

COVID-19 Learning Losses

Rebuilding Quality Learning for All

in the Middle East and North Africa



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- **UNESCO:** Hana Yoshimoto, Minghui Ligao
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Table of Contents

Acknowledgements	1
List of Figures	4
List of Tables	4
List of Boxes	5
Acronyms and Abbreviations	6
Executive Summary	7
Chapter 1. Introduction	13
1.1 The problem: learning disrupted by COVID-19	14
1.2 The context: schooling, learning and earning before COVID-19	14
1.3 The goal: enabling learning for all	15
Chapter 2. The problem: learning disruption	17
2.1 MENA school closures: overview	18
2.2 MENA school closures in detail	19
2.3 Reopening	20
Chapter 3. Responses to date: strategies to enable learning during the COVID-19 pandemic	21
3.1 Access to learning	22
i. Supply: provision of remote and hybrid learning	22
ii. Reach: participation in remote and hybrid learning	23
3.2 Engaged learners	28
i. Parents and caregivers: enabling home-based learning	28
ii. Catching up with remedial and accelerated learning	29
3.3 Enabling environment	31
i. Teacher development: skills for a new reality	31
3.4 Effectiveness: government perceptions	32
Chapter 4. The potential impact of COVID-19 on schooling and learning	35
4.1 Background	36
4.2 Methodology	36
4.3 Simulation results	38
i. Result 1: learning poverty	38
ii. Result 2: learning adjusted years of schooling	43
iii. Result 3: minimum proficiency in PISA	44
iv. Result 4: lifetime earnings	45
Chapter 5. ‘Building back better’: enabling quality education for all	47
5.1 Lessons learned	48
i. Access to learning	48
ii. Engaged learners	50
iii. Enabling environment	50
5.2 Recommendations	51
i. Pandemic period: continuity and engagement	51
ii. Early recovery period: reopening and remediating	60
iii. Post-pandemic period: accelerating and improving	67
Chapter 6. Conclusion: call to action	70
Annexes	72
Annex 1: Remote education delivery systems used in MENA: country details (10 March 2021)	74
Annex 2: Simulation model: data and assumptions	76
Annex 3: Assessment types and their key differences	87

List of Figures

Figure 1	Building back better': enabling learning for all	16
Figure 2	Duration of complete and partial school closures (in weeks) by region, March 2020 to January 2021	18
Figure 3	Duration of school closures (in weeks) on average in MENA, March 2020 to June 2021	19
Figure 4	Types of delivery system deployed by education level during school closures, 2020	22
Figure 5	Share and number of students (pre-primary to upper secondary) potentially reached and not reached by digital and broadcast remote learning policies by region	23
Figure 6	Share of students (pre-primary to upper secondary) potentially reached by different types of remote learning method by region	24
Figure 7	Internet penetration rate in MENA, 2019 to present	25
Figure 8	Digital connectivity per education level in MENA	25
Figure 9	Mitigation measures targeting parents and caregivers for continued learning at home (MENA regional overview)	28
Figure 10	Different approaches to limiting learning loss in MENA, July-October 2020	29
Figure 11	Mitigation measures targeting teachers for continued learning in MENA, July-October 2020	32
Figure 12	Number of countries by perceived effectiveness of remote learning in MENA, July-October 2020	33
Figure 13	Perceived effectiveness of remote learning, by modality and typology in MENA July-October 2020	33
Figure 14	Learning poverty: pre-COVID baseline and three simulation scenarios	38
Figure 15	Relationship between changes in learning poverty and learning poverty gap	40
Figure 16	Relationship between changes in learning poverty gap and learning poverty severity	40
Figure 17	Gender gaps in schooling and learning deprivation	42
Figure 18	Learning-adjusted years of schooling: pre-COVID baseline and three simulation scenarios	43
Figure 19	Aggregate economic cost of foregone lifetime earnings at present value (PV) (US\$ trillions)	45
Figure 20	Learning data gaps in MENA	63

List of Tables

Table 1	Parameters for MENA learning loss simulations	37
Table 2	Learning poverty gap: pre-COVID baseline and three simulation scenarios	39
Table 3	Learning poverty severity: pre-COVID baseline and three simulation scenarios	40
Table 4	Percentage below minimum proficiency in PISA: pre-COVID baseline and three simulation scenarios	44
Table 5	Implementation of diagnostic classroom assessment under four resource scenarios	69

List of Boxes

Box 1	Higher education context in MENA	15
Box 2	Higher education responses	27
Box 3	Refugee children and youth at risk of dropping out	30
Box 4	Teachers preparedness training package in UAE	31
Box 5	Gender gaps in learning poverty	42
Box 6	Refugee children face challenges in accessing remote learning	49
Box 7	Guiding principles for remote learning	52
Box 8	One of the largest virtual schools implementation in the Arab world - Saudi Arabia's Madrasati ('My School') platform	54
Box 9	Jordan's learning bridges: a national blended learning recovery programme	55
Box 10	Bridging the digital divide with public-private partnerships	56
Box 11	Supporting young children and their families COVID-19 response	57
Box 12	The role of different forms of assessment	61
Box 13	Advancing SDG 4 by improving minimum proficiency in reading and maths	62
Box 14	Learning data compact in MENA	63
Box 15	Examples of approaches to remediation	66
Box 16	Five key principles for education technology (EdTech) investments	68
Box 17	Five pillars for 'building back better' education systems	69

Acronyms and Abbreviations

COVID-19	Coronavirus disease, first identified in 2019
CAC	Conflict Affected Countries
DHS	Demographic and Health Surveys
ECD	Early Childhood Development
ECE	Early Childhood Education
GDP	Gross Domestic Product
LAYS	Learning Adjusted Years of Schooling
ICT	Information and Communications Technology
IMF	International Monetary Fund
IIEP-UNESCO	International Institute for Educational Planning of UNESCO
MENA	Middle East and North Africa
MENARO	UNICEF Middle East and North Africa Regional Office
MICS	Multiple Indicator Cluster Surveys
MoE	Ministry of Education
SDG	Sustainable Development Goals
PISA	Programme for International Student Assessment
UNESCO	United Nations Educational, Scientific and Cultural Organisation
UNICEF	United Nations Children’s Fund
UNHCR	United Nations High Commissioner for Refugees
UNRWA	United Nations Relief and Works Agency for Palestine Refugees
UIS	UNESCO Institute for Statistics
WASH	Water, Sanitation and Hygiene
WB	World Bank
WFP	World Food Programme

Executive Summary

The problem: learning disrupted by coronavirus disease (COVID-19)

The COVID-19 pandemic and associated educational disruption represents a catastrophe for the schooling, learning, and earning potential of the more than 110 million students from pre-primary to higher education in the Middle East and North Africa (MENA)

By the end of March 2020, all countries¹ in the region had closed their schools' physical premises as part of the measures put in place to contain the spread of the pandemic. Some had also suspended or cancelled teaching at the higher education level².

An entire generation of students, children and adolescents has been affected by this unprecedented disruption, with a potential far-reaching impact beyond the education sector to include consequences for their mental health, well-being, socialisation and prospects for being active participants in society, including in the labour market.

Before the pandemic, an estimated 15 million children in the region between the ages of 5-14 were out of school and nearly **two-thirds of children in the region were unable to read with proficiency**³. An additional 10 million children were at risk of dropping out of school, due to poverty, social marginalisation, displacement and disruption caused by conflict⁴. In 2020, on top of the pre-pandemic estimates, UNESCO estimated that a further 1.31 million children and youths were at risk of dropping out of school due to the COVID-19 crisis, noting that these children were unlikely to return to their education institutions⁵.

The broader economic impacts of the pandemic have been exacerbating the pre-existing macroeconomic and fiscal imbalances of MENA countries, placing public budgets under further pressure and causing a negative impact on investment in education systems. The **overall functioning of education systems has been affected, including capacity to collect evidence** to inform decisions and policy-making. This means that while facing unprecedented difficulties, policymakers and educators have less information available to help understand these challenges and develop evidence-based solutions.

Since the beginning of the pandemic, efforts have been made to monitor both school closures (and re-opening) and the measures put in place to ensure continuity of learning. These include the Survey of Ministries of Education on National Responses to COVID-19, jointly supported by UNESCO, UNICEF and the World Bank. However, to date, no systematic evidence has been available on how students' learning is being affected by the disruptions caused by the pandemic or on the impact of education response measures initiated by governments.

This report contributes to filling this evidence gap and includes a series of simulations of potential learning losses due to COVID-19 and exploration of their longer-term implications. The analysis is based on the Enabling learning for all framework⁶, which outlines access, engagement and enabling environment as the three crucial enablers for learning, while the simulation assumptions are informed by the evidence on school closures and governments' education-related responses, collected through the joint survey.

¹ 20 MENA countries/territories (according to the UNICEF and the World Bank categorisation) include: Algeria, Djibouti, Tunisia, Morocco, Libya, Egypt, Sudan, Palestinian territories, Lebanon, Syria, Jordan, Iraq, Gulf area (Kuwait, Bahrain, Saudi Arabia, Qatar, UAE), Oman, Yemen, Iran.

² UNESCO (2021). Survey on Covid-19: Reopening and Reimagining Universities. Six Arab States responded to the survey conducted between December 2020 and February 2021: Egypt, Jordan, Libya, Qatar, Palestine and the United Arab Emirates, four of them reported suspension or cancellation of teaching and research activities in tertiary education.

³ World Bank (2019). Ending Learning Poverty – What Will It Take?

⁴ UNICEF (2021). *Out-of-school children*.

⁵ UNESCO (2020). *UNESCO COVID-19 education response: how many students are at risk of not returning to school? Advocacy paper*.

⁶ Authors developed the framework based on desk and literature review.



This report:

- 1 Summarises the information on school closures in MENA and the **educational response to COVID-19** to date;
- 2 Estimates the **potential learning loss associated with the pandemic**, based on simulations; and,
- 3 Presents a series of **recommendations for policy and programming** to recover learning loss and ‘build back better’, with the aim that quality education becomes the experience of all MENA’s learners.

Responses to date: enabling learning for all

The pandemic has affected the enabling of learning for all, including **access to learning, engaged learners** and an **enabling environment**.

Access to learning

Efforts to ensure access to learning have varied - from country to country and by grade⁷ - and have included **face-to-face learning** for earlier grades, **hybrid learning** for most grades and **full remote learning**⁸. Remote learning modalities have included digital learning platforms, television and radio broadcasts and distribution of paper-based materials.

Despite these efforts, regional-level evidence shows that approximately 40 per cent of students in MENA (37 million children and adolescents) have not benefitted from any remote learning initiative, the majority of whom were already vulnerable and disadvantaged⁹. The main reasons for exclusion were the lack of availability of remote learning initiatives (available only for specific grades, in some countries) and the lack of tools to access remote learning (particularly digital devices and internet connections).

⁷ UNESCO/UNICEF/World Bank (2020). What Have We Learnt? Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

⁸ Ibid.

⁹ UNICEF (2020). COVID-19 – Are Children able to continue Learning during School Closure?

¹⁰ UNESCO/UNICEF/World Bank (2020). What Have We Learnt? Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

¹¹ International Task Force on Teachers for Education 2030 (2021). Futures of Teaching – Conversation between teachers and experts from the Arab States.

¹² MENA: Upper Middle Income countries include: Iran, Iraq, Jordan, Lebanon, and Libya, MENA: Lower Middle Income countries include: Algeria, Djibouti, Egypt, Morocco, Tunisia, Palestinian territories (based on World Bank income groupings).

¹³ UNESCO/UNICEF/World Bank (2020). What Have We Learnt? Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

¹⁴ PISA is the OECD’s Programme for International Student Assessment. PISA measures 15-year-olds’ ability to use their reading, mathematics and science knowledge and skills to meet real-life challenges.

Engaged learners

Findings suggest that at least 43 per cent of MENA countries recognise the crucial role of parents and caregivers in enabling learners’ engagement, having provided materials to support them with home-based learning for primary and secondary students¹⁰. Thirty-eight per cent of countries reported providing regular follow-up phone calls from teachers to parents and 19 per cent provided guidance materials for home-based pre-primary education.

Enabling environment

The pandemic also highlighted the need for continuous professional development, psychological support and socio-emotional learning for teachers, to enable them to make the transition to effective online and/or hybrid teaching¹¹. In response, according to the joint survey, 33 per cent of countries in the MENA¹² region provided teachers with instructions on online teaching and learning, as well as content designed or adapted for remote learning.

Officials reported that online platforms and televised learning were seen as the most effective modes of delivery, but official assessments have yet to be conducted about remote learning measures and their impact on learning and engagement¹³.

What’s at stake: impact of COVID-19 on future schooling, learning and earning

The analysis in this report focuses on four key outcomes of the simulation model:

- **learning poverty**,
- **learning-adjusted years of schooling (LAYS)**,
- percentage below **minimum proficiency on Programme for International Student Assessment (PISA)**¹⁴, and
- **lifetime earnings**. The simulations suggest that COVID-19-related school closures are likely to create a substantial setback to the global goal of halving the percentage of learning poor by 2030, as indicated by the following results:

- 1 The number of children **unable to read and understand a simple age-appropriate text (learning poor) in the MENA region could increase** by 9.4 percentage points (from 59.9 per cent to 69.3 per cent), including increased inequality among the learning poor¹⁵ across the region;
- 2 Children in the MENA region could **lose one LAYS**;
- 3 The proportion of 15-year-old **students performing below minimum proficiency in PISA could increase** from 60.1 per cent to 71.6 per cent; and,
- 4 MENA economies could lose up to US\$0.8 trillion in lifetime earnings for the current cohort of learners as a result of their lower levels of learning, their lost months of school, or their potential for dropping out of school.

'Building back better': reimagining and enabling quality learning for all

Lessons learned

Based on the analysis of data and information on school closures, the responses put in place by governments to enable learning continuity, and the simulations of the potential impact of COVID-19 on learning and earning, the report outlines the following takeaways and lessons learned on the three pillars of the "enabling learning for all" framework.

In summary, the simulations suggest that unless countries act quickly on several areas, COVID-19-related school closures could set back the learning and future prospects of MENA's current school-aged learners in a number of significant ways. With data and evidence, policy makers have a range of tools at their disposal which can be deployed to help them prioritize and accelerate learning.

Access to learning



- Strengthening a range of learning modalities is urgently needed to ensure that all learners have access to both learning and services to support their wellbeing.
- Pre-existing learning disparities are growing, suggesting a strong need for differentiated interventions and targeted policies, resources for those at a disadvantage, and innovative techniques including teaching based on the learning level of a child.

Engaged learners



- Teachers and parents need support to cope with the challenges created by the disruption of face-to-face learning and the shift towards digital and other modes of remote learning.
- Many MENA countries could experience a learning catastrophe if urgent action is not taken to provide remedial, remote and social-emotional learning for all learners.
- Learner, teacher and parent/caregiver perspectives on effectiveness are needed.

Enabling environment



- Comprehensive data are required to plan and monitor responses and develop mitigation and recovery strategies for learning.
- Education systems need to become more equitable, adaptive and resilient to enable access to learning at all times for all of MENA's learners.
- The learning and earning trajectories of a generation are at stake, including learning-adjusted years of schooling, learning proficiency and lifetime earnings.

¹⁵ Learning poverty is defined as the inability to read and understand a simple text by age 10. This indicator depicts the share of primary-aged children who are not in school (schooling deprived) or are below the minimum proficiency level in reading (learning deprived).

Recommendations

The takeaways and lessons above imply the urgent need to work towards children's safe return to school and, until this is possible, ensure that all children have equitable access to remote learning. A concerted effort is also needed to accelerate learning and tackle the learning crisis that predated COVID-19, by providing opportunities for remedial learning and catch-up for all children. Recovering lost learning in MENA will require reimagining education systems in several important ways:

1 During the pandemic and early recovery

it is important to address inequalities in access and engagement, as school closures can disproportionately impact marginalised and vulnerable groups, potentially deepening inequality. It is also critical to provide access for the early years and make remote instruction more effective through stronger support and guidance for teachers, engagement of parents and caregivers, and through more learner-centered pedagogical practices.

