



**Education**

**Preparedness**

**Index**

**in COVID-19**



Center for European Studies

## *Acknowledgement*

The EPIC index is one of the outputs of the project Enabling Learning to Happen for All Children in Emergency Crisis. The project is funded by Global Campus of Human Rights in partnership with the Right Livelihood Award Foundation. After the eruption of the global COVID-19 pandemics, the Center for European Studies of Yerevan State University, a member of the Global Campus of Human Rights as a Global Campus of Caucasus, initiated the project to facilitate and support the building of emergency resilient education systems to secure equal access to learning for every child. The group of experts gathered to create the EPIC index for assessing the resources, capacities and systems of educational know-hows for estimating the possibilities to create low-tech or no-tech remote learning programs for the urban and rural communities. The results of the assessment based on EPIC aims developing and retaining the knowledge and skills of school children to bridge the digital divide. By developing a resilient and vibrant educational system in the states and schools will be enabled to manage risks and mitigate the negative impact on schoolchildren in times of emergency.

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## BACKGROUND TO THE EMERGENCY PREPAREDNESS INDEX IN COVID-19

The outbreak of the Covid-19 pandemic has caused an unprecedented crisis in almost all spheres around the world in 2020 (economy, education, tourism, culture, etc). It has changed the lives of people across the globe especially the lives of teachers, children and their parents. Due to the Covid-19 crisis educational institutions gradually started to close to prevent the spread of the virus. At the peak of the global lockdown of schools<sup>1</sup> in April 2020, 94% of students or 1.6 billion children were left out of school across the globe, and, still, around 700 million children today are studying from home, in a context of huge uncertainty and with families and schools having to navigate across options of hybrid and distance learning, or no schooling at all (*World Bank 2021*). Moreover, more than 460 million children all over the world don't have internet access, computers or mobile devices to participate in virtual learning while their schools were closed (*Feuer 2020*).

As a response to the unprecedented pandemic, countries have taken steps to rapidly switch to distance learning but due to the lack of connectivity, equipment, relevant methods, clear understanding of distance learning, direct teacher-student interaction, it was particularly challenging for the states to ensure all learners to continue their education and avoid school dropouts.

The abrupt shift from in-person learning to distance learning constituted some challenges to teachers and school administration. Distance teaching requires more work for teachers. Distance education is not mere curriculum conversion and effective online learning cannot be done by simply converting existing face-to-face courses: various roles and skills are required to ensure effective online learning as online learning requires a more flexible approach. It can be seen, teaching online requires teachers to have more competencies and skills compared to traditional teaching (*Lasi 2021, 70*).

Relevant competencies and skills of teachers and students for online learning is the preparedness to distance learning, which provides a quality educational process during emergencies.

As it is known, the outbreak of the pandemic not only exacerbated global inequalities worldwide but also restricted several internationally recognized human rights including the right of the child to education. In times of public health emergency, education should be child-centered, rights-based, protective, inclusive and participatory<sup>2</sup>. In this regard, adopting a comprehensive national strategy or action plan for the children with relevant provisions on how to conduct an education in emergencies is highly recommended for the State<sup>3</sup>.

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<sup>1</sup>Even before COVID-19, the world was experiencing a learning crisis. 258 million children of primary- and secondary-school age were out of school, and the Learning Poverty rate in developing countries was 53% meaning that over half of all 10-year-old children could not read and understand a simple text. According to UNESCO calculations, covering 180 countries and territories, evaluate that about 10.9 million students from primary and secondary levels are at risk of not returning schools or other education institutions of which many of them are girls living in the world's least developed countries where attending school and getting an education is already a struggle (UNESCO 2020b, 5-7).

<sup>2</sup>Committee on the Right of the Child. 2008. "Day of General Discussion on the Right of the Child to Education in Emergency Situations" Accessed 03 March 2021 [https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC\\_Report\\_Right\\_of\\_the\\_Child\\_to\\_Education\\_in\\_Emergencies\\_2008.pdf](https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC_Report_Right_of_the_Child_to_Education_in_Emergencies_2008.pdf)

<sup>3</sup>Committee on the Right of the Child. 2003. "General Comment No. 5 General measures of implementation of the Convention on the Rights of the Child". Accessed 01 March 2021.

<http://docstore.ohchr.org/SelfServices/FilesHandler.ashx?enc=6QkG1d%2FPPrICAqhKb7yhsiQql8gX5Zxh0cQqSRzx6Zd2%2FQRsDnCTcaruSeZhPr2vUevjbn6t6GSi1fheVp%2Bj5HTLU2Ub%2FPZZtQWn0jExFVnWuhiBbqgAj0dWBofGbk0c>

UN Human Rights Council General Comment N 13 (Article 13) provides that to receive an education “in all its forms and at all levels” should be based on following interrelating and essential features :

- Availability**- number of functioning educational institutions, capacitated buildings and education facilities, etc.
- Acceptability**- non-discrimination, physical and economic accessibility
- Accessibility**- form and substance, curricula, teaching methods, minimum educational standards,
- Adaptability**- flexibility to the needs of the society, particularly the diverse social-cultural needs of students.<sup>4</sup>

Because of COVID-19 pandemics, the chances of drop-out tendencies increase. According to UNICEF data, more than 1 billion children are at risk of falling behind due to school closures aimed at containing the spread of COVID-19 (*UNICEF 2020*). As the States have a positive obligation to guarantee the continuity of education, they should undertake necessary steps to avoid drop-out tendencies at the schools. The COVID-19 crisis and the unparalleled education disruption are far from being over. As many as 100 countries have yet to announce a date for schools to reopen and across the world, governments, unions, parents and children are grappling with when and how to approach the next phase (*UN 2020*).

## 1.THE MODEL FOR ASSESSING THE EDUCATION SYSTEM IN EMERGENCIES: METHODOLOGY

### 1.1 BRIEF INTRODUCTION

In 2019, people all over the world are faced with new realities and adopted new rules of life. One of these realities affected the education system as well. Due to the COVID-19 pandemic, many countries in the world have initiated emergency remote education applications and systems in order to continue their education without interruption, aiming for students to continue their education. Under the crisis of COVID-19 remote/distance learning became a viable alternative to ensure the continuity of the educational process(Çağatay 2020).

Under these circumstances, researches aimed at studying the preparedness of the education system to adapt to new realities and to act in crisis conditions are important.

To this end, a group of Armenian experts took the initiative to develop a model for assessing the education system in emergencies - Education Preparedness Index in COVID-19 (EPIC).

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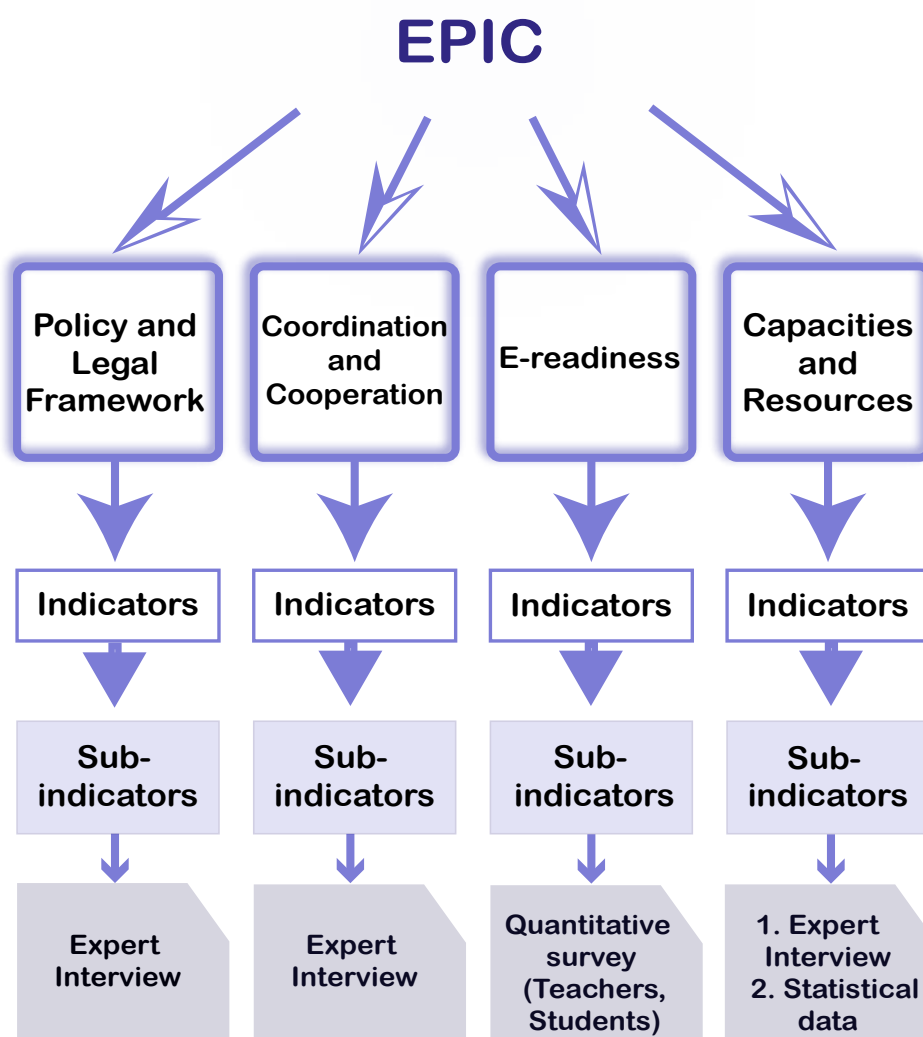
Human Rights Council. 2020." Report of the Special Rapporteur on the right to education. UN Committee on Economic, Social and Cultural Rights, General Comment No. 13: The right to education (Article 13)." Accessed 8 March 2021  
<https://www.ohchr.org/EN/Issues/Education/Training/Compilation/Pages/d%29GeneralCommentNo13Therighttoeducation%28article13%29%281999%29.aspx>.

