Human fulfilment;
- Sustainable development;
- Decent work;
- Poverty eradication;
- Lifelong learning;