2 As children return to in-person schooling

it is critical to ensure safe school reopening, assess potential learning losses and support teachers to ensure that teaching is adapted to the learning levels of the students to support catch up and recover lost learning.

3 Policy-makers and educators must reflect on and address the lessons emerging from the provision of remote and hybrid instruction over the past two years. Education systems will need to strengthen their infrastructure (including technology) to become more adaptive and resilient, in order to ensure effective learning on a sustainable basis for all children across the MENA region.

This report concludes with recommendations for policy-makers and decision-makers at the national and the school level for short, medium and long-term strategies aimed at remediating learning loss in MENA and creating equitable, effective and resilient teaching and learning systems¹⁶ which support access to learning, engaged learners and enabling environments. The recommendations are aligned with the Framework for Reopening Schools¹⁷ developed jointly by UNESCO, UNICEF, the WB, and the World Food Programme (WFP), as well as ongoing commitments to Sustainable Development Goal (SDG) 4¹⁸ and the Education 2030 agenda¹⁹. The recommendations are categorised in three phases²⁰, in alignment with the various stages of the global pandemic²¹:



¹⁶ OECD (2020). A framework to guide an education response to the COVID-19 Pandemic of 2020.

¹⁷ UNESCO, UNICEF, World Bank, WFP (April 2020). Framework for reopening schools.

¹⁸ <https://sdg4education2030.org/the-goal>.

¹⁹ UNESCO (2016). Education 2030 framework for action: https://unesdoc.unesco.org/ark:/48223/pf0000245656_eng

²⁰ Countries in the MENA region are going through different phases of the COVID-19 pandemic, and tremendous efforts have been already made by the governments to mitigate the learning loss. Policy-makers could use this phasing as a reference to reflect and adjust the education response plans based on the actual situation in their countries.

²¹ World Bank (May 2020). The COVID-19 Pandemic: Shocks to Education and Policy Responses.

Pandemic period: continuity and engagement	<ol style="list-style-type: none"> 1 Continue to address inequalities in access to and engagement in remote learning, ensure effectiveness of teaching and learning, provide access for early years, focus on foundational skills and prevent school dropout. 2 Provide stronger support and guidance to teachers to deal with the challenges and opportunities of the pandemic, strengthening teacher policy and investment in teachers. 3 Ensure ongoing engagement of parents and caregivers in their children’s learning with clear and inclusive communication strategies and supportive policies.
Early recovery period: reopening and remediating	<ol style="list-style-type: none"> 1 Ensure safe school reopening based on evidence-based decision-making. 2 Conduct comprehensive learning assessments to inform education planning and enable the provision of compensatory quality education to all learners. 3 Support teachers to ensure that teaching is adapted to the learning levels of the students so that they can catch up and recover lost learning. 4 Implement remedial and catch-up learning policies and programmes to remediate lost learning.
Post-pandemic period: accelerating and improving	<ol style="list-style-type: none"> 1 Develop and implement policies that enable accelerated learning for all learners, including the most vulnerable, while building more resilient systems. 2 Strengthen cross-sectoral coordination and provide holistic support for the rebuilding of equitable, effective and resilient education systems for all learners. 3 Identify mechanisms to finance the pandemic response in the education sector and advocate for efficient, effective and equitable investment in education.

The disruption caused by the pandemic has created an opportunity to not only recover lost learning, but also to build stronger, more resilient education systems that are better able to serve their students and societies. We must therefore seize this opportunity and take immediate action to ensure effective teaching and learning for all of the region’s children.

CHAPTER 1

Introduction

1. Introduction

1.1 The Problem: learning disrupted by COVID-19

The COVID-19 pandemic poses a serious threat to children's learning. At the onset of the crisis in early 2020, most countries around the world closed their education institutions to contain the spread of the virus, leaving over a billion students away from school premises²².

The speed and scale of the disruption to education are unparalleled, risking exacerbating the learning crisis in areas, especially in those areas like MENA where accessing learning was already a challenge for many. An entire generation of children has been affected by this unprecedented disruption, with the potential impact extending beyond the short and medium-term and beyond the education sector. The potential impact includes consequences for mental health, well-being, socialisation and prospects for being active participants in society, including in the labour market.

The pandemic unfolded in 2020 against an uncertain socio-political and economic background in MENA, putting social services under further pressure, depressing economies and exacerbating pre-existing inequalities²³.

To understand better how the COVID-19 crisis was affecting the education systems and how the countries were responding to the crisis in the education sector, national and international agencies including the UN and the WB rapidly established a monitoring mechanism (a government-level survey) focusing on the measures that governments have put in place to ensure continuity of learning. The findings of this survey, as well as simulation analysis conducted by the WB in June 2020 (updated here in cooperation with UNICEF and UNESCO), with contributions from UNHCR and UNRWA, form the basis of the analysis and recommendations of this report.

1.2 The context: schooling, learning and earning before COVID-19

Socioeconomic disparities and instability

The twenty countries of the MENA region host a child population of over 185 million (37 per cent of the total population) and reflect a wide range of socio-economic contexts, from high-income (e.g. Gulf states) to low-income countries, and from countries facing humanitarian crises (e.g. Libya, Sudan, Syria and Yemen) to middle income countries where most of the region's population lives. Wide socio-economic disparities across countries are compounded by substantial disparities within countries, alongside factors such as urban or rural residence, gender, class and family affiliation.

Political unrest has led to protracted humanitarian crises, which have compounded pre-existing challenges (including inequitable development pathways, resource scarcity, increasing poverty and malnutrition) and caused the largest displacement and refugee crisis since the Second World War²⁴. In 2020 in the region, there were 38 million children in need of humanitarian assistance, representing one in five children in MENA and one fifth of the total number of children in need globally²⁵. The region also hosted over six million internally displaced children and over six million refugee children, with a high likelihood of not being in school.

Access and learning crisis

As a result of this combination of challenges, prior to the start of the COVID-19 crisis in 2020, an estimated 15 million children in the region between the ages of 5-14 were out of school. An additional 10 million children were at risk of dropping out of school, due to poverty, social marginalisation, displacement and the disruption of infrastructure caused by conflict²⁶. While most children go to primary school, the likelihood of not being in school is 16 per cent for lower secondary education²⁷, and an estimated 35 per cent for upper secondary education²⁸.

²² Education: From disruption to recovery (unesco.org).

²³ A simulation analysis of the potential impact of COVID-19 conducted by UNICEF MENARO, covering nine MENA countries, found that the percentage of children living in multidimensional poverty in the region could have increased from 44 percent before the pandemic to 52 percent by the end of the 2020, with a potential increase of 12 million children living in multidimensional poverty, see UNICEF MENARO (July 2020). Simulating the Potential Impacts of COVID-19 on child multi-dimensional poverty in MENA.

²⁴ UNESCO, WFP, SCI, Desk Study on Main Trends and Analysis on Out of School Children, in Middle East and North Africa Region, not published.

²⁵ UNICEF. Regional Office Management Plan 2022—2025.

²⁶ UNICEF (2021) Out-of-school children.

²⁷ UNICEF (2018). Out of School Children in MENA – Regional Factsheet.

²⁸ UNICEF (2019). MENA Generation 2030.

This is accompanied by high inequalities, including a difference of up to 10 years of schooling between the most educated 20 per cent and least educated 20 per cent²⁹.

The region was experiencing a learning crisis before the pandemic, with huge disparities across and within countries and significant numbers of students failing to acquire the critical knowledge and skills needed for lifelong learning, employability, personal empowerment and active citizenship³⁰. Education systems were already constrained by outdated teaching and examination practices and a mismatch between learning content, contemporary realities and labour market requirements³¹. Before the COVID-19 pandemic, nearly 60 per cent of children in the MENA region could not read or understand a simple age-appropriate text at age 10³². Vast disparities existed within countries; in Tunisia there was a difference in basic reading achievement of 34 percentage points between the richest and the poorest quintile, even prior to COVID-19³³.



Box 1. Higher education context in MENA

The countries in the Arab States - according to the UNESCO Institute for Statistics classification³⁴ - have a total of 34 million tertiary-age people, representing 5.8 per cent of the global tertiary-age population. The Gross Enrolment Ratio³⁵ in the region was 33.8 percent, with higher female participation (35.8 per cent) than male (31.9 per cent). **Participation patterns across countries vary widely, ranging from 70.9 percent in Saudi Arabia to 5.3 per cent in Djibouti.** The gender balance also varies, with more female students in Algeria, Bahrain, Kuwait, Oman, Palestine/Palestinian territories, and Qatar and more male students in Iran, Iraq, Yemen, Mauritania and Djibouti.

Considering the diverse size of the countries and economies in the region, it is useful to compare government expenditure per tertiary student, which varies significantly, between the Gulf countries and the rest of the region, ranging from US\$71,133 in Kuwait (2004) to US\$952 in Jordan (2019).

1.3 The goal: enabling learning for all

If education stakeholders are to 'build back better', mitigate the learning loss associated with the pandemic and enable all of MENA's learners to experience quality education, it is crucial to clarify what enables learning for all. Enabling learning is the result of a combination of elements including: **access** (to schools and/or learning platforms and technological tools), **engagement** (enabled by learner-centred content, effective teaching and supportive relationships) and an **enabling environment** (including teacher development, effective leadership and data systems), as illustrated in Figure 1 below.



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²⁹ UNICEF (forthcoming). Learning, Skills and Employability in the Middle East and North Africa – Investing in Children as We Build a Next and Better Normal.

³⁰ UNICEF (2017). Reimagining Life Skills and Citizenship Education in the Middle East and North Africa: A Four-Dimensional and Systems Approach to 21st Century Skills.

³¹ UNICEF (forthcoming). Learning, Skills and Employability in the Middle East and North Africa – Investing in Children as We Build a Next and Better Normal.

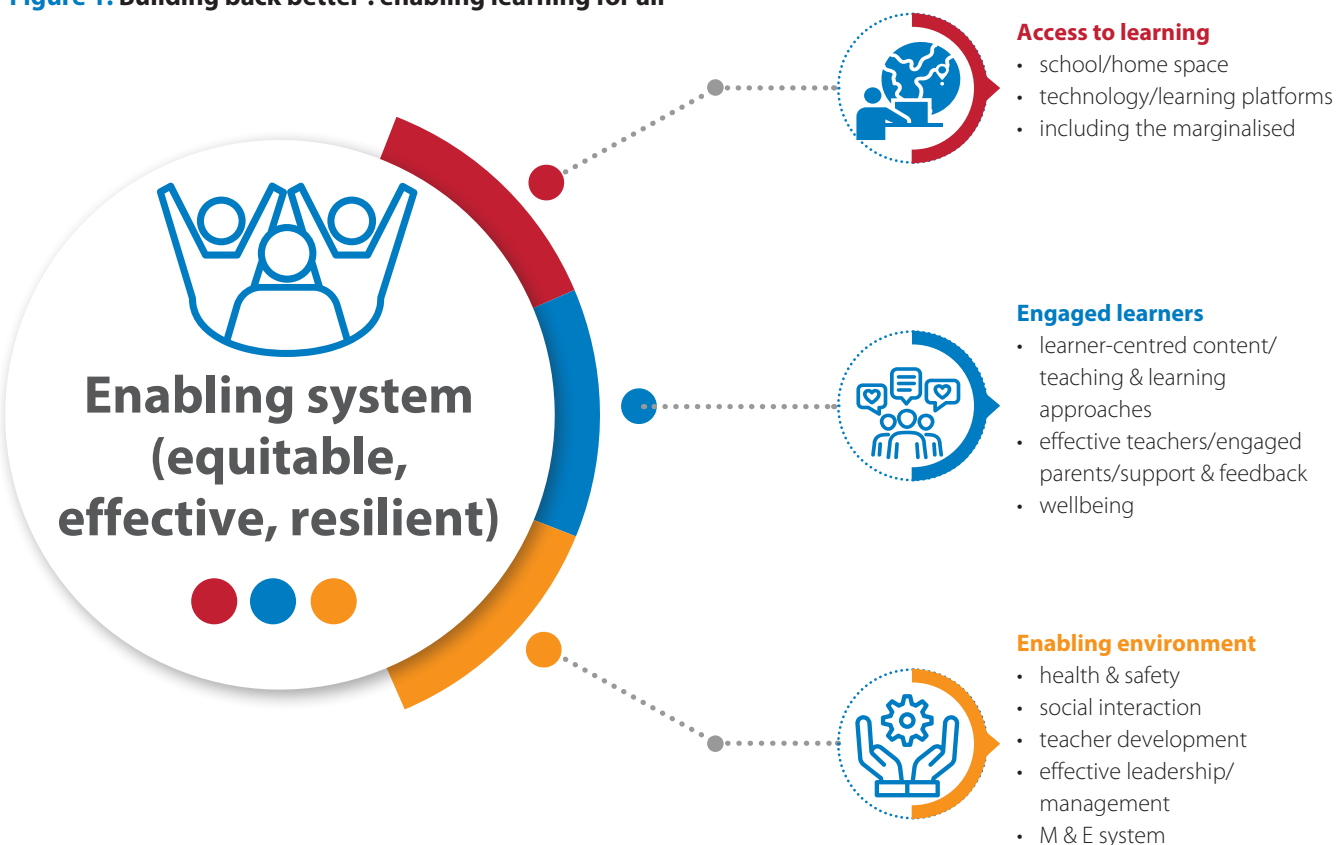
³² World Bank (2019). Ending Learning Poverty – What Will It Take?

³³ UNICEF MICS (2018).

³⁴ Algeria, Bahrain, Djibouti, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Sudan, Syrian Arab Republic, Tunisia, United Arab Emirates, and Yemen

³⁵ Gross Enrolment Ratio definition: Number of students enrolled in a given level of education, regardless of age, expressed as a percentage of the official school-age population corresponding to the same level of education. (UNESCO UIS)

Figure 1. Building back better’: enabling learning for all



In practice, these elements require the following:

Access to learning



Access to learning - access to schools for face-to-face learning, learning platforms, technological tools (computers, tablets, and smartphones) and an internet connection and/or materials for remote learning, or appropriate combinations of these for hybrid learning.

Engaged learners



Engaged learners - learner-centred activities and/or materials (appropriate for learners’ age and capabilities and enabling the development of social-emotional and life skills³⁶ as well as foundational skills) supported by effective pedagogy and curriculum, effective teachers (whose approach is centred on the learners) and engaged parents/caregivers who provide both support and feedback.

Enabling environment



Enabling environment - a safe school/home environment (including safe interaction with peers), strong initial teacher preparation, ongoing professional development for teachers (including skills for effective online/hybrid teaching), effective leadership and management (including clear communication with stakeholders) and strong monitoring and evaluation systems (including learning assessment) to enable ongoing provision of learning that meets the needs of all learners.

The school closures associated with the pandemic have cut many children off from experiencing learning, by disrupting **access** (especially for those without the tools and/or connectivity required for online or hybrid learning) and making it more difficult to **engage** in learning (due to disrupted relationships with teachers and lack of experience of online teaching and learning) and providing **enabling environments** (due to school closures).

This report investigates the ways in which the challenges of the pandemic and the associated policy and programmatic responses thus far are affecting the aspects of access, engagement and enabling environments for which the joint survey of Ministries of Education and simulations provide evidence or projections, including pertaining to children who are marginalised by refugee status, poverty, disability or gender.

³⁶ UNICEF (2017). Reimagining Life Skills and Citizenship Education in the Middle East and North Africa: A Four-Dimensional and Systems Approach to 21st Century Skills.