The education in emergency readiness assessment framework is a set of indicators, tools, and methods aimed at measuring education system readiness to emergencies and analyzing the effectiveness of education policy responses in crisis periods. The framework covers four main thematic areas, as follows:

- Policy and Legal Framework
- Coordination and Cooperation
- E-readiness
- Capacities and Resources

Each thematic area incorporates a set of indicators and sub-indicators that allow uncovering the level of achievements and effectiveness of preparedness within each recommended section.

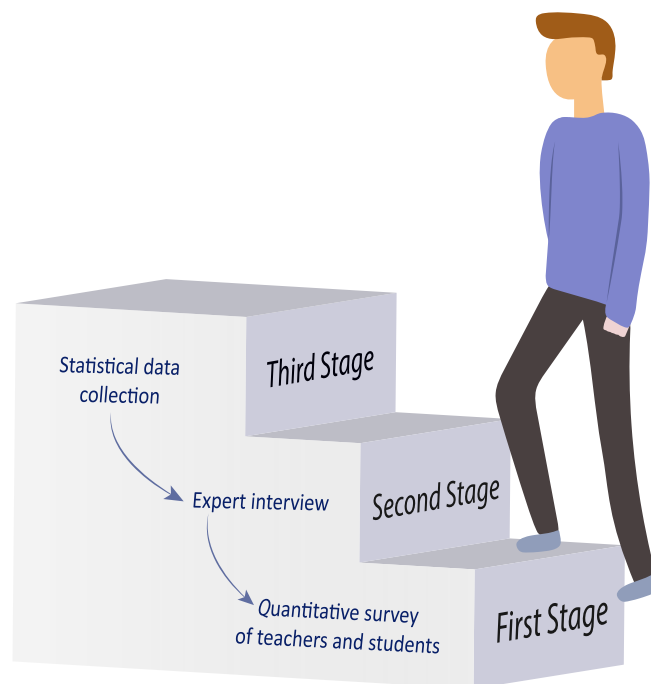
Figure 1. Education Preparedness Index in COVID-19



The calculation and analysis of the index is based on three data sources:

1. Quantitative survey of teachers and students;
2. Expert interview;
3. Statistical data.

Figure 2. Data collection stages



## 1.2 RESEARCH APPROACH

To achieve the research goals accordingly, the triangulation strategy was employed. The strategy is characterized as collecting data by combining qualitative and quantitative methods to avoid the possible biases deriving from the single source of information, and to help ensure comprehensiveness of the information. The purpose of the triangulation approach is to use diverse methods to assist each other in explaining and interpreting the data. Following this approach, the implementation of the research consists of three stages including both quantitative and qualitative components (*see Fig. 2*).

## QUANTITATIVE RESEARCH

**Stage 1:** The research includes conducting a representative quantitative survey among students and teachers of secondary schools to assess and calculate the E-Readiness Sub-index. The survey covers the following three thematic areas, indicating readiness to distance education of schools:

- Technological readiness to distance learning
- Social –psychological readiness to e-learning
- Cognitive readiness to online education

Each of the above-mentioned areas has its sub-indicators and a series of relevant questions for teachers and students. We adopted an online-standardized questionnaire hosted on Google, the link to which was provided to school administrators who further ensured its dissemination among students and teachers via private messaging systems. The questionnaire includes questions, mainly designed by using a Likert scale. On average, responders complete the survey in 20 minutes. The responses to these questions are initially collected by the Google drive excel database. After completion of the full survey, all answers were directly exported into an SPSS file and analyze.

## QUALITATIVE SURVEY: EXPERTS INTERVIEWS

**Stage 2:** As Creswell (2003) noted, follow-up qualitative data can provide insight into the quantitative data. It allows indicating whether the educational system, in general, is ready to ensure uninterrupted education in emergencies like pandemics. As a qualitative method, interviews with experts, who were involved in relevant policy/strategies elaboration, implementation, and monitoring, are utilized to collect information on policy level readiness of the education system in an emergency. The expert interview questionnaire consists of questions with scaled answers formulated in a closed-form that later standardized and transform into appropriate scores. It covers questions related to the existing regulations and policies, capacities, coordination of involved parties, technological availability, and delivered models of e-learning . To this end, interviews with representatives of the Government, independent experts, involved CSOs and international organizations were conducted. The expert interviews were conducted by utilizing the snowball sampling technique, which is defined as a non-probability **sampling technique** and based on referrals by experts to each other to recruit samples required for a research study. This technique is appropriate to utilize in case the final database of experts is not available at the stage of sampling design. The process of expert recruitment was started from the Ministry of Education the most involved focal persons in this regard. Further, they were asked inquiry questions

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<sup>5</sup>For more information on E-Readiness and its Indicators, see Chapter 7, Section 7.2.: "E-READINESS FOR TEACHERS AND STUDENTS" and Annex 3.

<sup>6</sup>For more information on See Annexes 1, 2, 4.

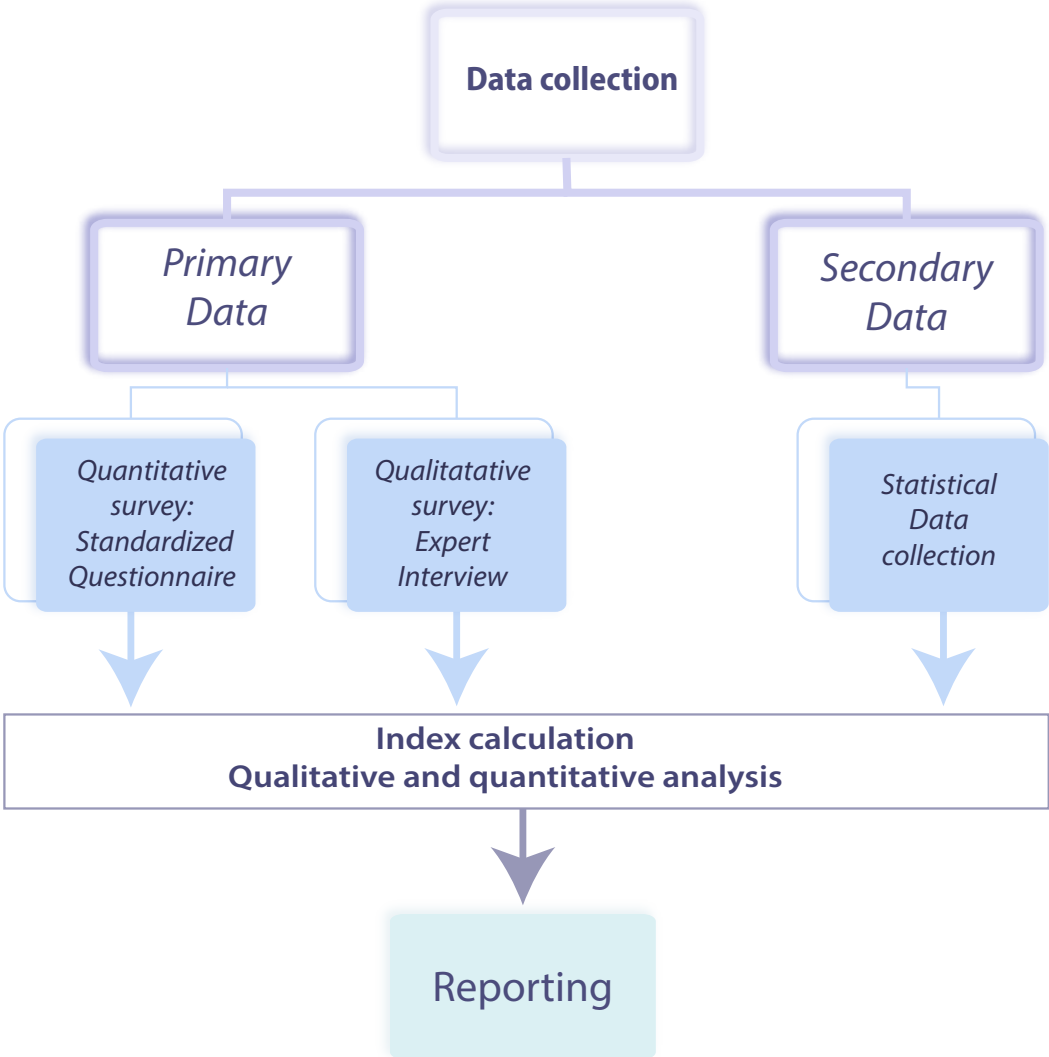
to identify other key players in the field. To collect impartial and well-balanced information, parallelly, renowned independent education experts were recruited to take part the interviews. In total, around 12 experts were reached out, three per each of the above-mentioned fields. An important approach is the application of the saturation method when the number of experts is determined by the collected information. Thus, as soon as we got to the point when information began to be repeated, we stopped the expert interviews.

### 1.3 STATISTICAL DATA COLLECTION

**Stage three:** The third stage of the study involves the collection of statistical data (See Table 1). In case of missing data for the reporting year, the most recent available data can be collected.