CHAPTER 2

The problem: learning disruption

2. The problem: learning disruption

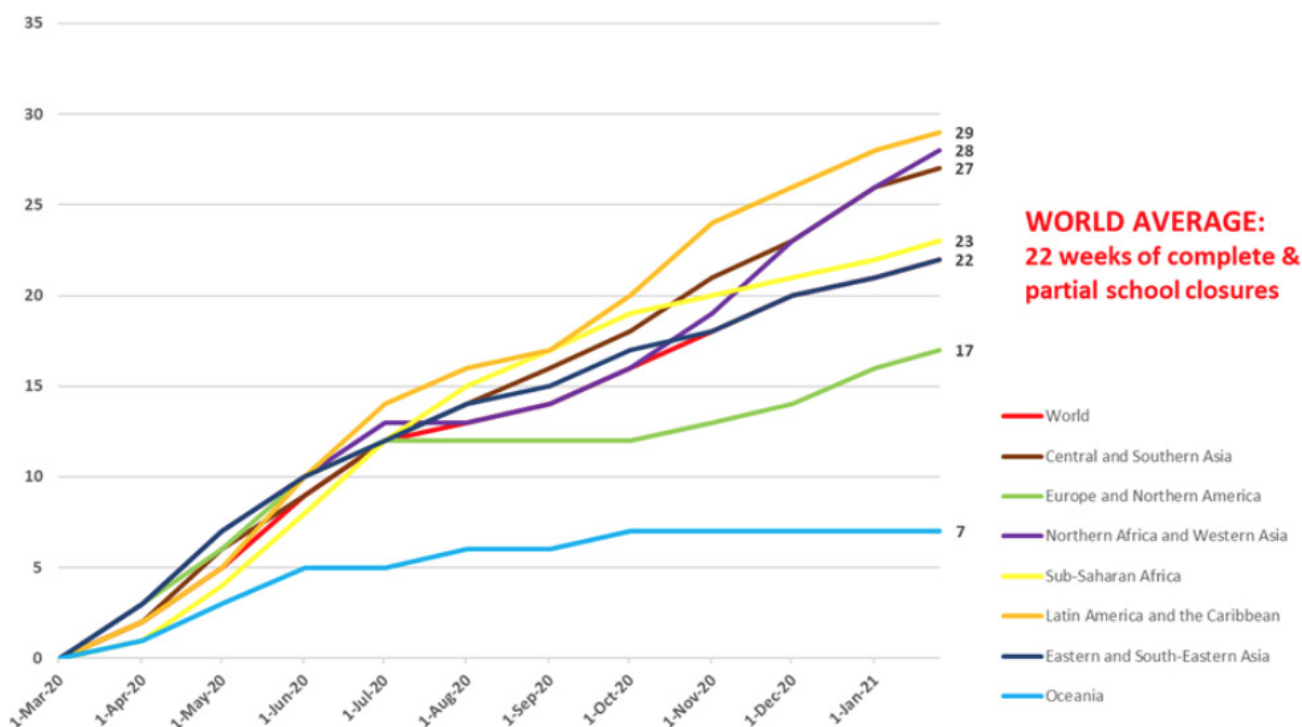
2.1 MENA school closures: overview

Education in MENA has been negatively affected by COVID-19 related school closures in addition to conflicts and economic shocks, generating a growing fear of generational regression in learning and skills^{37 38}. Between March 2020 and January 2021, the duration of **school closures in MENA was between four and six weeks longer than the global average**, according to UNESCO estimates³⁹. These estimates suggest that an average of two thirds of an academic year (22 weeks) was lost worldwide over this period, while the MENA regional average for full or partial school closure⁴⁰ was estimated at 28 weeks; the second highest after Latin America and the Caribbean (see Figure 2 below).



© UNICEF/Al Smadi

Figure 2. Duration of complete and partial school closures (in weeks) by region, March 2020 to January 2021



Source: UNESCO global monitoring of school closures

³⁷ UNICEF (2020). an overview of country COVID-19 “Safe return to schools” responses in Middle East and North Africa (MENA).

³⁸ UNICEF, MENA internal education covid-19 response tracker.

³⁹ <https://en.unesco.org/covid19/educationresponse>.

⁴⁰ School closure refers to physical closure of school premises and/or buildings and cessation of regular in-person schooling. However, learning can still continue through remote learning.

Figure 3, below, shows the estimated number of weeks of school closures (i.e. when schools were physically closed) per country across MENA between March 2020 and June 2021. The duration of closures varies widely between countries, ranging from one week in Sudan to forty-seven weeks in Kuwait for the two academic years (2019/2020 and 2020/2021) combined⁴¹.

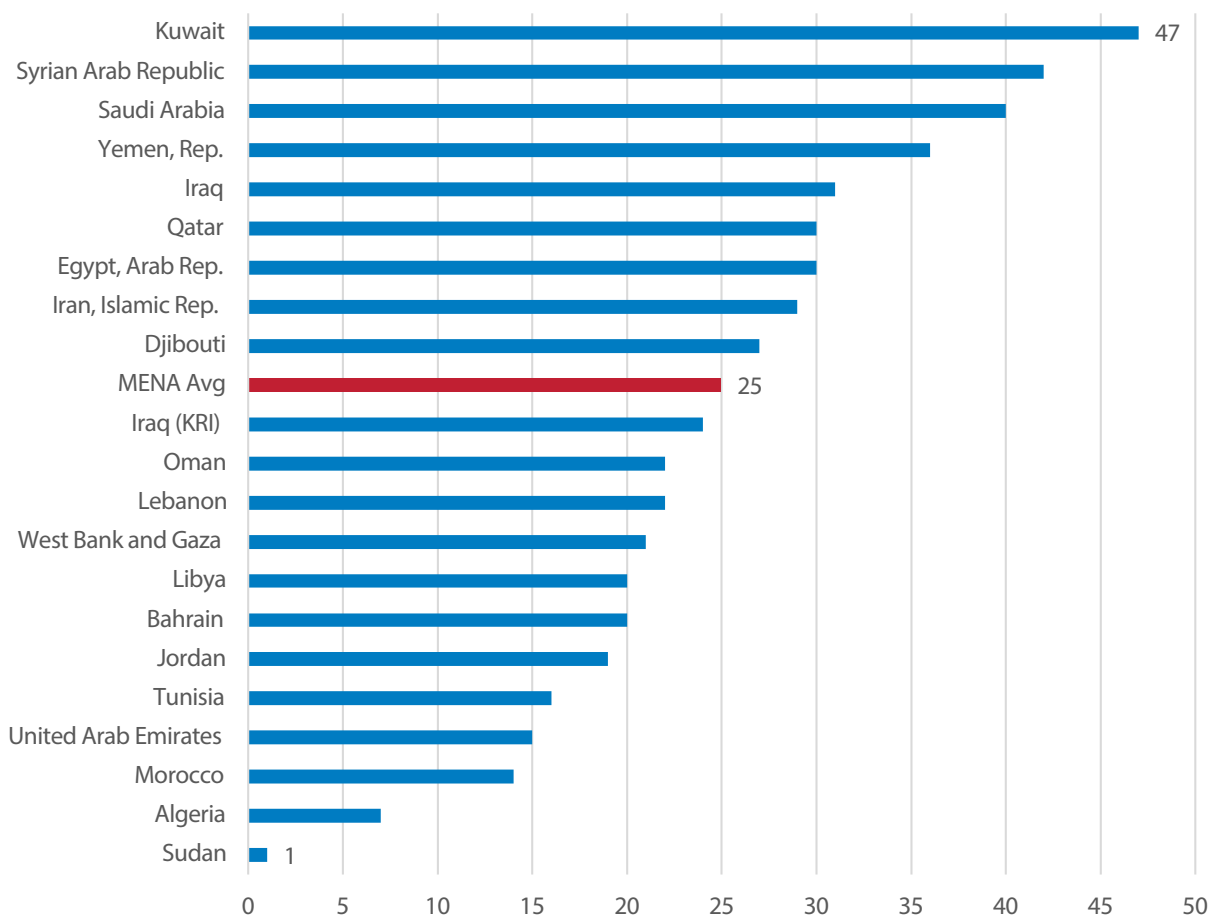
The number of weeks of in-person learning lost may impact the entire generation of children if appropriate policies to redress learning loss and ensure ongoing learning are not put in place, especially for the most vulnerable learners, including girls, the poor, refugees and those with disabilities.

2.2 MENA school closures in detail

2019-2020 academic year

Students of all ages across MENA experienced various patterns of school closure and reopening, in response to the double challenge of containing the spread of the COVID-19 and ensuring learning continuity. In January 2020 the majority of schools were still open or on a scheduled break, pending the decision of national health and education authorities. Iran, the first country in the region to report a confirmed case (in February 2020), was the exception, as national health authorities took drastic measures - including school closure - earlier in January to limit the spread of the virus⁴². During February, in response to lack of clear guidance or guarantees regarding safe school operations, Ministries of Education in the region began to close their institutions and explore ways to ensure learning continuity.

Figure 3. Duration of school closures (in weeks) on average in MENA, March 2020 to June 2021



Source: UNESCO global monitoring of school closures

⁴¹ Countries may have shifted their academic calendar, but this is not shown in the figure.

⁴² UNICEF (31 March 2020). Situation Report.

In March 2020, in response to the rapid spread of the virus across the region, national health authorities made the decision, in coordination with education stakeholders, to close all schools in the following seven countries: Iran, Saudi Arabia, Lebanon, Iraq, Bahrain, Kuwait and Palestine/Palestinian territories. By the end of March, all schools in the region were fully closed, with the exception of Qatar (partially closed) and three countries with schools closed for a scheduled break (Algeria, Bahrain, and United Arab Emirates). Ministries of Education in the region were not prepared for this unprecedented scenario, in which full school closures deprived 110 million students of opportunities for learning and socialisation and other services schools provide, including health services and nutrition⁴³.

The reopening of schools in MENA began in April and May of 2020 in three countries (Egypt, Lebanon and Qatar), with priority given to grades undertaking national examinations before the end of the academic year in June 2020. By the end of July 2020, all schools in the region were either on a scheduled break or fully closed, marking the end of the 2019-2020 academic year.

2020-2021 academic year

In September 2020, when all schools in the region were scheduled to resume, the scientific evidence regarding virus transmission among school age population to make informed decisions about safe reopening, was lacking. Almost 50 per cent of governments chose to postpone reopening, continuing with remote learning or operating with partial reopening.

By the end of September 2020, face-to-face teaching and learning had resumed in schools in three countries (Iraq, Qatar⁴⁴ and Syria), while schools in seven countries (Algeria, Egypt, Libya, Oman, Saudi Arabia, Yemen and Sudan) were still fully physically closed, with remote and/or hybrid learning available in some cases. By the end of October 2020, the number of countries providing face-to-face learning by fully reopening schools had increased to nine, and six countries had partially reopened, demonstrating eagerness towards resuming continuity of learning in person.

During November 2020, health and education authorities in the region were concerned about the epidemiological situation of the virus, leading to an increase in school closures, but by early December 2020, schools were fully or partially open in 15 countries and fully closed in only five countries (Djibouti, Iraq [Kurdistan Region of Iraq (KRI)], Jordan, Libya and Saudi Arabia). Sudan's school year, which usually runs from June to March, was initially scheduled to restart in September 2020, but was further postponed to January 2021.

As of late January 2021, only one country (Saudi Arabia)⁴⁵ kept schools closed and by early February 2021, almost 80 per cent of countries in MENA had operational education institutions, enabling in-person or hybrid learning.

2.3 Reopening

Ministries of Education in MENA took a flexible, phased approach to reopening schools, in combination with the provision of remote learning, in response to COVID-19. The decision to reopen schools physically was influenced significantly by the evolution of the pandemic in each country, as well as by public opinion regarding the safety of schools and the lack of reliable evidence available to guide national education responses.

The majority of countries went through various phases of closure and reopening. In Jordan, for example, schools reopened on 1 September 2020 on a partial basis, but closed fully later that month, reopening later in the school year⁴⁶. Other countries including Syria, Algeria, and Yemen reopened on a phased basis during the 2020-2021 school year, prioritising exam classes, certain grades or areas with low infection rates.

As of 22 September 2021, schools had fully re-opened in eleven countries, partially re-opened in seven countries and remained closed in two countries in the region⁴⁷.

⁴³ UNESCO. Global monitoring of school closures, Education: From disruption to recovery (unesco.org).

⁴⁴ In Qatar, the return was to hybrid learning in most private schools (the majority) and in all government schools – as of September 2021, schools have only 50% capacity at school (using shifts).

⁴⁵ However in Saudi Arabia all students were able to access the Madarasati learning platform.

⁴⁶ UNICEF Jordan (2020). COVID-19 Education Response in Jordan March to November 2020.

⁴⁷ Data retrieved from the UNESCO map on school closures and UIS on 8 November, 2021. As at September 2021, eleven fully school reopened countries include: Algeria, Djibouti, Egypt, Jordan, Morocco, Palestine, Sudan, Syria Arab Republic, Tunisia, United Arab Emirates, and Yemen; seven partially school reopened countries include: Bahrain, Kuwait, Lebanon, Libya, Oman, Qatar, and Saudi Arabia; two school closure countries include: Iraq and Iran.

CHAPTER 3

Responses to date: strategies to enable

learning during the COVID-19 pandemic

3. Responses to date: strategies to enable learning during the COVID-19 pandemic

3.1 Access to learning

i. Supply: provision of remote and hybrid learning

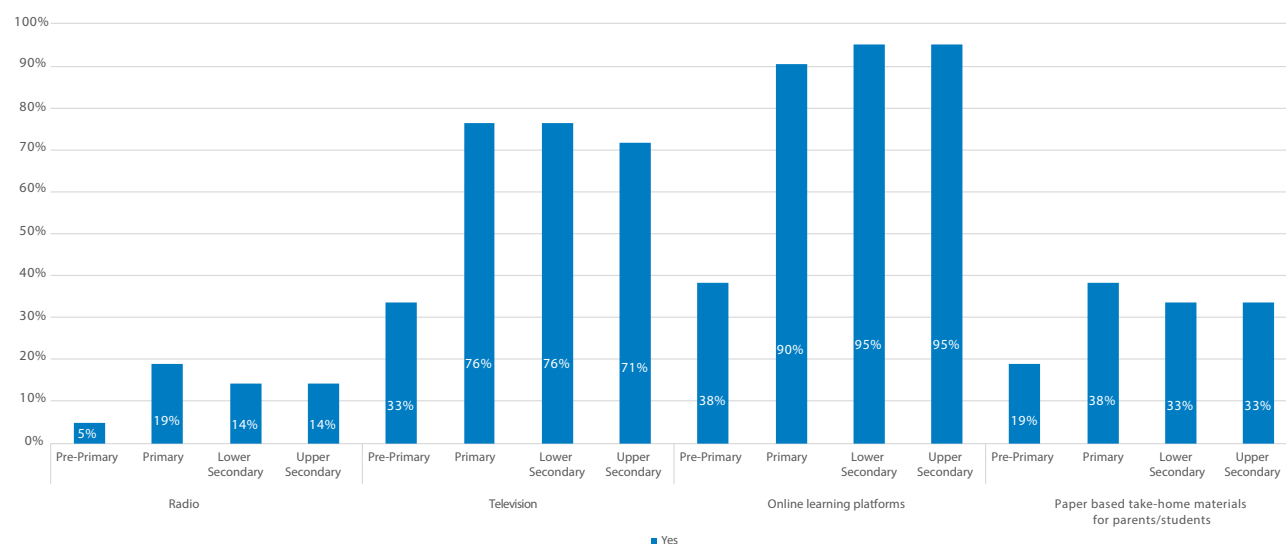
Countries across the region reacted with a mix of approaches to ensure continuity of learning for their student populations during school closures⁴⁸. Approaches included: face-to-face learning for the earlier grades, hybrid learning for most grades and full remote learning using mixed delivery modalities. The strategies used varied not only from country to country (see Annex 3 for details), but according to education grades (see Figure 4 below), and also from school to school within countries⁴⁹.

Countries used diverse means of delivery for remote learning, including establishing and operating digital learning platforms, developing and broadcasting lessons

through television and radio, and distributing paper-based take-home packages. Online learning platforms were the predominant model used overall, employed in 38 per cent of countries for pre-primary, 90 per cent of countries for primary and 95 per cent of countries for both lower and upper secondary level. Television was the second most used, employed in 33 per cent of countries for pre-primary, 76 per cent for primary and lower secondary and 71 per cent for upper secondary. Overall, pre-primary and primary education were less likely to be served by any of the remote learning approaches.