*In the final stage, all the data are standardized, on the basis of which the INDEX is calculated in the range 0-100, where 0 is the lowest level of preparedness and 100 is the highest.*

Figure 3. Data collection, analysis, reporting





### 1.3. EPIC: WEIGHS AND CALCULATION

Table 1. EPIC: Sub-Indexes, Indicators and Sub-Indicators

Education Preparedness Index in COVID-19 (EPIC)		
Sub-Index	Indicator	Sub-Indicator
<b>1. Policy and Legal Frameworks</b>	1. Quality Education: 4As	<ul style="list-style-type: none"> <li>• Availability</li> <li>• Accessibility</li> <li>• Acceptability</li> <li>• Adaptability</li> </ul>
	2. Equality	<ul style="list-style-type: none"> <li>• Gender Disparity</li> <li>• Disability</li> <li>• Children of Migrant Workers</li> <li>• Refugees</li> <li>• National or Ethnic, Religious and Linguistic Minorities</li> <li>• Child Labour</li> </ul>
	3. Drop-out risks	<ul style="list-style-type: none"> <li>• National education laws, regulations, policies, measurement system ensuring continuity of education</li> <li>• Multi-Sectoral policy (government, school, community, etc.)</li> <li>• School action plan/guideline</li> </ul>
	4. Comprehensive national strategy for children	<ul style="list-style-type: none"> <li>• The legal framework of the strategy/action plan</li> <li>• The efficiency of the strategy/action plan</li> </ul>
	5. Inter-sectoral cooperation	<ul style="list-style-type: none"> <li>• Legal formulation of Inter-sectoral cooperation</li> <li>• The efficiency of Inter-sectoral cooperation</li> </ul>

<b>2. Coordination and cooperation</b>	1.Ad Hoc Committee	-
	2.Multi Stakeholders Partnership	<ul style="list-style-type: none"> <li>• <i>Stipulation in national legislation concerning the multi-stakeholders governance body at any level</i></li> <li>• <i>Structure</i></li> <li>• <i>Functions, Mandate/ Obligations</i></li> <li>• <i>Quality</i></li> </ul>
<b>3. E-readiness</b>	1.Technological Readiness	<ul style="list-style-type: none"> <li>• <i>Students</i></li> <li>• <i>Teachers</i></li> </ul>
	2.Social-Psychological Readiness	<ul style="list-style-type: none"> <li>• <i>Students</i></li> <li>• <i>Teachers</i></li> </ul>
	3.Cognitive Readiness	<ul style="list-style-type: none"> <li>• <i>Students</i></li> <li>• <i>Teachers</i></li> </ul>
<b>4.Capacities and Resources</b>	1.Availability and efficiency of educational technologies	<ul style="list-style-type: none"> <li>• <i>Availability of special portals/platforms</i></li> <li>• <i>Payable video conferencing software</i></li> <li>• <i>Free video conferencing software</i></li> <li>• <i>Free video conferencing software with limited features</i></li> </ul>
	2.Supporting Resources for educational technologies	<ul style="list-style-type: none"> <li>• <i>Social Media applications and TV/Radio as an additional resource</i></li> <li>• <i>TV, Radio learning programs</i></li> <li>• <i>Additional Resources</i></li> </ul>
	3.Reserve Funds	-

	4. Budgeting Opportunities	<ul style="list-style-type: none"> <li>• Allocation of sufficient financial resources</li> <li>• Emergency response section in the budget</li> </ul>
	5. Internet Speed	<i>Mobile</i> <ul style="list-style-type: none"> <li>• Download</li> <li>• Upload</li> <li>• Latency</li> </ul>
		<i>Fixed Broadband</i> <ul style="list-style-type: none"> <li>• Download</li> <li>• Upload</li> <li>• Latency</li> </ul>
	6. Internet Users (%)	-
7. Government expenditure on education (%GDP)	-	

Table 1 presents EPIC Sub-Indexes, Indicators and Sub-Indicators. EPIC has 4 Sub-Indexes, 17 Indicators and 38 Sub-indicators. The scores assigned to the Sub-Indicators transform into scores of Indicators, which in turn form the scores for Sub-Indexes. The calculation of Sub-Indexes and the total EPIC score are determined as follows:

### 1. Policy and Legal Frameworks (PLF)

•  $PLF^7 = (Quality\ Education:4As + Equality + Drop\ out\ Risks + Comprehensive\ National\ Strategy + Inter\text{-}sectoral\ cooperation) / 5$

### 2. Coordination and cooperation (CC)

•  $CC^8 = (Ad\ Hoc\ Committee + Multi\ Stakeholders\ Partnership) / 2$

<sup>7</sup>PLF=Average/Weighted Average of Sub-Indicators

<sup>8</sup>CC=Average/Weighted Average of Sub-Indicators

### 3. E-readiness

- E-readiness<sup>9</sup>=(Technological Readiness + Social-Psychological Readiness + Cognitive Readiness)/3

### 4. Capacities and Resources (CR)

- CR<sup>10</sup>= (Reserve Funds+ Budgeting Opportunities + Internet Speed + Internet Users + Government expenditure on education + Availability and efficiency of educational technologies+ Supporting Resources for educational technologies)/7

$$\text{EPIC} = (\text{PLF} + \text{CC} + \text{E-readiness} + \text{CR})/4$$

The index is measured from 0 to 100, according to which states are classified in the following way:

- 0 – 32 is "the lowest level of preparedness"
- 33 – 66 is "the mid-level of preparedness"
- 67 - 100 is "the highest level of preparedness"

#### 1.4. METHODOLOGICAL NOTES: Explanation on a calculation of scores for three types of data<sup>12</sup>

All data are standardized by the following formula:

Formula 1. Data standardization

$$\frac{(x_i - \min\{x_i\})}{\max\{x_i\} - \min\{x_i\}}$$

where`  
min{x<sub>i</sub>} is the lowest value the variable X can attain  
max{x<sub>i</sub>} is the highest value the variable X can attain

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<sup>9</sup>E-readiness=Average/Weighted Average of Sub-Indicators

<sup>10</sup>CR=Average/Weighted Average of Sub-Indicators

<sup>11</sup>EPIC=Average/Weighted Average of Indicators

<sup>12</sup>An Excel file with integrated formulas is attached to the Index/Tool. The calculation will be carried out automatically when filling in the data.

After the standardization, all data are ranged on a scale from 0 to 100, where 0 is the lowest value and 100 is the highest.

### SCORING SYSTEM FOR EXPERT INTERVIEW ANSWERS:

As was mentioned above, the expert interview questionnaire consists of questions with scaled answers, which are the following:

No = 0, which standardized value is 0  
 To some extent = 1, which standardized value is 50  
 Yes = 2, which standardized value is 100

The final answer for each question is defined by mode.

Table 2. Example 1

Example												Sub-index 2: Coordination and cooperation											
Indicator		Questions for Expert Interview										Answers											
Ad Hoc Committee		Do national education laws, regulations and policies provide for the establishment of a coordinating body to ensure the continuity of education in emergencies?										Yes / No											
		Expert Answers										Summarized answer / mode <sup>1</sup>											
		Exp 1	Exp 2	Exp 3	Exp 4	Exp 5	Exp 6	Exp 7	Exp 8	Exp 9	Exp 10												
		Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes											
Yes=2, which standardized value is 100																							

In the same way, we count the second Question answers for this indicator, and then calculate the final score for Ad Hoc Committee Indicator, which is the simple average of two answers scores:

Table 3. Example 2

Example				Sub-index 2: Coordination and cooperation			
Indicator		Questions for Expert Interview				Summarized answers/ mode	Standardized Scores
Ad Hoc Committee		Do national education laws, regulations and policies provide for the establishment of a coordinating body to ensure the continuity of education in emergencies?				Yes	100
						No	

<sup>13</sup>In case the mode is not a qualified majority of answers, researchers should reach the experts on the second round and repeat the circles until they get homogenous responses.

	How effective is the coordinating body in ensuring the continuity of education in emergencies?	Very well	50
		To some extent	
		Not at all	
<b>Ad Hoc Committee = <math>(100+50)/2=75</math></b>			

## E-READINESS DATA CALCULATION

### Data calculation for each question

No (negative context)=0	Percent of answers *0
To some extent= $Qi\%/2$	Percent of answers/2
Yes (positive context) = $Qi\%$	Percent of answers

Table 4. Example 3

<i>Example</i> Sub- index 3: E-readiness			
Indicator	Questions for Students	Answers of Students	Standardized Scores
Technological Readiness (TR) to Distance Education	Q1: Do you feel confident to use a digital device (computer/telephone/tablet) for your learning purposes?	Yes – 50%	50
		To some extent- 30%	15 (30/2)
		No – 20%	0 (20*0)
	Q2: Do you feel confident to use the Internet for your learning purposes?	Yes - 30%	30
		To some extent- 60%	30 (60/2)
		No- 10%	0 (10*0)

$$Q_1=50+15+0=65$$

$$Q_2=30+30+0=60$$

In the same way, we count all the questions of this sub-indicator (in this case, totally 10 questions)

$$\text{Technological Readiness/Students}=(Q_1+Q_2+\dots Q_{10})/10$$

$$\text{Technological Readiness/Teachers}=(Q_1+Q_2+\dots Q_{10})/10$$

$$\text{Technological Readiness}=(TR_{Students}+ TR_{Teachers})/2$$

$$\text{Social-Psychological Readiness/Students}=(Q_1+Q_2+\dots Q_n)/N$$

$$\text{Social-Psychological Readiness/Teachers}=(Q_1+Q_2+\dots Q_n)/N$$

$$\text{Social-Psychological Readiness}=(SPR_{Students}+ SPR_{Teachers})/2$$

$$\text{Cognitive Readiness/Students}=(Q_1+Q_2+\dots Q_n)/N$$

$$\text{Cognitive Readiness/Teachers}=(Q_1+Q_2+\dots Q_n)/N$$

$$\text{Cognitive Readiness}=(CR_{Students}+ CR_{Teachers})/2$$

## STANDARDIZATION OF STATISTICAL DATA

While standardizing statistical formula (*see Formula 1*) the minimum and maximum values of each variable are identified by calculating the world average of the three minimum and three maximum values recorded in recent years (3 years). Xi is the value of a variable (e.g. Internet Users, %) for a given country for the reporting year.

Table 5. Variables of Statistical data and sources

Variable	Source
<b>1.Reserve Funds</b>	National Statistical Services
<b>2.Internet Speed</b> - Download - Upload - Latency	Speed -test Global Index: <a href="https://www.speedtest.net/global-index">https://www.speedtest.net/global-index</a>
<b>3.Internet Users (%)<sup>1</sup></b>	International Telecommunication Union (ITU): <a href="https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx">https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx</a>
<b>4.Government expenditure on education (% of GDP)</b>	<b>World Bank Indicators:</b> <a href="https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS">https://data.worldbank.org/indicator/SE.XPD.TOTL.GD.ZS</a>

<sup>14</sup>The variable "Internet Users" has three dimensions. The overall score for this variable is the average of the standardized data of these dimensions. Values of the "Latency" have the opposite meaning others than

## 2. RIGHT TO EDUCATION

The right to education as one of the economic, social and cultural rights obliges the states to undertake all necessary measures by using the maximum of available resources. The states must ensure freedom from discrimination in education and must provide free, compulsory primary education – regardless of the resources available to the government.<sup>16</sup>

The right to education involves specific requirements at different levels of education. Primary education must be compulsory and free of charge for all, which will involve considerations of both direct and indirect costs relating to education. The compulsory nature of primary education guards against violations of this right by parents or governments eliminates income-based discrimination and removes incentives for non-attendance. States should develop a national framework that will progressively expand and improve the educational system and successively introduce free education at all other levels, namely secondary, higher, and fundamental education.<sup>17</sup>

To help States understand their obligations, the former United Nations Special Rapporteur on Education, Katarina Tomasevski, developed the following “4” as a scheme identifying the essential features of quality education.<sup>18</sup>

- (a) Availability, which requires that functioning educational institutions (including sanitation facilities for both sexes and safe drinking water) be available, as well as trained teachers, teaching materials, computer facilities and information technology;
- (b) Accessibility, meaning that educational institutions and programmes have to be physically and economically accessible to everyone, without discrimination;
- (c) Acceptability, meaning that the form and substance of education, including curricula and teaching methods have to be acceptable to students and, in appropriate cases, parents; this is subject to the educational objectives required by article 13(1) of the Covenant and such minimum educational standards as may be approved by the State under the articles 13(3) and (4).
- (d) Adaptability, which demands that education be “flexible so it can adapt to the needs of changing societies and communities and respond to the needs of students within their diverse social and cultural settings”.<sup>19</sup>

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"Download" and "Upload". The highest values indicate the worst situation, the lowest values the best. In this case, the minimum and maximum values in the formula are swapped.

See, CESCR, General Comment No. 3: The Nature of States Parties Obligations, UN Doc. E/1991/23(SUPP), 1 January 1991, paras 2, 9. Committee on Economic, Social and Cultural Rights.1991. General Comment No. 3: The Nature of States Parties Para 5.

United Nations General Assembly. 1989. International Convention on the Rights of the Child. Article 28..

UN Commission on Human Rights.1999. Preliminary Report of the Special Rapporteur on the Right to Education. Paras. 51–74.



As it is stated above, the International Covenant on Economic, Social and Cultural Rights and the Convention on the Rights of the Child do not contain provisions on possible derogations from this right. During a public health emergency, such as COVID-19, the State parties of the following Conventions should undertake appropriate actions to guarantee this right's fulfillment. Even though COVID-19 forced the member states to close schools and to limit the scope of the right to education, however, the State parties are not waived from their international obligations. They should guarantee the fulfillment of the right in times of COVID-19.

It is worthy to note that the States' measures, in essence, must be necessary to combat the public health crisis posed by COVID-19 and be reasonable and proportionate. Emergency measures and powers adopted by States parties to address the pandemic should not be abused, and should be lifted as soon as they are no longer necessary for protecting public health.<sup>20</sup>

### 3 RIGHT TO EDUCATION AS AN INTERNATIONAL HUMAN RIGHT

The right to education is enshrined in numerous international and regional human rights instruments. Article 26 of the **Universal Declaration on Human Rights** stipulates that everyone's right to education and makes it mandatory for the State parties to provide free education at least elementary and fundamental stages of life. It also requires the State parties to make elementary education compulsory. According to the Universal Declaration, the key purposes of education is human development and the strengthening of respect for human rights and fundamental freedoms.<sup>21</sup>

The Right to education is also stipulated in the **International Covenant on Economic, Social and Cultural Rights** (ICESCR). ICESCR enumerates the steps that the State parties should undertake to realize the right to education. The Covenant stipulates that primary education shall be compulsory and available free to all. The state parties should undertake the necessary steps for school development. Parents should have the freedom to choose schools for their children. Children should have the opportunity to pursue education programs according to their religious and moral convictions, etc.

Article 10 of the Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) stipulates that States parties shall take all appropriate measures to eliminate discrimination against women to ensure to them equal

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<sup>19</sup>UN Committee on Economic, Social and Cultural Rights, 1999. General Comment No. 13: The right to education (Article 13). Accessed 04 March 2020

<https://www.ohchr.org/EN/Issues/Education/Training/Compilation/Pages/d%29GeneralCommentNo13Therighttoeducation%28article13%29%281999%29.aspx>

<sup>20</sup>Human Rights Council. 2020. Report of the Special Rapporteur on the right to education, para 10.

<sup>21</sup>United Nations General Assembly. 1948. Universal Declaration of Human Rights. Article 26. Accessed 07 March 2020 <https://www.un.org/en/about-us/universal-declaration-of-human-rights>

<sup>22</sup>United Nations General Assembly. 1966. International Covenant on Economic, Social and Cultural Rights. Article 13. Accessed 01 March 2021. [https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg\\_no=IV-3&chapter=4](https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=IV-3&chapter=4).

rights with men in the field of education and in particular, to ensure, based on equality of men and women. It also stipulates that both male and female students should have equal access to the same curricula examinations, teaching staff with qualifications of the same standard and school premises and equipment of the same quality. It also created an obligation for the state parties to reduce female drop-out rates from the schools and programmes for girls and women who have left school prematurely.

Article 24 of the **International Convention on the Rights of Persons with Disabilities** (CRPD) guarantees the right of persons with disabilities to education. This Article obliges state parties to provide instruction in an inclusive, non-discriminatory and equal manner. The State parties should undertake necessary Steps to ensure persons with disabilities are not excluded from the education systems based on disability. Persons with disabilities shall have access to an inclusive, quality and accessible primary education. Persons with disabilities shall receive the support required within the general education system to facilitate their effective education. Effective individualized support measures must be provided in environments that maximize academic and social development, consistent with the goal of full inclusion.<sup>24</sup>

According to Article 12.4 of the **International Convention on the Protection of the Rights of All Migrant Workers and Members of their Families** (CPRMWF), States Parties must respect migrant worker parents and legal guardians' liberty to choose religious and moral education for their children in conformity with their convictions. Article 30 of the Convention stipulates that each child of a migrant worker shall have the fundamental right to access education based on equality of treatment with nationals of the State concerned. As per Article 45 of the Convention, members of the families of migrant workers in the State of employment shall enjoy equality of treatment with that State's nationals while accessing educational institutions and services. Institutions' admission requirements, regulations and services should be the same.<sup>25</sup>

According to Article 22 of the **International Convention Relating to the Status of Refugees, the Contracting States** shall accord to refugees treatment as favorable as possible, and, in any event, not less favorable than that accorded to aliens generally in the same circumstances, concerning education other than elementary education and, in particular, as regards access to studies, the recognition of foreign school certificates, diplomas and degrees, the remission of fees and the award of scholarships.<sup>26</sup>

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<sup>23</sup>United Nations General Assembly. 1979. International Convention on the Elimination of All Forms of Discrimination Against Women, Article 10, 19 December 1979. Accessed 02 March 2021 <https://www.un.org/womenwatch/daw/cedaw/>.

<sup>24</sup>United Nations General Assembly. 2006. International Convention on the Rights of Persons with Disabilities. Article 24. the UN General Assembly, 13 December 2006. Accessed 07 March 2020. <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>

<sup>25</sup>United Nations General Assembly. International Convention on the Protection of the Rights of All Migrant Workers and Members of Their Families. Articles 12, 30, 45. Accessed 12 March 2020. <https://www.ohchr.org/en/professionalinterest/pages/cmw.aspx>

<sup>26</sup>United Nations General Assembly. 1951. International Convention Relating to the Status of Refugees, Article 22. Accessed 05 March 2021. <https://www.ohchr.org/en/professionalinterest/pages/statusofrefugees.aspx>

According to Article 4 of the **Declaration on the Rights of Persons belonging to National or Ethnic, Religious and Linguistic Minorities**, States should, where appropriate, take measures in the field of education to encourage knowledge of the history, traditions, language and culture of the minorities existing within their territory. Persons belonging to minorities should have adequate opportunities to gain an understanding of society as a whole.

The **United Nations Convention on the Rights of the Child** (CRC) separates two articles concerning the right to education. According to the Article 28 of the CRC the states recognize the right of the child to education and the possibilities of its implementation, such as by defining different means and principles of receiving education (equal opportunities, availability, the frequency of attending schools, etc). Article 29 of CRC targets the education goals in relation to the development, individual qualities, virtue, physical and mental development of the child, cultural peculiarities and many others. The consideration of the EPIC covers mostly Article 28 of the CRC which obliges its member states to make primary education compulsory and available for all.<sup>28</sup> Article 28(c) guaranteeing the accessibility of the education programs by all means. State parties should undertake appropriate measures to encourage attendance at schools and decrease dropout rates. It also created an education framework that will ensure the full development of the child.

#### **4. RIGHT TO EDUCATION AS DOMESTIC OBLIGATION**

All countries have a legal foundation, generally consisting of a founding document, such as a constitution, and the laws passed by the national legislature and other levels of lawmaking authority. These laws function in a hierarchy, which determines how they rank in authority and how the authority and scope of each level are derived from the constitution (Wheeler 1911, 66-83). Different countries have different legal systems and hierarchies of the norms. The differences are associated with governing systems.

In terms of the basic elements of the hierarchy, a constitution states the grounding legal and democratic principles that its government is obligated to uphold, and because of this is considered the supreme law in a country to which all other laws must adhere. A statute is a law enacted by a legislature to govern society, and its authority is derived from the constitution or founding document of a country, which authorizes the legislature to enact it. Regulations are issued under the authority of a statute by a division of the government or by a special body (*IFES 2016, 2*).

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<sup>27</sup>United Nations General Assembly. 1992. Declaration on the Rights of Persons belonging to National or Ethnic, Religious and Linguistic Minorities. Article 5. Accessed 03 March 2020  
<https://www.ohchr.org/en/professionalinterest/pages/minorities.aspx#:~:text=1.-,Persons%20belonging%20to%20national%20or%20ethnic%2C%20religious%20and%20linguistic%20minorities,and%20without%20interference%20or%20any>

<sup>28</sup>United Nations General Assembly. 1989. International Convention on the Rights of the Child. Article 28. Accessed 02 March 2021. <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>.