These strategies also varied according to the level of teacher engagement and participation, and the amount of guidance provided to parents on home-schooling and extra-curricular activities. In addition, ten countries⁵⁰ focused on conducting national exams, abiding by safety protocols, including physical distancing.

Figure 4. Types of delivery system deployed by education level during school closures, 2020



Sources: UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures (2020) and UNICEF Country offices (2020) and John Hopkins tracker

⁴⁸ UNESCO, UNICEF, the World Bank and OECD (2021). What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-10 Pandemic.

⁴⁹ UNESCO/UNICEF/World Bank (2020). What Have We Learnt? Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

⁵⁰ Algeria, Egypt, Iraq, Jordan, Kuwait, Libya, Palestine/Palestinian territories, Sudan, Tunisia and Yemen

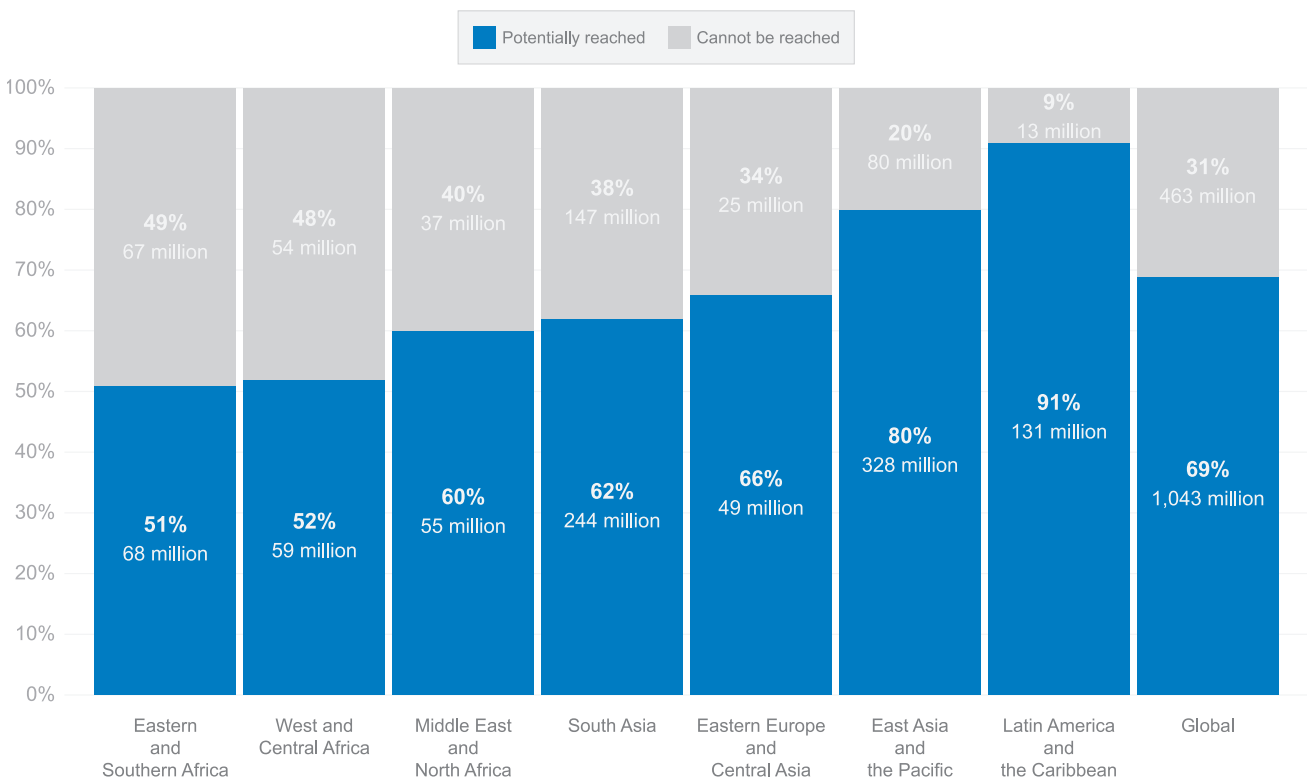
ii. Reach: participation in remote and hybrid learning

Governments across the region ensured continuity of learning during school closures through remote learning modalities. However, an estimated 37 million students were not reached (see Figure 5), based on the data collected in May and June 2020⁵¹. Regional-level evidence shows that 40 per cent of students did not have access to and/or did not participate in the digital and broadcast remote learning options provided. Similar patterns were recorded in Eastern and Southern Africa (49 per cent), West and Central Africa (48 per cent) and South Asia (38 per cent). The majority of the students who were not reached were already vulnerable and disadvantaged⁵².

Participation in remote and hybrid learning programmes depends on learners having access to the relevant resources, including internet connections, computers, tablets, smartphones, television and digital content in the language of instruction. Those without access to these resources and tools are at risk of being left behind as school closures drag on and as the world faces regular potential outbreaks in the future. The UNICEF analysis of household survey data shows that in the MENA region, only 26 per cent of students have access to both the internet and a computer and 52 per cent had access to a television (see Figure 6).

Children living in low-income households, who already achieve lower educational attainment levels than their peers living in more affluent households, are likely to be further disadvantaged by poor teacher capacity, lack of parental support and resources needed for remote and hybrid learning.

Figure 5. Share and number of students (pre-primary to upper secondary) potentially reached and not reached by digital and broadcast remote learning policies by region

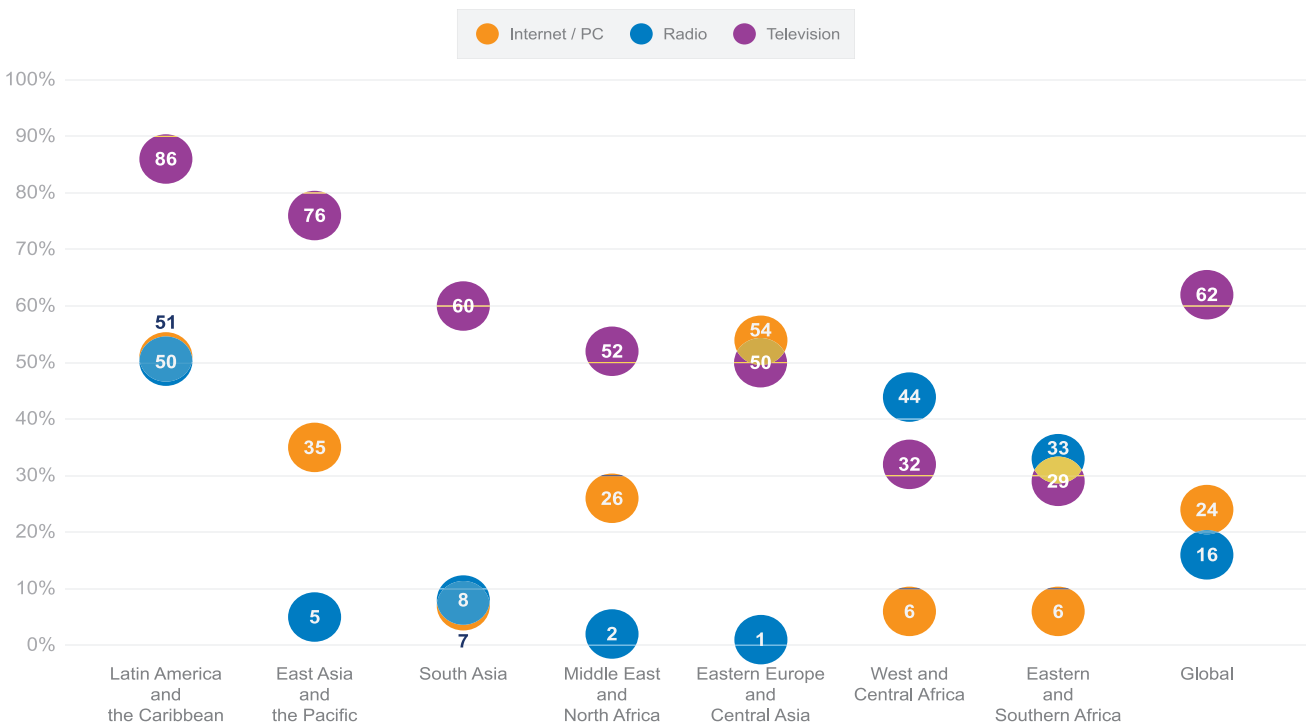


Source: UNICEF (2020): COVID-19 – Are Children able to Continue Learning during School Closure?

⁵¹ UNICEF (2020). COVID-19 – Are Children able to continue Learning during School Closure?

⁵² Ibid.

Figure 6. Share of students (pre-primary to upper secondary) potentially reached by different types of remote learning method by region



Source: UNICEF (2020): COVID-19 – Are Children able to Continue Learning during School Closure?

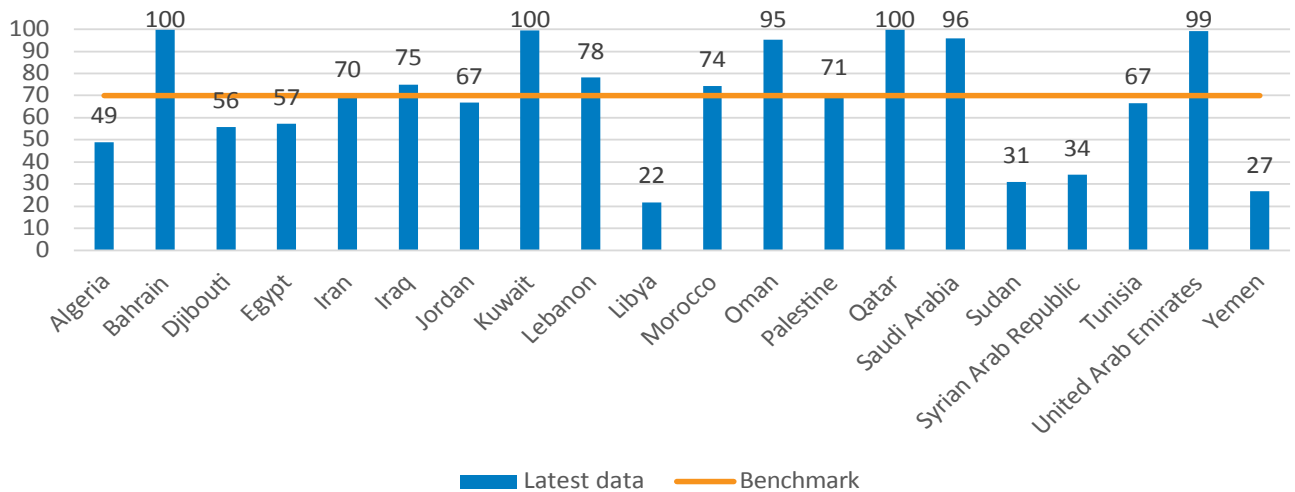
Ministries of Education in all MENA countries made at least one online platform available to enable home-based learning during school closures. However, internet access is available to varying degrees across the region, with nine countries having an internet penetration rate of lower than 70 per cent (see Figure 7). For some countries, including Libya, Sudan, Syria and Yemen, internet penetration is lower than 35 per cent.

While overall reach is higher in other countries, data on the uptake and effectiveness of the various remote learning options is limited. This is mostly due to challenges in widescale data collection during the COVID-19 pandemic, possibly caused in part by a lack of data collection frameworks to guide national initiatives.



maxbelchenko/Shutterstock.com

Figure 7. Internet penetration rate in MENA, 2019 to present

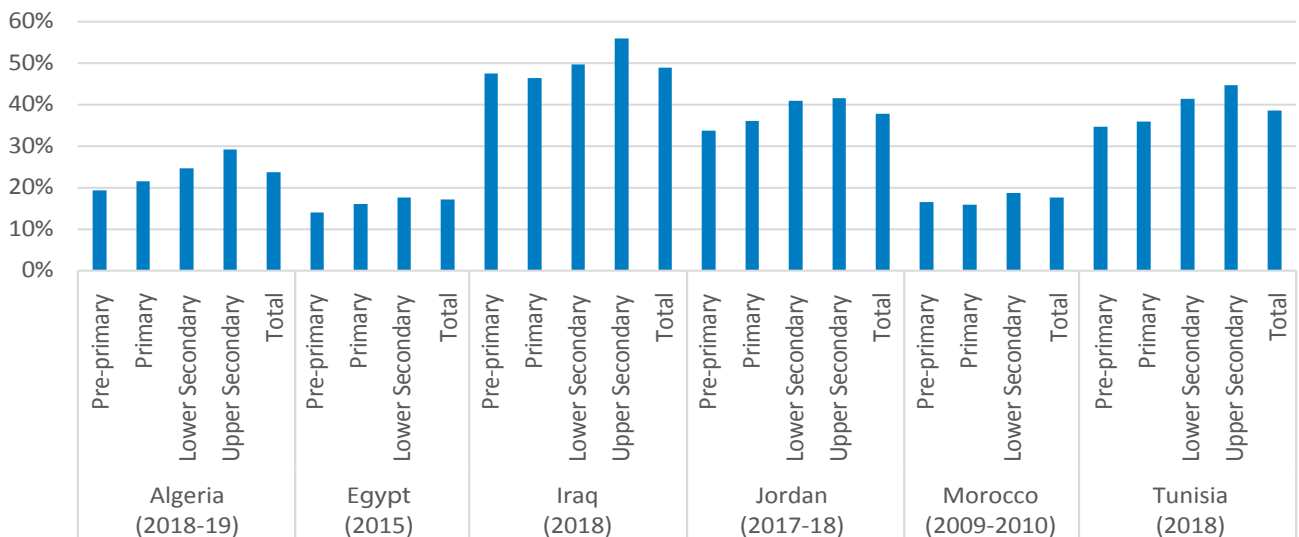


Data source: "Percentage of Individuals using the Internet (excel)" from ITU Statistics (2021) <https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>

The available survey data on digital connectivity (i.e. access to both a device and the internet) pre-dates the COVID crisis and the reality may have improved in recent years. However, these surveys provide the most reliable data currently available, by education level, for selected countries in the region. They indicate **limited internet access across all education levels**, with implications for the accessibility of digital remote learning.

As shown in Figure 8, students in several countries were likely to be excluded from ongoing learning opportunities, due to lack of access to the internet, exacerbating the existing digital divide and educational inequalities. Those in lower grades, in particular pre-primary and primary, were more likely to be excluded than those in higher grades. In-depth analysis considering other key areas of inequities (e.g. rural vs urban or income levels) could provide interesting insights regarding where policy makers need to focus to design effective policy responses.

Figure 8. Digital connectivity per education level in MENA



Source: UNICEF Global database on school-age digital connectivity [Multiple Indicator Cluster Survey, Household Income, Expenditure and Consumption Survey, Demographic and Health Survey, Morocco Household and Youth Survey (MHYS)].



Ministries of Education across MENA, with the support of education stakeholders, implemented several strategies to bridge the digital divide within their student populations. These initiatives aim to enable all students, and especially the most vulnerable, to take part in learning activities, particularly where devices and connectivity are limited. These mitigation strategies for bridging the digital divide include:

- **Internet zero rating or subsidised internet access (data free)** for accessing Ministry of Education (MoE) websites during specified times of day. For example, free data packages were provided in Jordan by UNICEF between March and November 2020, to vulnerable students in camps and informal tented settlements⁵³;
- **Extended electricity hours** in refugee camps (e.g. Zaatari Refugee Camp in Jordan⁵⁴) to ensure children can watch television when MoE lessons are aired;
- **Donated and/or subsidised ICT devices** (tablets with hotspots) with preloaded learning resources provided to children. In Algeria, servers and routers were provided by UNICEF to expand coverage of existing distance learning platform⁵⁵;
- **Access to online learning platforms** enabled via mobile phones.

⁵³ UNICEF (2020). COVID-19 Education Response in Jordan, March to November 2020.

⁵⁴ UNICEF Jordan (November 2020). COVID-19 Education Response.

⁵⁵ UNICEF. (2020). Country Office Annual Report: Algeria.



Box 2. Higher education responses

To provide an evidence-based overview of the current situation of the higher education system at national and global levels, UNESCO conducted a Survey on Covid-19: Reopening and Reimagining Universities⁵⁶ between December 2020 and February 2021, addressed to 193 UNESCO Member States and 11 Associate Members. Six Arab States responded to the survey: Egypt, Jordan, Libya, Qatar, Palestine/Palestinian territories and the United Arab Emirates.

The survey explored the diverse impact of the pandemic on the higher education system in terms of access, equity, quality of teaching and learning, university operations, national challenges, emerging issues and strategic responses. It found some countries were able to transform the challenges associated with the rapid digitalisation of education into opportunities, with strong government support and international cooperation. The reporting Arab states shared strategic priorities of expanding infrastructure and the availability of digital devices for online learning, supporting teachers more effectively and increasing international collaboration via research and policy dialogues.

Access

Though the impact of COVID-19 on the higher education global enrolment varies by region and income level (depending on government funding and levels of domestic enrolment), all six responding Arab States indicated no reduction in student enrolment. Pandemic-related travel restrictions affected international students' physical access, but the transfer to online learning enabled ongoing access. Surprisingly, in Egypt the number of inbound mobile students increased from 12,617 in 2019/2020 to 15,709 in 2020/2021, though Egypt also recorded a decrease in outbound students from 15,500 in 2019/2020 to 8,900 in 2020/2021.

Engagement

The major impact of COVID-19 on learning design in higher education globally has been the move from face-to-face to online learning, with hybrid learning being the most popular method in all regions except Europe (where online is preferred). In the six responding Arab

States, hybrid learning has been the most common response overall. The pandemic caused suspension or cancellation of teaching and research activities both globally and in four out of six of the reporting Arab States; though Egypt reported an increase in research and activities focused on COVID-19 and education policy.

The contraction of global job opportunities associated with the pandemic is making the transition from higher education to the labour market more challenging, with employers increasingly prioritising applicants with technology skills. In the Arab States, Palestine/Palestinian territories and the UAE highlighted the digitalisation of the labour market, with the UAE reporting that new workforce entrants are beginning their careers online rather than face-to-face. Libya reported a decrease in the demand for new jobs in both the public and private sectors. These findings have implications for the integration of digital skills in learning design for higher education across disciplines.

Enabling environment

Despite the closure of many universities, the impact of COVID-19 on university staff compared to the previous academic year is limited. In the Arab States, Egypt, Qatar, Palestine/Palestinian territories and the UAE reported no impact on university staff (academic and administrative) and only Jordan and Libya indicated a reduction in employment of up to 20 per cent and a general salary reduction (which included administrative staff in Jordan).

Finance

Regarding financial support from government and external sources – often crucial to the survival of higher education institutions – three of the responding countries (Egypt, Palestine/Palestinian territories and UAE) - indicated stable funding during the pandemic, while two (Jordan and Libya) reported a reduction of income. This was due to enrolment loss in Jordan and to reducing fees in Libya. Three countries reported receiving additional income from government (Egypt and Libya) or international aid (Jordan).

Source: Based on UNESCO, COVID-19 Reopening and reimagining universities: Survey on Higher Education via UNESCO National Commissions, 2021.

⁵⁶ UNESCO. (2021). COVID-19: Reopening and Reimagining Universities, Survey on Higher Education through the UNESCO National Commissions.

3.2 Engaged learners

i. Parents and caregivers: enabling home-based learning

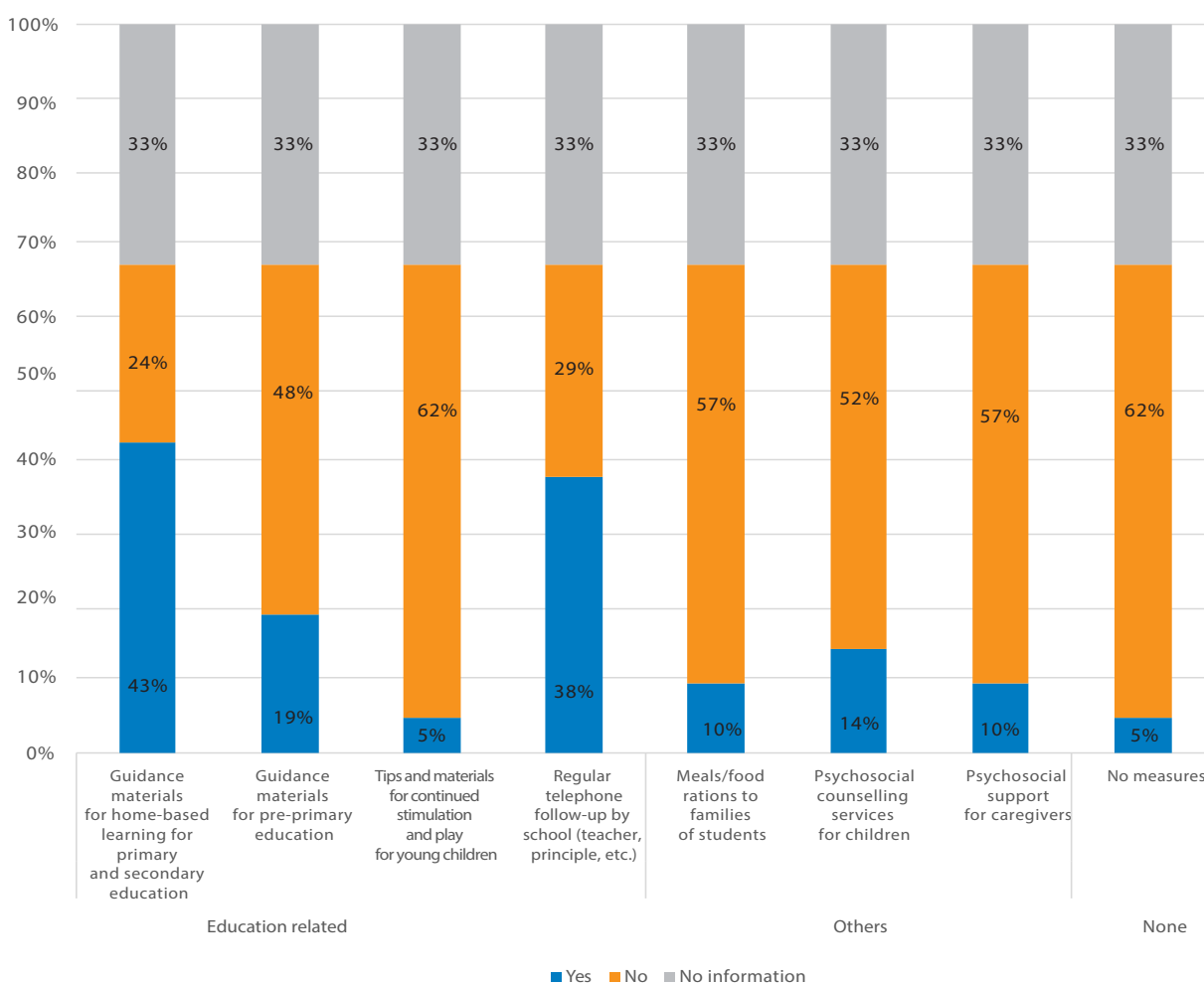
COVID-19 school closures highlighted the significance of the home environment in learning⁵⁷. Parents and caregivers became more vital agents in their children’s learning than ever before, at a time when many lacked the time and/or capacity to fulfil this role effectively. Across MENA, government efforts to facilitate learning continuity at home during school closures by supporting parents and caregivers varied from country to country and included both education-related measures and the provision of food and psychosocial support to children and/or caregivers.

Overall, nine of the 21 countries (43 per cent) reported providing materials to guide parents in home-based learning for primary and secondary students and four countries (19 per cent) for pre-primary students (see Figure

9). Parental guidelines for supporting learning at home were reinforced with regular follow-up phone calls by schools in eight countries (38 per cent) in the region. Only 5 per cent of countries provided support to parents and caregivers for providing ongoing stimulation and play for young children.

COVID-related school closures in MENA also interrupted other critical services provided by education systems, including childcare and school meals. The absence of these services put additional financial burdens on households, especially the most vulnerable who are most reliant on these forms of support. In response to this shortfall, two countries (10 per cent) – Saudi Arabia and Sudan - reported providing meals or rations to families during school closures, and three countries (14 per cent) – Iran, Saudi Arabia and Sudan – reported providing psychological counselling services for children. Saudi Arabia and Sudan were the only countries who reported providing psychological support for caregivers (see Figure 9).

Figure 9. Mitigation measures targeting parents and caregivers for continued learning at home (MENA regional overview)



Source: UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures (2020).

⁵⁷ UNESCO/UNICEF/World Bank (2020): What Have We Learnt? Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

ii. Catching up with remedial and accelerated learning

Building on past experiences dealing with pandemics in MENA and beyond, governments in MENA implemented a range of responses, including both remediation and acceleration programmes, to catch up on learning lost during school closures.

Fourteen per cent of reporting countries increased class time to combat learning loss from primary to upper secondary level, 24 per cent introduced remedial programmes to help children catch up and 10 per cent used accelerated programmes (see Figure 10 below).



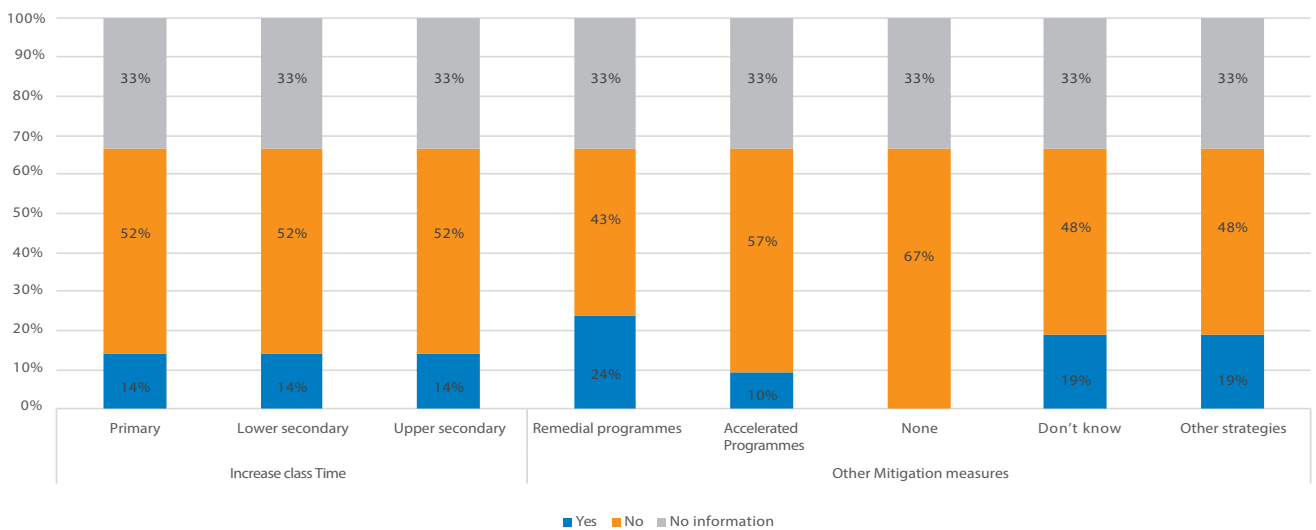
Remediation and acceleration: what's the difference?

- 1 At a basic level, **remediation** (or reteaching) means 'teaching again' content that students previously missed or failed to learn.
- 2 **Acceleration** focuses on teaching only what must be learned at a given level, focusing on the minimum skills and knowledge required for a student to access grade-level material adequately.

The limited scope of remedial strategies in the region is alarming and will exacerbate the pre-existing learning crisis – increasing the risk of dropout, especially for the most vulnerable groups - if policies and action to redress learning loss are not implemented urgently.



Figure 10. Different approaches to limiting learning loss in MENA, July-October 2020



Source: UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures (2020) and UNICEF Country offices (2020).



Box 3. Refugee children and youth at risk of dropping out

With most national education systems shifting to home-based learning, many refugee children, adolescents and youth have been particularly at risk of being excluded from learning. Their growing frustration at being isolated and having their movement restricted has been compounded by struggling to access online learning due to lack of internet, devices, and necessary support services, including language classes and psycho-social support. Additionally, suspension of school meal programmes has impacted marginalised children's nutrition and health.

Meanwhile, refugee parents have shouldered the competing demands of supervising their children's learning while protecting their family's economic welfare. Their children are at higher risk of not returning to school after reopening, or dropping out completely due to learning loss, protection issues and the economic pressures experienced by their families. Various catch-up modalities have been used to support refugee learners in MENA, including face-to-face learning in Syria and Gaza, hybrid learning in Jordan and remote learning in Lebanon.

- In **Syria**, the focus of the catch-up programme was to prepare Grade 9 students for undertaking the national exams over the summer. In Gaza, catch-up was organised for all students for two weeks in August 2020 and in Jordan, a two-week catch-up programme was offered in early September 2020, using hybrid learning. In Lebanon, catch-up classes were provided to students who had not been able to participate fully in remote learning due to challenges with access to technology. This was followed by a full, four-week catch-up programme starting in mid-September 2020 for all grades. The official start of the 2020-21 school year in all five fields of operation (Jordan, Lebanon, Palestinian territories (and West Bank and Gaza) and Syria) was marked by uncertainty as COVID-19 continued to spread across the region.
- In **Jordan**, for 119,056 UNRWA students, the school year began on 1 September 2020 with hybrid learning. The focus was on the four core subjects, with a reduction in the number of lessons allocated to non-core subjects. With the rise in infection rates, all schools in Jordan, including UNRWA schools, moved Grades 4-10 to full remote learning on 17 September 2020. The decision regarding the attendance of children in Grades 1-3 was initially left up to parents. However, on 9 October 2020, all ages moved to full remote learning, with support for children with special needs built into the model.
- In **Lebanon**, the devastating explosions in the Beirut Port damaged many Government schools. The physical damage, combined with an increase in COVID-19

cases, delayed the official start of the new school year until 2 November 2020. Throughout November, 37,944 UNRWA students followed classes using a hybrid model for secondary grades and a full remote approach for all other grades. A two-week lockdown from 14 to 29 November resulted in all students returning to full remote learning. From 30 November 2020 until the end of the year, all students were able to resume their classes using hybrid learning.

- **Syria** was the sole UNRWA Field where all 50,609 students returned to full school-based, face-to-face learning on 13 September. Due to a lack of extra teachers and classroom space to enable social distancing, the emphasis was on health and hygiene measures. The length of the school day was reduced by 30 minutes to allow time for school cleaning between the two shifts in 62 of 102 agency schools operating on a double shift.
- In **Gaza**, the start of the school year for its 287,019 students was postponed until 17 October 2020 for Grades 7-9, and 20 October for Grades 1-6; education was carried out through remote learning. From 2 November, education for Grades 7-9 was delivered through hybrid learning, with the move back to full remote learning starting 5 December 2020.
- The **West Bank** began the school year on 6 September with hybrid learning, initially for Grades 1-4 and extended to Grades 5-10 on 20 September. The 46,016 students divided their time between school attendance – practicing physical distancing in classrooms – and remote learning at home. Classes were split with half of the students attending school while the other half studied at home, on rotation during the six-day school week, with three days for face-to-face learning per group. Students were regularly supported through remote psychosocial support, and the Psychosocial Support and Recreational Activities Resource Guide⁵⁸ was made available to teachers and school counsellors.

With the emphasis on remote and hybrid learning the pandemic, the Education and Information Management and Technology (IMTD) departments worked together to put an agency-wide safe and accessible Self Learning Platform in place to support students. Psychosocial support was also provided to students and a booklet of recreational games and learning activities was also finalised. In addition, UNRWA launched a Writing and Drawing Event in July for students.

Sources: Based on UNHCR, COVID-19 Emergency Education Response Update 19 November 2020 and UNRWA, COVID-19 response summary August-December 2020

⁵⁸ Psychosocial Support Recreational Activities Resource Guide (unrwa.org).