To be sure the country guarantees the right to education, first of all, it is necessary to check whether the Constitution contains relevant provisions. If the Constitution has relevant provisions concerning the right to education, it is important to check whether the ordinary jurisdiction or legislatively enacted legal acts have relevant provisions concerning the rights. The implementation of the acts falls under Government's competency. To achieve the main goals of the legislative acts, usually, the Governments are adopting regulations, related to the right to education. As the government's resources are limited, very often, they are adopting strategies concerning the right to an education that serve as guiding policy.

When States are ratifying international legal instruments, they are responsible for incorporating and implementing their norms into their domestic jurisdiction. The vast majority of States approved dozens of international tools concerning the right to education. Hence, they opt to be bound by the norms of international jurisprudence.

On the one hand, public health emergencies can create hardships for the states to provide quality education. On the other hand, the domestic jurisdictions and international commitments oblige states to guarantee the fulfillment of the right. In times of global health emergencies, the relevant state institutions should abolish legal and administrative barriers, which may impede the educational process. Children and their parents should have the necessary financial resources to get a quality education. It is important to ensure affordable distance learning programs. Compulsory schooling should not be interrupted.<sup>29</sup>

States Parties shall undertake all appropriate legislative, administrative, and other measures for the implementation of the rights. States should not only strengthen their national systems of education, but also the legal framework for the protection and health and essential social services to increase their ability to withstand emergencies.<sup>30</sup>

Based on their domestic jurisdiction and international instruments, during an emergency, the States should prepare a plan of action to provide education in emergencies. Domestic legal acts should create obligations for the States to allocate adequate sustained resources to ensure the right to education when an emergency occurs. The adoption of the emergency responsive curriculum is necessary, and teachers should be trained to cope with emergencies. Domestic legal acts should contain provisions on how to adopt emergency responsive curricula, for all levels of the educational system. Domestic legal acts shall create grounds for the establishment and maintenance for a transparent and effective monitoring system.<sup>32</sup>

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<sup>29</sup>The UN Committee on Economic, Social and Cultural Rights. 1999. General Comment No. 13: The right to March education (Article 13). Accessed 07 March 2020. <https://www.ohchr.org/EN/Issues/Education/Training/Compilation/Pages/d%29GeneralCommentNo13Therighttoeducation%28article13%29%281999%29.aspx>.

<sup>30</sup>The UN Committee on the Right of the Child. 2008. Day of General Discussion on the Right of the Child to Education in Emergency Situations. Accessed 06 March 2021. [https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC\\_Report\\_Right\\_of\\_the\\_Child\\_to\\_Education\\_in\\_Emergencies\\_2008.pdf](https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC_Report_Right_of_the_Child_to_Education_in_Emergencies_2008.pdf)

<sup>31</sup>The UN Committee on the Right of the Child. 2008. Day of General Discussion on the Right of the Child to Education in Emergency Situations. [https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC\\_Report\\_Right\\_of\\_the\\_Child\\_to\\_Education\\_in\\_Emergencies\\_2008.pdf](https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC_Report_Right_of_the_Child_to_Education_in_Emergencies_2008.pdf).

<sup>32</sup>The UN Committee on Economic, Social and Cultural Rights. 1999. General Comment No. 13: The right to education (Article 13). Accessed 08 March 2021. <https://www.ohchr.org/EN/Issues/Education/Training/Compilation/Pages/d%29GeneralCommentNo13Therighttoeducation%28article13%29%281999%29.aspx>.

National laws and regulations should contain provisions related to the internationally agreed principles of equity and non-discrimination. Exclusion from education or limitations to the right to education on the basis of socially ascribed or perceived difference should be prohibited, and States must ensure this prohibition is duly applied at all levels and in relation to all children.<sup>33</sup>

Developing a comprehensive national strategy and curricula based on children's needs are enshrined in the Convention on the Right of the Child. If the State Government as a whole and at all levels is to promote and respect the rights of the child, it needs to work based on a unifying, comprehensive and rights-based national strategy, rooted in the Convention.<sup>34</sup> The comprehensive national strategy may be elaborated in sectoral national plans of action - for example for education and health - setting out specific goals, targeted implementation measures and allocation of financial and human resources.<sup>35</sup>

As providing education is a positive obligation of the state, a comprehensive national strategy should include principles on how to conduct education in emergency situations. National and local education plans should indicate the actions to be taken in current or future emergencies. They should specify decision-making, coordination, security and protection mechanisms for inter-sectoral coordination. Plans should be based on a thorough understanding of the context and should include indicators and mechanisms for early warning of disaster and conflict. They should be supported by appropriate education policies and frameworks. There should be a system for regular revision of national and local education plans (*INEE 2010, 10, 80*). This should include the appointment of a focal point within the Ministry of Education in charge of coordination between governmental bodies, civil society, humanitarian relief agencies and donors; the allocation of adequate sustained resources to ensure the fulfillment of the right to education should an emergency occur.<sup>36</sup>

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<sup>33</sup>The UN Committee on the Right of the Child. 2008. Day of General Discussion on the Right of the Child to Education in Emergency Situations. Accessed 08 March 2021. [https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC\\_Report\\_Right\\_of\\_the\\_Child\\_to\\_Education\\_in\\_Emergencies\\_2008.pdf](https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC_Report_Right_of_the_Child_to_Education_in_Emergencies_2008.pdf).

<sup>34</sup>The UN Committee on the Right of the Child. 2003. General Comment No. 5 General measures of implementation of the Convention on the Rights of the Child. Accessed 08 March 2021. <http://docstore.ohchr.org/SelfServices/FilesHandler.ashx?enc=6QkG1d%2FPPrICAqhKb7yhsiQql8gX5Zxh0cQqSRzx6Zd2%2FQRsDnCTcaruSeZhPr2vUevjbn6t6GSi1fheVp%2Bj5HTLU2Ub%2FPZZtQWn0jExFVnWuhiBbqgAj0dWBoFGbK0c>.

<sup>35</sup>The Committee on the Right of the Child. 2003. General Comment No. 5 General measures of implementation of the Convention on the Rights of the Child. Accessed 10 March 2021. <http://docstore.ohchr.org/SelfServices/FilesHandler.ashx?enc=6QkG1d%2FPPrICAqhKb7yhsiQql8gX5Zxh0cQqSRzx6Zd2%2FQRsDnCTcaruSeZhPr2vUevjbn6t6GSi1fheVp%2Bj5HTLU2Ub%2FPZZtQWn0jExFVnWuhiBbqgAj0dWBoFGbK0c>.

<sup>36</sup>The UN Committee on the Right of the Child. 2008. Day of General Discussion on the Right of the Child to Education in Emergency Situations. Accessed 12 March 2020. [https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC\\_Report\\_Right\\_of\\_the\\_Child\\_to\\_Education\\_in\\_Emergencies\\_2008.pdf](https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC_Report_Right_of_the_Child_to_Education_in_Emergencies_2008.pdf).

## 5. EDUCATION IN EMERGENCY

*Education* is a process of learning that begins at birth and continues to the end of life. Education is a process that takes place in the family, community and at school. As mentioned above, the right to education is fundamental and inalienable (Nicolai 2003, 11-12). Education promotes the increase of quality of life, helps individuals to lead a healthy life, be a full member of society, restore peace and stability (UNICEF 2018).

An *emergency* is a sudden situation that exposes to danger the safety of one or more individuals. An emergency situation can be caused by armed conflict, political instability, natural disaster, health-related crises, etc (Nicolai 2003, 11-12). Above mentioned events, that abruptly a children's normal educational process via limiting their opportunities to gain age-specific knowledge and skills can be defined as an education in emergency. During an emergency situation, the continuity of the educational process is very important especially for children, as emergencies can disrupt a child's education for years, which will have a negative impact on the further development of the state. Therefore, education in an emergency plays a crucial role in the lives of children, being in a difficult situation. In this regard, it is important for the states to have an educational response in emergencies for mitigating the impact of sudden eventualities on education. An educational response in emergencies can be explained by the following:

- Education in emergencies can be both life-saving and life-sustaining. It can save lives by protecting against exploitation and harm and by disseminating key survival messages (INEE 2004, 5).
- Schooling in emergency times can help improve psychological well-being, enhance child social-psychological resistance and recover their self-esteem. Peer-to-peer communications and games help to rebuild social skills and trust towards adults and peers.
- It returns a feeling of safety and a chance for a decent future.
- Education is a tool for protecting children in emergencies.
- Education provides a channel for conveying health and survival messages and for teaching new skills and values, such as peace, tolerance, conflict resolution, democracy, human rights, environmental conservation (Bensalah 2002, 11).

It is important to note, that education efforts in emergencies can be based on three pillars:

- 
- The child's right to education
- The child's need for protection

A community's priority of education (Nicolai 2003, 6-11).

**The child's rights to education:** As stipulated above, the right to education without discrimination is now embedded in international law. Educational rights have been further elaborated to address issues of availability of education, with some agreements directly addressing provisions for children affected by different types of emergencies.

**The child's need for protection:** Education plays a fundamental role in protection. A crisis leaves children vulnerable for a variety of reasons – they may have been displaced, witnessed purposeful violence, lost family members, or fallen victim to an unexpected natural disaster. Child protection needs to be addressed via a safe and supervised environment, engagement in structured activities, learning to cope with increased risks, care for vulnerable groups, shielding from exploitation.

**Education is prioritized by communities:** experiencing crisis commonly calls for the provision of education as a top priority in assistance. Children and parents both believe there is urgency in continuing schooling, but when an emergency interrupts local education efforts, already under-resourced communities can rarely cope. Although communities may be able to establish some type of education on a small scale, they often struggle to maintain or enhance those efforts without any outside assistance.

## **5 1 EDUCATION IN COVID-19 EMERGENCY**

The COVID-19 is not just a matter of public health. The restrictions caused by non-pharmaceutical interventions like social distancing, have also impacted education at all levels and will continue to do, as learners and teachers are unable to physically meet in the schools and universities (*Fernando & Schleicher 2020, 3*). The closure of schools and an abrupt shifting to online education hurt almost all children. In various degrees, the challenges they have faced were due to the digital obstacles, social vulnerability of families, and lack of skills and competencies needed to tackle the crisis. In general, COVID 19 disrupted the environment where children live, grow and develop. Consequently, these disruptions had negative implications on children's education, development, and protection. Mobility restrictions mainly negatively affected families, where relations were initially tense, where children were usually neglected and/or exposed to other forms of violence. Children with special needs were deprived of opportunities to participate fully in online education and didn't receive specialized support services during that time due to the system's unpreparedness. One of the adverse outcomes of the situation caused by COVID 19 is discriminatory practices against children, notably from disadvantaged families. Already vulnerable families and children who lived in unfavorable socioeconomic conditions were more susceptible to exploitation, physical and psychological violence. All the above circumstances indicated that COVID-19 results in emergencies affecting the child and in education, in general.

## 6. MINIMUM STANDARDS FOR EDUCATION IN EMERGENCY

In December 2004, the Inter-Agency Network for Education in Emergencies (INEE) launched a handbook entitled *Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction* (INEE 2004). Modelled on the Sphere Project, the Minimum Standards are both a handbook and an expression of commitment that everyone, young or old, has a right to education during emergencies (*Humanitarian Practice Network, 2006*). To provide students with education in emergency situations exist minimum standards which cover five domains:

- *Foundational Standards*: these standards include coordination, community participation, and analysis. These standards should be applied across all domains to promote a holistic quality response. They give particular attention to the need for good diagnosis at all stages of the project cycle, in order to better understand the context and apply more appropriately the standards in the domains that follow.
- *Access and Learning Environment*: standards in this domain focus on access to safe and relevant learning opportunities. They highlight critical linkages with other sectors such as health, water and sanitation, nutrition and shelter that help to enhance security, safety and physical, cognitive and psychological well-being.
- *Teaching and Learning*: these standards focus on critical elements that promote effective teaching and learning, including curricula, training, professional development and support, instruction and learning processes, and assessment of learning outcomes.
- *Teachers and Other Education Personnel*: standards in this domain cover administration and management of human resources in the field of education. This includes recruitment and selection, conditions of service, and supervision and support.
- *Education Policy*: standards in this domain focus on policy formulation and enactment, planning and implementation (*MERS 2010*).

## 7. DISTANCE LEARNING

Distance learning is a process where teachers are separated from learners by space or time or both at the same time using media and information technologies to enable communication and exchange during the learning process despite this separation. According to the UNESCO (2020a) report, distance learning is a term often used synonymously with online learning, e-learning, distance education, correspondence education, external studies, flexible learning, and massive open online courses (MOOCs). Distance learning may take place through print-based



learning materials, or one-way massive broadcasting (TV and radio programmes), or through web-based exchange using social media channels or learning platforms. This kind of education tends to require a high level of self-directed learning and study skills on the part of the learner, which must be supported through new teaching methods, learning and guidance strategies (*UNESCO 2020a, 2*).

Two main categories of distance learning exist:

- *Synchronous distance learning*, where teachers and students are expected to be available at the same virtual space at the same time for the learning process to occur. Synchronous distance learning requires live communication.

- *Asynchronous distance learning*, where assignments, lessons and lectures are given through prerecorded videos and print-based learning materials. Students watch videos, do assignments in their appropriate time and place consuming as much or as little of the content at a time as they can. During asynchronous distance learning, teachers can measure and evaluate students' engagement and achievements through quizzes, educational games, video and/or print-based material analytics, etc.

Various types of distance learning exist, which can be synchronous or asynchronous, even some fall into both categories. They are the following:

- Video conferencing
- Hybrid distance education
- Open schedule online courses
- Fixed-time online courses

All these four types of distance learning can be effective if only teachers and students have adequate resources at home, are motivated and flexible (*TechSmith 2020, 6-8*).

## **7.1. AVAILABLE RESOURCES**

The necessary resources for distance learning are diverse. Different countries have developed different solutions for organizing distance learning during school closures. The quality of the internet connection, the existence and usage of online distance learning platforms and portals, the access to devices (computers, laptops, tablets and phones) for students at home, or the availability of adapted software are among the critical factors that must be integrated when designing an education response to the Covid-19 crisis. To ensure continuity in education, an emergency strategy should build on the resources available. OECD and Harvard Graduate School of Education together have done research (*OECD 2020, 10*) according to

which the vast majority of the countries relied on existing online instructional resources. Some countries lent laptops to students (New South Wales, Australia), or relied on more traditional practices by printing and delivering additional work booklets (Great Britain, Japan). In other countries, national TV and radio channels started to broadcast educational programmes for different school levels, etc. UNESCO (2020d) has done the research and made a list of distance learning online resources aimed to help school administrators, teachers, students and parents facilitate learning and provide social care and interaction during the time of school closure. This list includes resources like:

- Resources to provide psychosocial support
- Management systems for digital learning
- Systems built for use on basic mobile phones
- Systems with strong offline functionality
- Platforms for Massive Open Online Course (MOOC)
- Self-directed learning content
- Mobile reading applications
- Live-video communication platforms
- Tools for teachers to create digital learning content
- External repositories of distance learning solutions

Availability of educational technologies provides equal educational opportunities without taking into consideration the social, economic and geographical status of the students and teachers.

The role of educational technologies became more crucial during school closures due to the Covid-19 crisis. In response to the education crisis, countries around the globe are leveraging technology and remote learning to continue education during school closures. Educational technology, a combination of IT tools and educational practices, used to facilitate and enhance learning, has opened access to education for learners in many countries of the world.

The use of different educational technologies during distance/remote learning supports teachers, students and their families effectively in times of crisis due to Covid-19 and provides the educational content they need, often requiring a combination of several platforms, software and application (Chebib 2020). Availability and effective use of educational technologies during school closures provides continuity of education and contributes to the improvement of the quality of education.

During the distance/remote learning due to the Covid-19 crisis many countries focused on local solutions developing their special platforms and portals to avoid dependencies while other countries signed agreements with the companies owning

educational platforms/portals to cover the e-learning needs of students and teachers. Supporting resources for educational technologies can increase educational productivity by accelerating the rate of learning. The use of supporting and additional resources for educational technologies during distance learning in times of Covid-19 makes the educational process more attractive, engaging and effective (*U.S. Department of Education n.d.*).

## **7.2. E-READINESS FOR TEACHERS AND STUDENTS**

Formally, the word “readiness” is defined as being fully prepared for some experience or action. E-learning readiness is referred to as the mental and physical preparation of an organization for e-teaching experience or action. An E-learning readiness assessment helps a school to design e-teaching strategies and effectively achieve its goals. E-readiness is recognized as one of the most significant aspects for the success of implementing distance learning programs for the students of the schools (*Kalkan 2020; Penna & Stara 2007, 3*).

Effective distance learning during school closures due to the Covid-19 crisis requires that teachers have proficient skills and knowledge on information and education technologies, adequate resources at home, willingness to organize engaging lessons. Teacher e-readiness refers to their willingness, their preparation for basic technical and communication skills and training new teaching methodology for distance learning (*Phan & Dang 2017, 5*). Effective distance learning requires that students have basic knowledge of information technologies, have a quiet place at home for learning, presence of skills to meaningfully organize the independent work, willingness to study online.

The structure of e-readiness to distance education is a united set of elements, which allows evaluating the development level of students’ and teachers’ e-readiness to distance education in accordance with the criteria as it follows:

- Technological readiness,
- Social-psychological readiness,
- Cognitive readiness

Each criterion contains corresponding indicators that characterize its development level in students’ and teachers’ activity:

### **1. Technological readiness**

- necessary skills to use current information technologies
- basic knowledge about existing online educational materials
- basic knowledge about using e-learning platforms

the concepts of multilateral and public-private partnerships were seen as critical tools for the implementation of the outcomes of major international conferences of the UN, notably the Rio Conference on Environment and Sustainable Development (UNCED) in 1992, the Cairo International Conference on Population and Development (ICPD), and the Copenhagen World Summit on Social Development (Kebede 2016, 311).

Multi-stakeholders' collaboration and coordination at local, national and regional levels in emergencies is critical to overcome the crisis and promote sustainable and inclusive solutions. It is the platform for putting together diverse resources, expertise, technologies, and ideas to achieve results.

Multi-stakeholder partnerships should be forged in all stages of education responses to emergencies. That is to say, it is critically important to involve all relevant stakeholders as early as possible in the planning, implementation, and monitoring of responses to emergencies in education.

Engagement of stakeholders at local and community levels is one of the effective means to ensure representation of rights and interests of children with special needs and promoting interests of other unprivileged ones. Through community leaders and parent-teachers-students' associations, the voice of vulnerable children can be raised and articulated at higher levels of the national protection system to address their needs and make them more visible for emergency policymakers. It is also critical of ensuring the youth's participation in issues directly affecting them.

The engagement of multiple stakeholders at all levels of the system should take place in correspondence to the national humanitarian-coordination strategies and policy frameworks developed and utilized for education responses to emergencies. Cumulative capacities of diverse national, regional and local stakeholders can bring onboard innovative and effective solutions for overcoming multifaceted challenges and crises at each level of the system. Intensive co-creation and strategizing, regular participation in the meetings, and various formats of contribution are the key factors of setting productive partnerships at any level of policymaking. It is important to leverage the capacities and resources at regional and local levels by taking into account the specifics of the development of each of the involved in the process region and community.

Gerda Ferburg, UN Chair of the Committee on Food Security describes MSPs as follows:

*MSPs range from short consultation processes to multi-year engagements that may evolve through many phases. Some MSPs may be very structured and backed by formal organizational arrangements. Others may be much more ad hoc and fluid. Different groups will take the lead in initiating MSPs. Governments may initiate a stakeholder consultation process for assessing new policy directions.*

- necessary skills to accomplish assigned tasks through the existing online educational resources (for students only)

## 2. Social-psychological readiness

- willingness to study online
- necessary conditions for effective and quality e-learning
- attitude towards distance education

## 3. Cognitive readiness

- skills to meaningfully organize the independent work;
- the presence of skills in self-management, self-assessment, and self-control
- knowledge about methods and methodology of distance education (for teachers only)
- understanding and evaluation of distance education (for teachers only).

The defined indicators are developed for in-depth study and assessment of teachers' and students' e-readiness to distance learning according to which results, necessary actions can be taken to mitigate the impact of emergencies on education.