3.3 Enabling environment

i. Teacher development: skills for a new reality

The unprecedented disruption to schools caused by the COVID-19 pandemic, impacting over 63 million teachers worldwide, has highlighted the need for educational systems to adapt rapidly to changing demands. The pandemic reinforced the need for ongoing professional development, psychological support and social-emotional learning for teachers, in addition to protecting their rights and working conditions, and generating ongoing research of rapidly changing teaching and learning environments⁵⁹.

With the sudden switch to remote and hybrid learning, teachers needed new pedagogic skills to enable them to use new technologies to deliver online and remote learning effectively, as well as dealing with heavier workloads, adapting content, conducting formative assessment and establishing new working routines for themselves and their learners⁶⁰. Various initiatives took place at regional and country levels to support them during this transition.

The first priority for international development partners at the regional level was the coordinated effort to develop the Ready to Come Back: Teachers Preparedness Training Package⁶¹ to support teachers' ability to enable learning for all during the pandemic and facilitate school reopening.

This regional training package, adopted by Ministries of Education and contextualised in several countries (Sudan, Iran, UAE, Egypt), covers three main topics: Safe School Operation (understanding COVID-19, classrooms protocols, reporting and referral mechanisms), Well-being and Protection (well-being and school, teacher well-being, learner well-being) and Back to Learning (managing lost school learning, implementing hybrid learning strategies, building a supportive learning environment). The package speaks directly to the teachers and can be adapted to their context and completed at their own pace. It includes quizzes, self-evaluation and planning tools to encourage ongoing reflection, exploration and learning. The online version of the package includes a module on inclusion, to be delivered to teachers, both online and offline.

In Sudan, for example, a training of trainers was conducted, selected teachers were introduced to the package and printed copies were distributed, to enable teachers

to support students' learning. In the UAE, educational practitioners in Dubai and Sharjah were introduced to the Ready to Come Back: Teachers Preparedness Training Package via virtual workshops (see participants' testimony in Box 4).



Box 4. Teachers preparedness training package in UAE

A participant explained: "We, [practitioners from] the GEMS Cambridge International Private School in Sharjah (UAE) participated in and appreciated Module 2 of the Teacher Preparedness Training Package, introducing the importance of mental health and psychosocial support.

After attending the training, our counselling teams, senior leadership, and medical teams created tailored workshops and exercises focusing on cognitive, emotional, social, and physical aspects. This made our students, staff and parents prepared and aware of the precautionary measures that contribute to staying safe, identifying common stressors, and understanding techniques to cope with stress and anxiety.

Parents were also assisted at home with strategies and helpful tips to overcome environment-induced stressors. As for teachers, they reinforced mindfulness and promoted supportive communication skills.

Overall, we witnessed a smoother transition and our students, teachers and parents were well-equipped to support each other. We were also able to share successful practices with the community."

The number of teachers reached with other forms of professional development has been limited due to financial and logistical constraints. However, some best practices are emerging at the country level, including in Jordan, where the MoE, with support from UNICEF, has developed a framework for an online teacher professional development course covering three units, including Unit 1: Effective face-to-face teaching practices; Unit 2: Effective remote teaching practices; and Unit 3: Effective hybrid teaching.

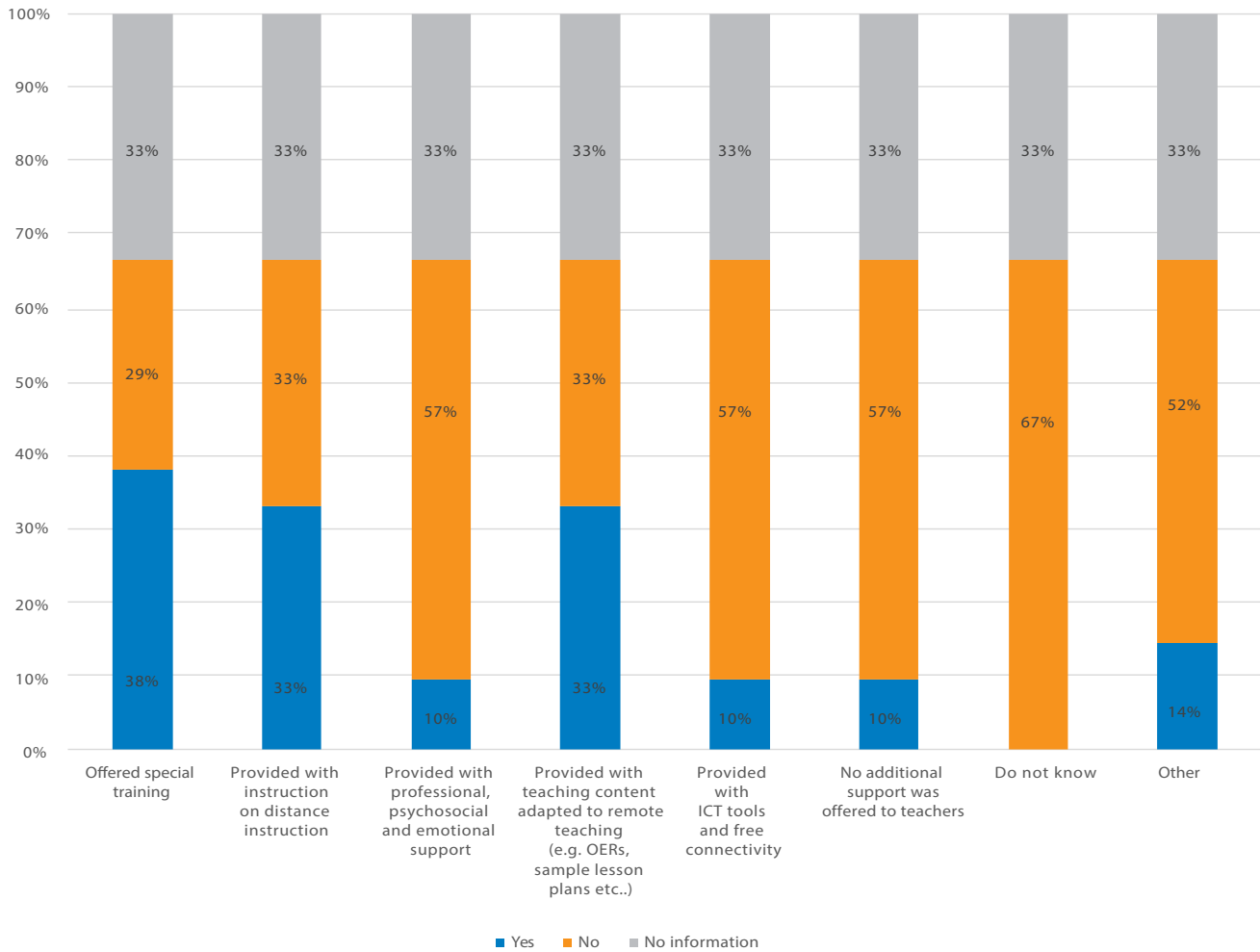
Thirty-three per cent of countries in MENA provided teachers with instructions on remote teaching and learning, as well as with content adapted for remote teaching and learning, such as open educational resources and sample lesson plans (see Figure 11).

⁵⁹ International Task Force on Teachers for Education 2030, Futures of Teaching – Conversation between teachers and experts from the Arab States.

⁶⁰ International Task Force on Teachers for Education 2030, Teaching on the front line.

⁶¹ UNICEF MENA Regional Office (2020). Ready to Come Back: Teacher Preparedness Training Package.

Figure 11. Mitigation measures targeting teachers for continued learning in MENA, July-October 2020



Source: UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures (2020).

3.4 Effectiveness: government perceptions

MoE officials in MENA responding to the UNESCO/UNICEF/WB joint survey (Round 2)⁶² reported that online platforms and televised-based learning are perceived to be the most effective modes of delivery of remote learning (see Figure 12).

Among CAC with ongoing humanitarian crises, including Syria, Yemen and Libya, learning via both online platforms and the television were perceived to be ‘very effective’ (100 per cent), as depicted in Figure 13. Take-home packages were reported to be perceived as ‘fairly effective’ by 100 per cent of reporting countries with ongoing humanitarian crises, mainly driven by safety considerations and limited access to connectivity and other ICT devices. Among Middle Income Countries, most learning modes were either reported to be perceived as ‘very effective’ or ‘fairly

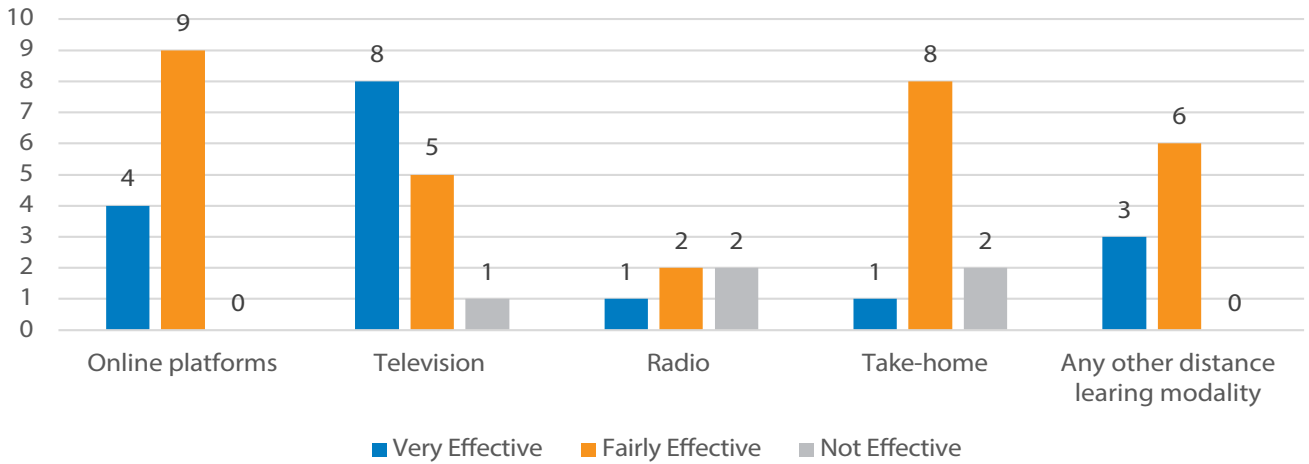
effective’, except for take-home packages, which were reported to be ‘not effective’ in some cases (29 per cent).

Radio was reported to be perceived as ‘not effective’ in two High-Income Countries (Qatar and Saudi Arabia), though this could be correlated to the prevalence of its use across income groups. Countries with ongoing humanitarian crises reported radio as either ‘very effective’ (50 per cent) or ‘fairly effective’ (50 per cent).

However, for a more holistic picture of the effectiveness of these responses, data on student engagement and performance (especially changes in performance), as well as the perspectives of students and teachers, are required.

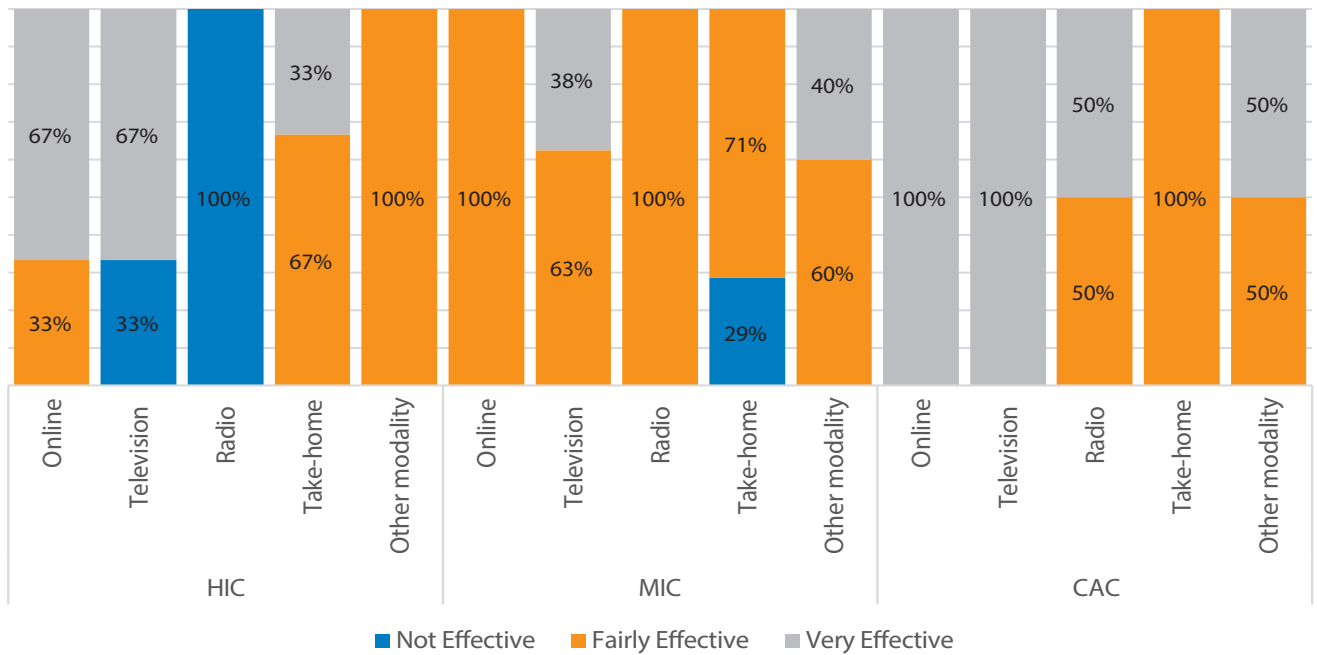
⁶² UNESCO/UNICEF/World Bank (2020): What Have We Learnt? Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

Figure 12. Number of countries by perceived effectiveness of remote learning in MENA, July-October 2020



Source: UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures (2020) and UNICEF Country offices (2020).

Figure 13. Perceived effectiveness of remote learning, by modality and typology in MENA July-October 2020



HIC: High Income Country

MIC: Middle Income Country

CAC: Conflict Affected Countries

Sources: UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures (2020) and UNICEF Country offices reporting on MoE officials' responses (2020).

Note: Figures are estimated using simple averages across countries.

CHAPTER 4

The potential impact of COVID-19
on schooling and learning

4. The potential impact of COVID-19 on schooling and learning

4.1 Background

COVID-19 related school closures are taking countries off track from achieving their schooling learning goals. When children are unable to attend school, they lose the opportunity to acquire new knowledge and skills and may forget what they learned in the past, resulting in lower average learning levels for countries and eventually in disengagement and dropout. Unremediated learning losses may compound over time if children continue to fall further behind in the curriculum⁶³. Simultaneously, the economic shock of the crisis and its impact on income, employment, and government budgets, can affect learning outcomes and future earning capacity for millions of students.

In 2020, the WB released COVID-19 simulations modelling the potential impact of school closures on a number of learning outcomes, including learning poverty⁶⁴, LAYS, percentage of students below the minimum proficiency on PISA, as well as impacts on earnings⁶⁵. Building on this work, this section focuses on simulations from the MENA region and reflects significant updates to the simulation model published in 2020. The world is now approaching two school years of the crisis, and this report contains country-specific data⁶⁶ on the length of school closures, based on information from the WB and UNICEF Country Teams and the UNESCO School Closures Tracker, all of which are used to inform school closure projections. The report combines a variety of sources of data to cover school closure information over a longer time period, with the WB and UNICEF data covering from January 2020 to February 2021, and the UNESCO data covering from March 2021 to July 2021. This

publication uses updated economic projection data based on the Global Economic Prospects June 2020 data.

The report focuses on four key outcomes of the simulation model to contextualise learning loss impacts:

- **Learning poverty**⁶⁷,
- **Learning-adjusted years of schooling**⁶⁸,
- **Percent below minimum proficiency on PISA**⁶⁹,
- **Lifetime earnings**.

The simulation results can help Ministries of Education, key national stakeholders, and development partners advocate for and plan evidence-based recovery strategies to mitigate potential learning losses arising from COVID-19 school closures, while continuing to combat the learning poverty that existed before the crisis. It is important to keep in mind that these results are simulations, and that they do not use actual data on learning losses or mitigation effectiveness, which is limited at present, particularly for MENA countries. In the absence of such empirical evidence, the simulations can guide policymakers, educators and researchers towards addressing and analysing potential learning loss impacts.

4.2 Methodology

The analysis simulates the impact of COVID-19 school closures and mitigation effectiveness under three scenarios: optimistic, intermediate, and pessimistic⁷⁰. These three scenarios vary primarily according to the duration of school closures and the effectiveness of mitigation measures and are based on the following assumptions:

⁶³ Kaffenberger, M. 2020. Modeling the Long-Run Learning Impact of the Covid-19 Learning Shock: Actions to (More Than) Mitigate Loss. RISE Insight Series. 2020/017. https://doi.org/10.35489/BSG-RISE-RI_2020/01.

⁶⁴ Azevedo, J. P. (2020). Learning Poverty: Measures and Simulations. Policy Research Working Papers 9446. The World Bank. [doi:10.1596/1813-9450-9446](https://doi.org/10.1596/1813-9450-9446).

⁶⁵ Azevedo, J. P., Hasan, A., Goldenberg, D., Geven, K. and Iqbal, S. A. (2021). "Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes: A Set of Global Estimates." The World Bank Research Observer 36 (1): 1–40. [doi:10.1093/wbro/lkab003](https://doi.org/10.1093/wbro/lkab003).

⁶⁶ Note that only baseline school closure data is country specific. Other input parameters into the simulations model, such as mitigation effectiveness and learning gains per year, are not country-specific but based on country income groupings.

⁶⁷ Learning poverty is defined as the inability to read and understand a simple text by age 10. More information about the learning poverty measure can be found <https://www.worldbank.org/en/topic/education/brief/what-is-learning-poverty>.

⁶⁸ The World Bank's Learning Adjusted Years of Schooling (LAYS) concept combines quantity (access) and quality (learning outcomes) of schooling into a single easy-to-understand metric of progress. More information about the LAYS measure can be found [here](#).

⁶⁹ Share of children performing below the minimum proficiency (PISA Level 2 or 407.47 points).

⁷⁰ It is important to exercise caution when interpreting the country-level results of the simulations as some of the differences across scenarios are small, and potentially not statistically significant.

- **Optimistic:** Observed country-level school closures. The effectiveness of government-initiated mitigation measures (such as remote learning) is high⁷¹. Partial closures are assumed to affect 50% of the student population.
- **Intermediate:** Observed country-level school closures. Mitigation measures have a middle level of effectiveness⁷². Partial closures are assumed to affect 75% of the student population.

- **Pessimistic:** Observed country-level school closures. Mitigation measures have a low level of effectiveness, partial closures are assumed negligible and are treated as a full closure.

Table 1 describes the key input parameters on school closures, mitigation effectiveness, and school productivity used in the model to simulate the learning and earning outcomes under different scenarios.

Table 1. Parameters for MENA learning loss simulations

	MENA: Overall	MENA: High Income	MENA: Upper Middle Income	MENA: Lower Middle Income	MENA: Low Income
A. Learning gains or school productivity (in HLO points/year) ⁷³	37.0	50.0	40.0	30.0	20.0
B. Actual school closure to date (months)	6.5	6.8	7.29	5.2	7.5
Optimistic Scenario					
C1. Share of the system affected over observed period (18 months)	45.5%	49.4%	64.8%	47.2%	57.0%
E1. Mitigation effectiveness (0 to 100%)	38.5%	60.0%	40.0%	28.0%	14.0%
F1. HLO decrease (points) = C1 (A* (Total School Weeks/43.3)*(1-E1)	15.3	12.3	21.0	12.9	12.8
Intermediate Scenario					
C2. Share of the system affected over observed period (18 months)	59.6%	54.9%	69.0%	50.8%	67.6%
E2. Mitigation effectiveness (0 to 100%)	19.7%	30.0%	20.0%	14.0%	10.0%
F2. HLO decrease (points) = C2* (A*Total School Weeks /43.3)*(1-E2)	11.8	14.9	14.4	8.4	8.5
Pessimistic Scenario					
C3. Share of the system affected over observed period (18 months)	67.3%	63.2%	75.2%	56.3%	83.5%
E3. Mitigation effectiveness (0 to 100%)	9.9%	15%	10%	7%	5%
F3. HLO decrease (points) = C3* (A*(Total School Weeks /43.3)*(1-E1)	28.3	31.3	35.9	20.1	21.4
Global Economic Prospects (GDP % Points) [g]	-0.07	-0.06	-0.09	-0.04	-0.06

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 5 countries: Iran, Iraq, Jordan, Lebanon, and Libya. "MENA: Lower Middle Income" includes 6 countries: Algeria, Djibouti, Egypt, Morocco, Tunisia, and Palestine/Palestinian territories. "MENA: Low Income" includes 3 countries: Sudan, Syrian Arab Republic and Yemen. "MENA: Overall" includes all the countries listed previously. The classifications are based on World Bank income groupings. Regional and sub-regional estimates are simple averages, and not population weighted. HLO refers to the World Bank's Harmonized Learning Outcomes measure based on linking results from international student achievement testing programs and putting them on a comparable scale. Note that all the low income countries, Sudan, Syrian Arab Republic, and Yemen, and one lower middle income country, Palestine/Palestinian territories, and two upper middle income countries, Lebanon and Libya, are classified as fragile- and conflict-affected situations by the World Bank (World Bank 2021). For Iraq, we do not have regionally disaggregated data for all the required input parameters of the simulations. In the HLO decrease formula, 43.3 represents the approximate number of weeks in one school year.

⁷¹ Mitigation effectiveness is measured on a scale between 0 – 100%, and brings together three elements: government supply of alternative education modalities, ability of households to access these alternative modalities, and effectiveness of alternative modalities. Mitigation effectiveness varies across scenarios based on the income level of the country. In no case do we expect the mitigation to fully compensate for school closures and accompanying learning losses. See Figure A1 (Annex 4) for further details on input parameters of the simulation model.

⁷² Note that the share of the school system closed is a function of both spatial and temporal aspects. Spatially, we have information about whether schools were fully or partially closed in each week, and partial closures can be by geographic location or by certain grades. Temporally, we have information on closures spanning the calendar from January 2020-July 2021.

⁷³ The World Bank's [Harmonized Learning Outcome \(HLO\)](https://datacatalog.worldbank.org/dataset/harmonized-learning-outcomes-hlo-database) puts learning data from international and regional assessments on a comparable scale. The data can be accessed <https://datacatalog.worldbank.org/dataset/harmonized-learning-outcomes-hlo-database>.

As discussed in Section I, the governments’ supply of remote learning, student access to or take-up of remote learning, and its effectiveness are likely to have varied within and across MENA countries. Figure A1 in Annex 4 shows how government supply, take-up, and effectiveness of remote learning jointly inform mitigation effectiveness of alternative learning modalities in the simulations. Across scenarios, higher mitigation effectiveness for higher income countries, reflecting both greater supply of and household access to technology - such as computers, internet, and mobile phones - and higher expected effectiveness of the remote learning interventions are anticipated⁷⁴.

On the other hand, lower mitigation effectiveness for lower income countries are anticipated. This is due to the limited supply of remote learning interventions offered by these governments, lack of household access to the technological infrastructure required to access remote education, along with the relatively lower effectiveness of remote learning interventions (for example, using low-tech asynchronous modalities such as radio or television that may constrain opportunities for interaction or feedback), which may limit the governments’ ability to mitigate the negative impacts of school closures. Figure A1 in Annex 4 explains the key input parameters and outcomes in the simulation model.

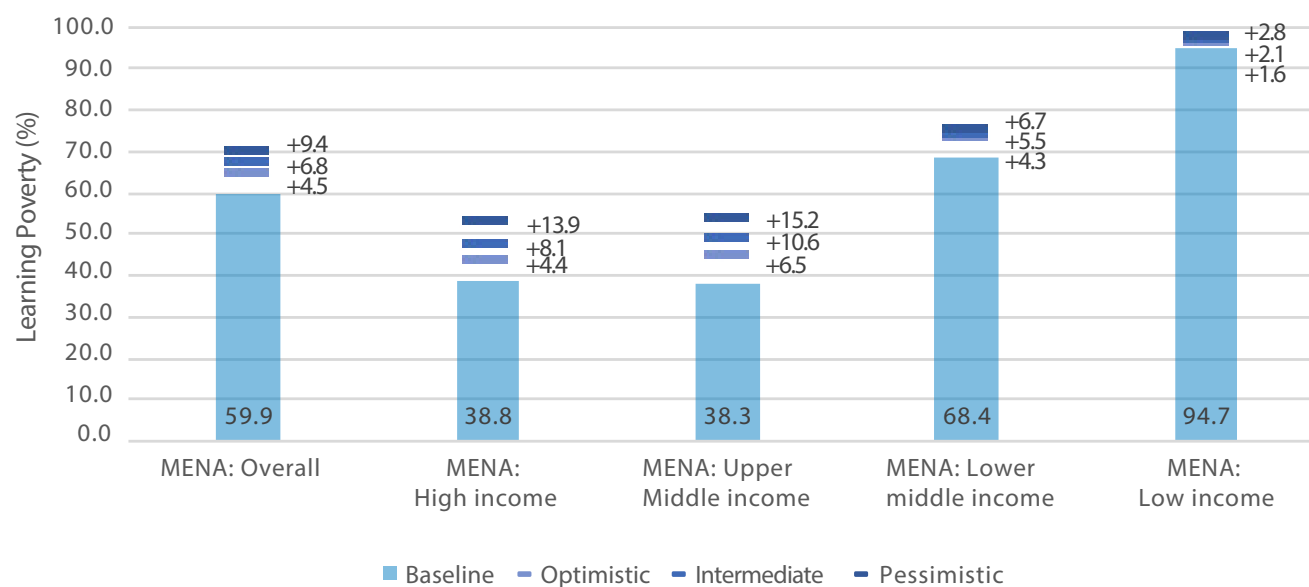
4.3 Simulation results

i. Result 1: learning poverty

Learning poverty in the MENA region could increase by 9.4 percentage points due to COVID-19

Learning poverty is defined as the inability to read and understand a simple text by age ten. This indicator depicts the share of primary-aged children who are not in school (schooling deprived) or are below the minimum proficiency level in reading (learning deprived). By combining schooling and learning, the indicator highlights the importance of both “more access to schooling”, as well as “better learning”, which is critical to ensuring that schooling leads to acquisition of skills and capabilities⁷⁵. Even before COVID-19, more than half of the children in MENA were unable to read and understand a simple text by age ten. The pre-COVID learning poverty estimate in MENA (used as a baseline for the simulation analysis) suggests that 59.9 per cent of children were either out-of-school or not able to read and understand a simple text by age ten.

Figure 14. Learning poverty: pre-COVID baseline and three simulation scenarios



Note: “MENA: High Income” includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. “MENA: Upper Middle Income” includes 2 countries: Iran and Jordan. “MENA: Lower Middle Income” includes 3 countries: Egypt, Morocco, and Tunisia. “MENA: Low Income” includes 1 country: Yemen. “MENA: Overall” includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [GitHub](#). We follow UNICEF’s classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

⁷⁴ We make assumptions on availability, take-up, and effectiveness of remote learning, which are based on the limited literature on remote learning effectiveness and household information on access to alternative learning modalities such as television and internet using PISA, DHS, and MICS data. In addition, we also make assumptions regarding the expected learning observed in a school year, and they rely on the literature on school productivity, unexpected school closures, and summer learning loss. For more information about these assumptions, see Azevedo et al. (2021).

⁷⁵ The World Bank (April 2021). What is Learning Poverty?



The simulations suggest that COVID-19 related school closures are likely to create a substantial setback to the global goal of halving learning poverty by 2030. In a pessimistic scenario of prolonged school closures and low mitigation effectiveness, learning poverty may increase from its baseline level of 59.9 per cent to 69.3 per cent for the MENA region, representing an increase of 9.4 percentage points. In the intermediate scenario, learning poverty may rise to 66.7 per cent.

Most of this increase in learning poverty is expected to occur in high income countries. Thus, countries with the highest levels of learning poverty before COVID-19 (predominantly low-income countries) might have the smallest absolute and relative increases in learning poverty, reflecting how serious the learning crisis was in those countries even before the pandemic.

The learning poverty measure reflects only the change in the population of students who are learning poor, and does not share insights about changes in learning among those who were already below the minimum proficiency level by the end of primary school. This implies that most of the learning losses in low-income countries impact students who were already failing to achieve the minimum reading proficiency level by the end of primary; that is, those who were already learning-poor. Therefore, though the increase in learning poverty may not be large, children already below minimum proficiency may fall further behind. This phenomenon is examined by learning poverty gap and severity simulations in Table 2.

Table 2. Learning poverty gap: pre-COVID baseline and three simulation scenarios

	Baseline	Optimistic	Intermediate	Pessimistic
MENA: Overall	22.2%	23.5%	24.4%	25.2%
MENA: High Income	9.4%	10.7%	11.1%	12.5%
MENA: Upper Middle Income	9.8%	10.5%	12.1%	13.2%
MENA: Lower Middle Income	22.9%	24.5%	25.2%	25.7%
MENA: Low Income	58.3%	60.1%	60.7%	61.7%

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 2 countries: Iran and Jordan. "MENA: Lower Middle Income" includes 3 countries: Egypt, Morocco, and Tunisia. "MENA: Low Income" includes 1 country: Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [GitHub](#). We follow UNICEF's classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

The learning poverty estimates depicted in Figure 14 treat all students below the minimum proficiency threshold as being equally learning deprived, even though countries with similar learning poverty rates could have different learning levels among those who are learning poor. The learning poverty rate also does not capture improvements in learning that occur below the minimum proficiency threshold. For example, these could include foundational subskills such as hearing and making sounds of words, mapping sounds to letters, etc., which are critical to develop the foundational reading skills needed to meet the minimum proficiency threshold.

To measure these aspects, the learning poverty gap brings together the concepts of the learning deprivation gap, which indicates the average effort needed to bring children in school above minimum proficiency, and schooling deprivation, which highlights the need to improve access to schooling among those who are out of school.

For example, as shown in Figure 15 below, while both Oman and Saudi Arabia are expected to have similar increases in learning poverty under a pessimistic scenario, both countries have different expected changes in the learning poverty gap, implying that on average, very

different effort, resources, and a policy focus on children at the bottom or out of school may be required to tackle learning poverty.

Based on the results of the simulation, under the intermediate scenario the learning poverty gap will rise from 22.2 per cent to 24.4 per cent for the MENA region. Under the pessimistic scenario, the gap will grow from 22.2 per cent to 25.2 per cent.