A sudden interruption of the educational process due to the Covid-19 crisis made teachers across the globe cope to help their students travel the world of distance learning, often without sufficient guidance, training, support, and resources (*UNESCO 2020c, 2*).

In addition to this, most teachers are not adequately prepared for the transition of provision of school education, and families are not ready to facilitate and monitor daily home-based learning especially with multiple children. It is much more challenging when parents lack the language and literacy skills and the time to follow schedules of studies and manage learning processes.

According to UNESCO (*2020c*), for the duration of the crisis, it will be vital to find ways to sustain and nurture teachers' professional networks, as well as the relationships between teachers and learners, their families and communities, in order to ensure the success of distance learning as a stop-gap measure before schools are ready to reopen.

During school closures many local and international companies step forward to help teachers to get the basic knowledge on organizing distance learning with different existing educational technologies, on distance learning methods and how to evaluate the achievements and engagement of children during distance education.

## **8. COOPERATION AND COORDINATION: ENGAGEMENT OF STAKEHOLDERS**

The quest for sustainable development through multi-stakeholder partnerships (MSPs) began to receive greater attention since the early 1990s. More specifically,

*NGOs may work to bring business and government together around an environmental or social concern. Businesses may realize they need to partner with government and NGOs to create new market opportunities and to manage their operations in ways that create shared value and give them a 'license to operate' (Kebede, 2016, 312).*

Different forms of partnerships could be established with the involvement of a broad array of stakeholders representing different sectors of society. In times of emergency, it is recommended to involve in multi-stakeholder partnerships, stakeholders, including, but are not limited to NGOs, foundations, youth grass-roots initiatives, students, teacher's unions, International development aid agencies, academia, and private sector representatives. Their cooperation can vary from consultations to their engagement in capacity building, budget support, aid provision, etc.

## **9 BUDGETING AND FINANCING EDUCATION IN EMERGENCIES**

In most countries, governments are typically expected to ensure access to basic education, while citizens are required by law to attain education up to a certain level. Nowadays, education is perceived not only as a right but also as a duty of citizens (*Roser & Ortiz-Ospina 2016*).

While larger education budgets are no guarantee of better student results, a minimum level of spending is necessary for ensuring good quality education provision.

The government's ability to provide quality education for all and to respond to new priorities depends on the availability of adequate funding and the system through which school funding is governed, distributed, and monitored.

The vast majority of school funding comes from public sources. On average across the OECD member countries, almost 91% of the funds for schooling come from public sources (*OECD, 2017*).

A significant increase in financing is required to achieve Sustainable Development Goals (*SDG 4*). The full realization of the SDG4-Education 2030 agenda requires sustained, innovative and well-targeted financing and efficient implementation arrangements, especially in those countries furthest from achieving quality education for all at all levels and in emergencies (*UNESCO 2016, 66*).

National contexts are diverse, but the following international and regional benchmarks are crucial reference points:

- allocating at least 4% to 6% of gross domestic product (GDP) to education; and/or
- allocating at least 15% to 20% of public expenditure to education (*UNESCO 2016, 67*)

Most of the countries have been severely affected by the COVID-19 and declared an emergency, which resulted in not only unprecedented health challenges but also many limitations for business activity and a sharp decline in the economy. On one side this has affected government incomes (taxes, etc.) and on the other side, it has significantly increased unprecedented expense levels, which governments should be able to incur in a short period.

However, the government budgeting process and re-budgeting are not designed for effective short-term problems management that countries face during the emergency. Government budgeting policy aims to increase public well-being in a long-term perspective (*Barry n.d.*).

While there is no exact approach to how to adapt budgeting in an emergency, there are several general principles that should be considered in government budgeting during an emergency.

In general, for effective disaster management, the following factors should be considered by each government at a budgeting level.

- Availability of additional funds: whether the government can increase public expenses in a very short period in total or for a specific task or activity.
- Re-budgeting process efficiency- whether the government may adjust the existing budget in a short period and the existing bureaucracy level
- The flexibility of the existing budget: whether the existing budget provides flexibility: The ratio of fixed and variable expenses, capital and operating expenses. In general, it may be expected that the weight of capital expenses increase the flexibility as could be postponed, and salary expenses limit the flexibility for re-budgeting

Effective liquidity management is always a key for government success to meet the extended obligations and provide support to most affected government sectors. Even if some offsetting opportunities are available within the budget, a pandemic response will most likely require higher disbursement of cash and expenditure levels shortly. Government debt and cash managers should start planning for increased financing and liquidity needs at the earliest opportunity.

In this process each government passes through the following stage (*IMF 2020*):

- Revise the macrocosmic expectations, including GDP growth, and expected government income from all sources
- Adjust short and medium level government objectives
- Design and plan a more flexible and agile budget that may cope with huncertainties
- Timely communication to line responsible parties (*IMF 2020*).

In an emergency, quick revision may be a challenging task, because of existing uncertainties, however, improvements are possible through the preparation and planning before the disaster happens.

For understanding how much the government budgeting is flexible in a specific sector the general indicators could be:

- The share of the specific sector expenses in total government expenses, compared with world average or other countries
- The share of specific sector expenses in GDP per capita
- The share of provisional funds in the total budget

For sufficient funding, the efforts should be focused to cover funding gaps with domestic sources. However, public funding may also be international, from donors and multilateral institutions. This international public finance plays a key role to mobilize public resources domestically. This is especially crucial for the poor and most vulnerable countries with limited internal resources. Financial sustainability and proper budgeting are key to strengthening education systems and creating sustainable, scalable programs. International public funding may help to strengthen financial sustainability, by designing and implementing projects and activities that have finance-focused outputs (*USAID EducationLinks 2019*).

## **CONCLUSION**

Finally, an emergency situation such as the Covid-19 pandemic has raised awareness for the need for schools and education systems to be prepared for different emergencies. This crisis which has spread across the globe made clear that countries should develop and have a coping strategy for mitigating the impact of the pandemic, to identify and provide additional support to the most vulnerable. This challenge is an opportunity for those schools not having a strategy for emergency situations to develop one and to use it during such eventualities. School closures have shown that online teaching and learning preparedness is not only a



trend but also a must to have success in the educational process. The effectiveness of distance learning and the educational process in general mostly depends on the relevant professional-pedagogical skills of the teaching community, the willingness of teachers to constantly improve and develop, on teachers' creative thinking, motivation to teach at school, etc.

Different international studies have shown that in order to have an effective educational system, it is important to have a highly qualified pedagogical and teaching community. The effectiveness of the education system is largely measured by the achievements of the students. And the achievements of the students significantly depend on the high professional and pedagogical skills and capacities of teachers (Arustamyan 2019, 222-223) So, in the case of distance learning we will succeed if we have:

- teachers, students and parents with basic knowledge of information and educational technologies,
- developed own special platform/portal for organizing education process during emergency situations like Covid-19,
- availability of tools and methodologies for organizing synchronous and asynchronous lessons through their own special platforms/portals taking into consideration the needs of all students based on the approaches of the universal design for learning,
- accessible and detailed video tutorials on tools and possibilities of this own special platforms/portals in native language for teachers, students and their parents,
- use of different inclusive methods and techniques aimed at promoting students' critical and creative thinking, analytical skills and metacognition during distance learning,
- organization of lessons for students with disabilities and special needs at home ensuring that teachers and/or multidisciplinary team members visit their home,
- Control and Consistency over the implementation of distance learning during emergency situations like Covid-19.

## REFERENCES

1. Çağatay, İhsan Ulus. 2020. "Emergency Remote Education vs. Distance Education". European Commission. Accessed February 20, 2020. <https://epale.ec.europa.eu/en/blog/emergency-remote-education-vs-distance-education>.
2. Creswell, John 2003. Research design: Qualitative, quantitative, and mixed methods approaches (2nd ed.). Thousand Oaks, CA: Sage.

3. Arustamyan, Anna. 2019. "The Role of Teachers in Assurance of Efficient Quality Management in Education". Quarterly Journal Alternative, October-December. [http://alternative.am/wp-content/uploads/2019/12/December.2019-verjnakan.pdf?fbclid=IwAR0PHbRwOqjh3\\_3pTpmdjaG6xVE\\_e3-1SQim30SAbQgRxOIqynW0l2IVanw](http://alternative.am/wp-content/uploads/2019/12/December.2019-verjnakan.pdf?fbclid=IwAR0PHbRwOqjh3_3pTpmdjaG6xVE_e3-1SQim30SAbQgRxOIqynW0l2IVanw).
4. INEE (Inter-Agency Network for Education in Emergencies). 2010. "Minimum Standards for Education: Preparedness, Response, Recovery". Accessed March 8, 2021. [https://inee.org/system/files/resources/INEE\\_Minimum\\_Standards\\_Handbook\\_2010%28HSP%29\\_EN.pdf](https://inee.org/system/files/resources/INEE_Minimum_Standards_Handbook_2010%28HSP%29_EN.pdf)
5. Chebib, Kinda. 2020. "Education For All in the Time of COVID-19: How EdTech can be Part of the Solution". Accessed April 8, 2021. <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/09/EdTech-Final-WEB.pdf>.
6. Nicolai, Susan. 2003. "Education in Emergencies A toolkit for starting and managing education in emergencies". Save the Children. Accessed March 10, 2021 <https://resourcecentre.savethechildren.net/node/3299/pdf/3299.pdf>.
7. Lasi, Masri bin Abdul. 2021. "Online Distance Learning Perception and Readiness During Covid-19 Outbreak: A Research Review". International Journal of Academic Research in Progressive Education and Development. 28 February. Accessed April 23, 2021. [https://hrmars.com/papers\\_submitted/8593/online-distance-learning-perception-and-readiness-during-covid-19-outbreak-a-research-review.pdf](https://hrmars.com/papers_submitted/8593/online-distance-learning-perception-and-readiness-during-covid-19-outbreak-a-research-review.pdf).
8. OECD. 2020. "Education Response to Covid-19: Implementing a Way Forward". Working Paper No. 224. 9 July.
9. TechSmith. 2020. "How to Effectively Shift to Online Teaching. The Ultimate Guide". Accessed February 28, 2021 [https://assets.techsmith.com/Docs/How-to-Effectively-Shift-to-Online-Teaching-US.pdf?utm\\_source=lead&utm\\_medium=email&utm\\_content=eb-delivery&utm\\_term=HAL&utm\\_campaign=HED&spMailingID=66117496&spUserID=NTA2NTA1MTU4MjQ5S0&spJobID=2023741636&spReportId=MjAyMzcyNDQzMQS2](https://assets.techsmith.com/Docs/How-to-Effectively-Shift-to-Online-Teaching-US.pdf?utm_source=lead&utm_medium=email&utm_content=eb-delivery&utm_term=HAL&utm_campaign=HED&spMailingID=66117496&spUserID=NTA2NTA1MTU4MjQ5S0&spJobID=2023741636&spReportId=MjAyMzcyNDQzMQS2).
10. U.S. Department of Education. n.d. "Use of Technology in Teaching and Learning". Accessed April 8, 2021. <https://www.ed.gov/oii-news/use-technology-teaching-and-learning>.
11. UNESCO. 2020a. "COVID-19 Education Response, Distance learning strategies in response to COVID-19 school closures". Issue note no. 2.1, April.
12. UNESCO. 2020b. "COVID-19 Education Response, How Many Students are at Risk of not Returning to School". Advocacy paper, 30 July.
13. UNESCO. 2020c. "Covid-19 Education Response. Education Sector Issue Notes. Supporting teachers and education personnel during times of crisis". Issue note no. 2.2, April.
14. UNESCO. 2020d. "Distance Learning Solutions". Accessed 12 April, 2021. <https://en.unesco.org/covid19/educationresponse/solutions>
15. UNICEF. n.d. "Education in emergencies". Accessed 3 April, 2021. <https://www.unicef.org/education/emergencies>.

16. World Bank. 2021. "Urgent, Effective Action Required to Quell the Impact of COVID-19 on Education Worldwide". 22 January. Accessed March 11, 2021. <https://www.worldbank.org/en/news/immersive-story/2021/01/22/urgent-effective-action-required-to-quell-the-impact-of-covid-19-on-education-worldwide>.
17. Kalkan, Naci. 2020. "Investigation of e-learning readiness levels of university students studying in different departments". 17 July. Accessed April 8, 2021. <https://files.eric.ed.gov/full-text/EJ1263364.pdf>.
18. Pena, Maria Pietronilla, Vera Stara. 2007. "The failure of e-learning: why should we use a learner centred design". Journal of e-Learning and Knowledge Society. January.
19. Phan, Thanh Thi Ngoc, Ly Thi Thao Dang. 2017. "Teacher Readiness for Online Teaching: A Critical Review". June. Accessed April 2, 2021. [https://ijodel.com/wp-content/uploads/2017/12/001\\_Phan\\_Dang.pdf](https://ijodel.com/wp-content/uploads/2017/12/001_Phan_Dang.pdf).
20. Feuer, Will. 2020. "At Least 24 Million Students Could drop out of School Due to the Coronavirus Pandemic, UN Says". 15 September. Accessed April 22, 2021. <https://www.cbc.com/2020/09/15/at-least-24-million-students-could-drop-out-of-school-due-to-the-coronavirus-un-says.html>.
21. Bensalah, Kacem. 2002. "Guidelines for education in situations of emergency and crisis: EFA strategic planning". UNESCO. Accessed November 15, 2020. <https://unesdoc.unesco.org/ark:/48223/pf0000128214>.
22. Fernando, M. Reimers, Andreas Schleicher. 2020. "A framework to guide an education response to the Covid-19 Pandemic of 2020". Harvard Graduate school of education. Accessed December 10, 2020. [https://globaled.gse.harvard.edu/files/geii/files/framework\\_guide\\_v2.pdf](https://globaled.gse.harvard.edu/files/geii/files/framework_guide_v2.pdf).
23. INEE. 2004. "Minimum Standards for Education in Emergencies, Chronic Crises and Early Reconstruction". DS Print. Accessed November 29, 2020. <https://www.refworld.org/pdfid/41f627494.pdf>.
24. Nicolai, Susan. 2003. "Education in Emergencies A toolkit for starting and managing education in emergencies". Save the Children. Accessed February 10, 2021 <https://resourcecentre.savethechildren.net/node/3299/pdf/3299.pdf>.
25. Kebede, Kassa. 2016. "Managing Multi-Stakeholder Partnership (MSP) in Higher Education: Challenges, Opportunities and Implications for Sustainable Development". Accessed March 2, 2021. [https://www.researchgate.net/publication/322244819\\_Managing\\_Multi-Stakeholder\\_Partnership\\_MSP\\_in\\_Higher\\_Education\\_Challenges\\_Opportunities\\_and\\_Implications\\_for\\_Sustainable\\_Development](https://www.researchgate.net/publication/322244819_Managing_Multi-Stakeholder_Partnership_MSP_in_Higher_Education_Challenges_Opportunities_and_Implications_for_Sustainable_Development).
26. OECD. 2017. "The Funding of School Education: Connecting Resources and Learning". OECD Reviews of School Resources. OECD Publishing, Paris. Accessed March 2, 2021. <https://doi.org/10.1787/9789264276147-en>.
27. Roser, Max and Esteban Ortiz-Ospina. 2016. "Financing Education". Accessed March 2, 2021. <https://ourworldindata.org/financing-education>.

28. Barry, Anderson. n.d. "Budgeting for Disasters." Based on a paper by Marvin Phaup. OECD. Accessed March 2, 2021. <https://www.oecd.org/governance/budgeting/42407562.pdf>
29. IMF. 2020. "Fiscal Affairs. Preparing Public Financial Management Systems for Emergency Response Challenges". Special Series on Fiscal Policies to Respond to COVID-19. Accessed February 10, 2021 <https://www.imf.org/en/Publications/SPROLLS/covid19-special-notes>.
30. USAID EducationLinks. 2019. "What is Education Finance? Mobilizing and effective education impact using public and private resources". September 2019. Accessed February 10, 2021. <https://www.edu-links.org/learning/what-education-finance>.
31. Wheeler, Everett. 1911. "Governments De Facto". American Journal of International Law, 5(1): 66-83. doi:10.2307/2186766.
32. Humanitarian Practice Network. 2006. "Implementing minimum standards for education in emergencies: lessons from Aceh". Accessed April 19, 2021. <https://odihpn.org/magazine/implementing-minimum-standards-for-education-in-emergencies-lessons-from-aceh/#:~:text=The%20Minimum%20Standards%20were%20developed,the%20right%20to%20education%20in>.
33. Committee on Economic, Social and Cultural Rights. 2020. "Statement on the Coronavirus Disease (COVID-19) Pandemic and Economic, Social and Cultural Rights". Accessed March 5, 2021. <https://www.ohchr.org/en/hrbodies/cescr/pages/cescrindex.aspx>.
34. Human Rights Council. 2020. "Report of the Special Rapporteur on the right to education. UN Committee on Economic, Social and Cultural Rights, General Comment No. 13: The right to education (Article 13)". Accessed March 8, 2021. <https://www.ohchr.org/EN/Issues/Education/Training/Compilation/Pages/d%29GeneralCommentNo13Therighttoeducation%28article13%29%281999%29.aspx>.
35. Committee on the Right of the Child. 2008. "Day of General Discussion on the Right of the Child to Education in Emergency Situations". Accessed March 5, 2021. [https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC\\_Report\\_Right\\_of\\_the\\_Child\\_to\\_Education\\_in\\_Emergencies\\_2008.pdf](https://www.right-to-education.org/sites/right-to-education.org/files/resource-attachments/CRC_Report_Right_of_the_Child_to_Education_in_Emergencies_2008.pdf).
36. Committee on the Right of the Child. 2003. "General Comment No. 5 General measures of implementation of the Convention on the Rights of the Child". Accessed March 5, 2021. <http://docstore.ohchr.org/SelfServices/FilesHandler.ashx?enc=6QkG1d%2FPPRiCAqhKb7yhsiQql8gX5Zxh0cQqSRzx6Zd%2FQRsDnCTcaruSeZhPr2vUevjbn6t6GSi1fheVp%2Bj5HTLU2Ub%2FPZZtQWn0jExFVnWuhiBbqgAj0dWBoFGbK0c>.
37. UNICEF. 2020. "Education and COVID-19 report". Accessed March 5, 2021. <https://data.unicef.org/topic/education/covid-19/>.
38. The United Nations. 2020. "Policy Brief; Education during COVID-19 and beyond". Accessed March 4, 2021. [https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg\\_policy\\_brief\\_covid-19\\_and\\_education\\_august\\_2020.pdf](https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf)

39. CESCR. 1991. "The Nature of States Parties Obligations". Accessed March 2, 2020. <https://www.refworld.org/pdfid/4538838e10.pdf>
40. World Bank. 2021. "Urgent, Effective Action Required to Quell the Impact of COVID-19 on Education Worldwide". January 22. Accessed March 11, 2021. <https://www.worldbank.org/en/news/immersive-story/2021/01/22/urgent-effective-action-required-to-quell-the-impact-of-covid-19-on-education-worldwide>.
41. Feuer, Will. 2020. "At Least 24 Million Students Could drop out of School Due to the Coronavirus Pandemic, UN Says". 15 September. Accessed April 22, 2021. <https://www.cnbc.com/2020/09/15/at-least-24-million-students-could-drop-out-of-school-due-to-the-coronavirus-un-says.html>.
42. UNICEF. 2020. "Education and COVID-19 report". Accessed March 5, 2021. <https://data.unicef.org/topic/education/covid-19/>.
43. UN. 2020. "Policy Brief: Education during COVID-19 and beyond", August. Accessed March 4, 2021. [https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg\\_policy\\_brief\\_covid-19\\_and\\_education\\_august\\_2020.pdf](https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf).
44. UNESCO. 2016. "Education 2030: Incheon Declaration and Framework for Action for the implementation of Sustainable Development Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning". Accessed March 4, 2021. <https://unesdoc.unesco.org/ark:/48223/pf0000245656>.