Table 3. Learning Poverty Severity: Pre-COVID baseline and three simulation scenarios

	Baseline	Optimistic	Intermediate	Pessimistic
MENA: Overall	13.1%	13.8%	14.0%	14.6%
MENA: High Income	4.6%	5.0%	5.1%	5.6%
MENA: Upper Middle Income	4.5%	4.8%	5.2%	5.8%
MENA: Lower Middle Income	12.0%	12.7%	12.9%	13.3%
MENA: Low Income	44.2%	45.6%	45.8%	46.9%

Note: “MENA: High Income” includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. “MENA: Upper Middle Income” includes 2 countries: Iran and Jordan. “MENA: Lower Middle Income” includes 3 countries: Egypt, Morocco, and Tunisia. “MENA: Low Income” includes 1 country: Yemen. “MENA: Overall” includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [GitHub](#). We follow UNICEF’s classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

Figure 15. Relationship between changes in learning poverty and learning poverty gap

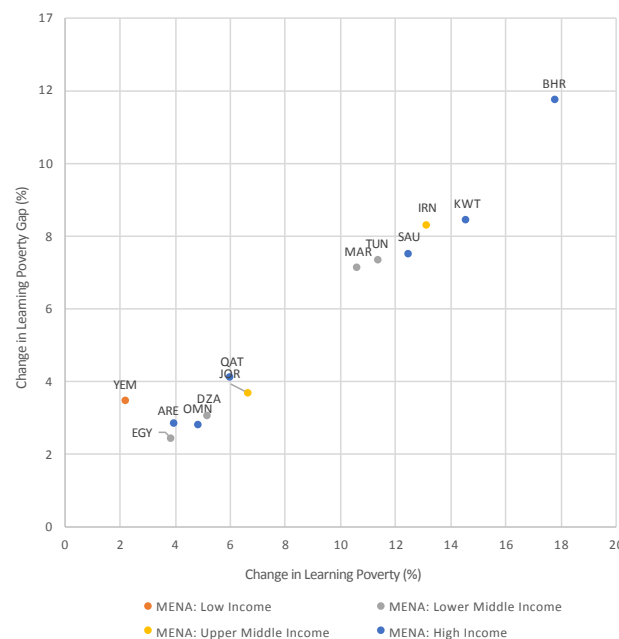
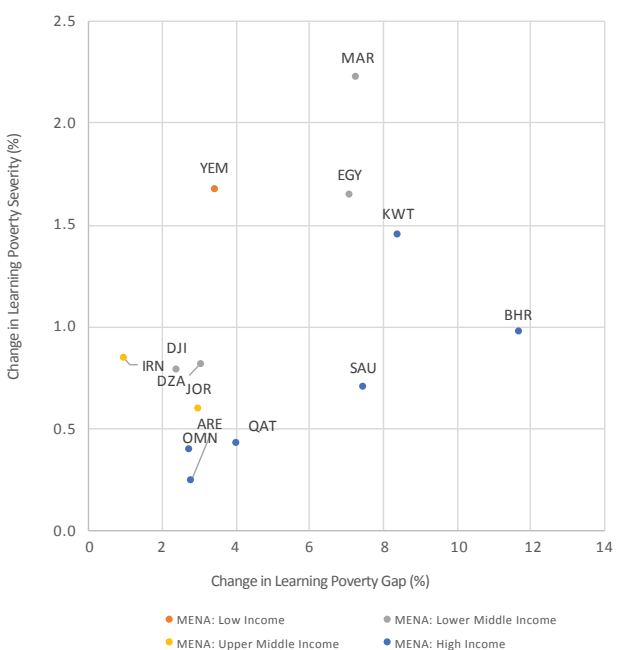


Figure 16. Relationship between changes in learning poverty gap and learning poverty severity



Note: The above two figures are prepared by the authors for this publication. The percent change reflects change in values from baseline to pessimistic scenarios.



While the gap measure shows how far students are behind the minimum proficiency level on average, it is not distribution-sensitive, and cannot distinguish between changes in the learning gap driven by students near the minimum proficiency threshold and that driven by those at the very bottom of the learning distribution. Students who are further away from the minimum proficiency threshold likely have different learning needs than those closer to the threshold.

Learning poverty severity indicates inequality of learning among those below the threshold. It brings together the concepts of learning deprivation severity, which gives an indication of the inequality in learning among the learning deprived children already in school, and schooling deprivation, which highlights the effort needed to increase access to schooling among those who are schooling deprived. Compared to the gap measure, the severity measure is more sensitive to changes in learning levels of learning deprived children who are further away from the minimum proficiency threshold, as well as to changes in learning deprived children who are out of school.

For example, as shown in Figure 16, Morocco and Jordan are expected to have similar increases in the learning poverty gap under a pessimistic scenario, but both countries have different expected changes in learning poverty severity. This implies that both countries may need different levels of focus on policies identifying the diversity

of learning needs among children below minimum proficiency and on providing flexible and tailored learning opportunities, or bringing schooling deprived children into school. As school systems reopen, it will be critical to meet students at their point of need and monitor changes in the learning distribution among the learning poor; for that, learning poverty severity is the appropriate measure.

Based on the simulation results, learning poverty severity will rise from 13.1 per cent to 14.0 per cent under the intermediate scenario, and to 14.6 per cent under the pessimistic scenario in the MENA region (Table 2.2). The increase in learning poverty severity is highest in low-income countries, though there is increased learning inequality among the learning poor across the region. Tackling this will require a focus on differentiated learning interventions for children at the bottom, for example, through techniques such as Teaching at the Right Level, based on the learning level of the child.

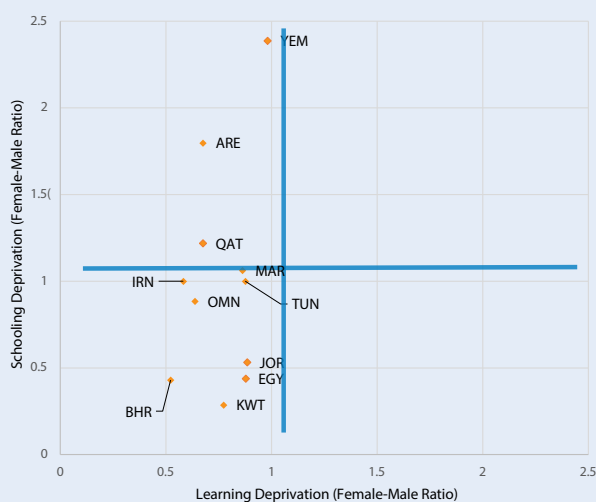
Policies to reduce learning poverty could differ across countries depending on the levels of learning poverty gap and severity. Depending on the country's gap and severity estimates, effectively mitigating learning losses may require different levels of resources and effort targeted at children at the bottom (as captured by learning poverty gap) or a differentiated focus on addressing learning inequality among children at the bottom, through tailored learning opportunities (as captured by learning poverty severity).



Box 5. Gender gaps in learning poverty

In all MENA countries with a learning poverty estimate, a measure of the ability to read and understand a simple text by age ten, females have lower learning poverty than males. The learning poverty indicator combines the share of primary-aged children out of school who are schooling deprived, and the share of pupils below a minimum proficiency in reading, who are learning deprived. However, these results might hide important differences in terms of gender differences on learning and schooling. Figure 17 below shows the female-male ratio on these two key sub-components of learning poverty, with learning deprivation on the X axis and schooling deprivation on the Y axis.

Figure 17. Gender gaps in schooling and learning deprivation



Two key insights emerge from Figure 17 above:

In all countries in the MENA region for which we have learning and schooling data, girls actually have lower learning deprivation than boys. This means that once in school, girls tend to do better than boys. Looking at gender gaps among children who are learning deprived paints a similar picture. For example, looking at the learning deprivation gap, which measures the average distance of a learning deprived child from the minimum proficiency level and indicates the average increase in learning required to eliminate learning poverty, girls are doing better than boys in all MENA countries. In terms of learning deprivation severity, which captures the inequality of learning among the learning poor population, girls are again doing better than boys in all MENA countries, as shown in Table A2 in the Annex.



Looking at schooling deprivation for MENA countries with learning poverty estimates, the picture is mixed, with some MENA countries with gender gaps in favour of boys and vice versa in other countries. In five countries (Bahrain, Egypt, Jordan, Kuwait, and Oman), males have higher schooling deprivation than females, while in one country (Iran), schooling deprivation for males and females is roughly similar. However, in five countries (Algeria, Morocco, Qatar, UAE, and Yemen), females have higher schooling deprivation than males, as displayed in Table A1.2. In fact, some of the largest gender gaps in enrolment, in terms of magnitude, exist in these countries, particularly Yemen, Algeria, and the UAE.

Data shows that there is still unresolved business on the agenda of improving girls’ access to schooling, particularly in certain countries. However, note that some of the pro-male inequities in schooling deprivation are more than compensated for by the pro-female learning deprivation outcomes across countries, as evidenced by the fact that girls have lower overall learning poverty in all MENA countries. However, the key message is this: reducing learning poverty in the MENA region will require more than a focus on “closing gender gaps” as evidenced by the high learning poverty rates for both boys and girls in many MENA countries; it will require examining how to improve schooling and learning outcomes for both boys and girls.

Note: Figure 17 is prepared by the authors for this publication. See Table A1 in the Annex for gender-disaggregated data on learning poverty, learning deprivation, and schooling deprivation for MENA countries.

ii. Result 2: learning adjusted years of schooling

Children in the MENA region stand to lose one full learning-adjusted year of schooling due to COVID-19

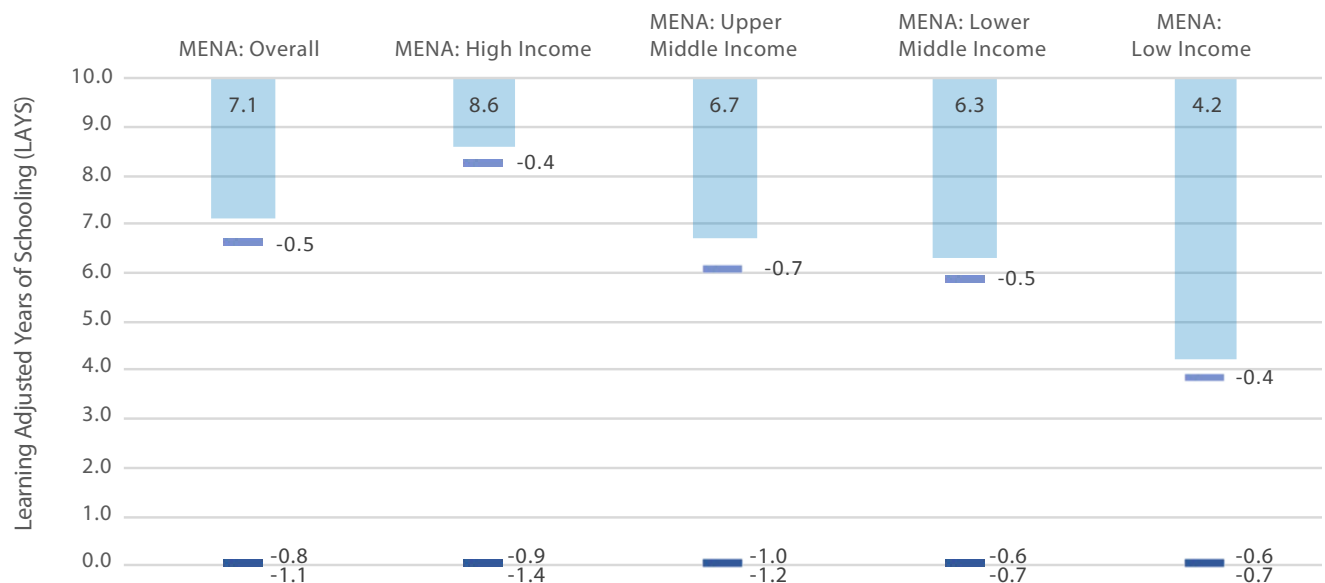
The WB's LAYS concept combines quantity (access) and quality (learning outcomes) of schooling into a single easy-to-understand metric of progress⁷⁶. The WB's Human Capital Index defines a complete quality education as 14 learning-adjusted years of schooling, which serves as a benchmark for comparing performance⁷⁷.

In the MENA region, the average baseline LAYS pre-COVID were 7.1. This means that on average, children in MENA only achieved 7.1 years of quality education. The simulation results suggest that in the pessimistic scenario of low mitigation effectiveness, school closures due to

COVID-19 could reduce the average learning adjusted years of schooling that students achieve during their lifetime from 7.3 to 6.1, representing a reduction of 1.0 year. In the intermediate scenario, LAYS is likely to reduce to 6.4 (see Figure 18 below).

Across the MENA region, the extent of this loss will vary. In low-income countries where children were expected to complete 4.2 LAYS prior to the pandemic, the simulations suggest that COVID-19 could lower LAYS from 3.8 in the optimistic scenario, to 3.6 in the pessimistic scenario. At the other end of the spectrum, children in high-income countries were expected to complete 8.6 LAYS prior to COVID-19, and the simulations suggest that the impact of the pandemic could lower LAYS to 8.2 in the optimistic scenario and 7.6 in the pessimistic scenario. The decrease in LAYS is relatively higher for high-income countries as low-income countries already have lower LAYS on average, highlighting the severity of the learning crisis in these countries even before COVID-19.

Figure 18. Learning-adjusted years of schooling: pre-COVID baseline and three simulation scenarios



Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 4 countries: Iran, Iraq, Jordan, and Lebanon. "MENA: Lower Middle Income" includes 5 countries: Algeria, Egypt, Morocco, Tunisia, and Palestine/Palestinian territories. "MENA: Low Income" includes 2 countries: Sudan and Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are simple averages, and not population weighted. LAYS are similar between upper middle income and lower middle income countries, however, Iraq's baseline LAYS is 4.0, which brings down the average for upper middle income countries. For Iraq, we do not have regionally disaggregated data for LAYS.

⁷⁶ Filmer, D., Rogers, H., Angrist, N. and Sabarwal, S. Forthcoming. Learning Adjusted Years of Schooling (LAYS): Defining a New Macro Measure of Education. *Economics of Education Review*. <https://doi.org/10.1016/j.econedurev.2020.101971>.

⁷⁷ While both LAYS and learning poverty combine schooling and learning, LAYS encompasses all levels of basic education, capturing the educational life of students from 4 to 17 years of age and represents the learning levels achieved by a schooling system of an entire country. Learning poverty focuses on primary-aged children by combining learning deprivation (share of children at the end of primary below minimum proficiency) and schooling deprivation (share of primary-aged children who are out-of-school) into one multi-dimensional indicator.

iii. Result 3: minimum proficiency in PISA

COVID-19 is likely to increase
the percent of children below minimum
proficiency in PISA

OECD's PISA measures learning outcomes of 15-year-olds in reading, maths, science, and other skills, such as collective problem solving. Unlike the learning poverty analysis which focuses on outcomes at the primary level, the analysis of education proficiency based on PISA focuses on student achievement for 15-year-olds, who tend to be at lower secondary level. Focusing on reading proficiency scores, we simulate how the share of children performing below the minimum proficiency (PISA Level 2 or 407.47 points)⁷⁸ could potentially change due to school closures and mitigation effectiveness of remote learning.

Across the MENA region, **the percentage of 15-year-olds below minimum proficiency is likely to rise.**

The percentage of 15-year-old children scoring below minimum proficiency could rise from 60 per cent to 71.6 per cent in the pessimistic scenario, and to 68.0 per cent in intermediate scenario (see Table 3 below). These results imply a rise in the share of students who are not able to identify the main idea in a text of moderate length, find information based on explicit though sometimes complex criteria, and reflect on the purpose and form of texts when explicitly directed to do so (PISA's definition of a minimum level of proficiency).

The impact is lower in lower-middle income MENA countries where the share of students below minimum proficiency was already high at 73.0 per cent at baseline and is projected to increase by 11.2 per cent points to 84.2 per cent under the intermediate simulation scenario. Upper-middle income MENA countries could experience a similar increase in the share of students below minimum proficiency (9.2 per cent points) from 62.1 per cent to 71.4 per cent in the intermediate scenario. As mentioned in learning poverty results, the greater increase could be explained by the fact that upper-middle income countries are starting from a baseline of a lower percentage of students at or below the minimum threshold.

Table 4. Percentage below minimum proficiency in PISA: pre-COVID baseline and three simulation scenarios

	Baseline	Optimistic	Intermediate	Pessimistic
MENA: Overall	60.1%	66.2%	68.8%	71.6%
MENA: High Income	49.0%	52.9%	56.0%	60.5%
MENA: Upper Middle Income	62.1%	69.1%	71.3%	72.9%
MENA: Lower Middle Income	73.0%	81.8%	84.2%	86.3%
MENA: Low Income	NA	NA	NA	NA

Note: "MENA: High Income" includes 3 countries: Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 2 countries: Jordan and Lebanon. "MENA: Lower Middle Income" includes 3 countries: Algeria, Morocco, and Tunisia. "MENA: Low Income" includes no countries, as denoted by "NA". "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are simple averages, and not population weighted.

⁷⁸ Minimum reading proficiency is a score below level 2, which is 407.47 points, as defined by UIS in the context of the Sustainable Development Goals (SDG) 4.1.1.

⁷⁹ Past evidence from Kuwait suggests that as a result of the Gulf War men on average earned 5.6 percent less for each year of schooling lost (Bilo et al. 2021).

iv. Result 4: lifetime earnings

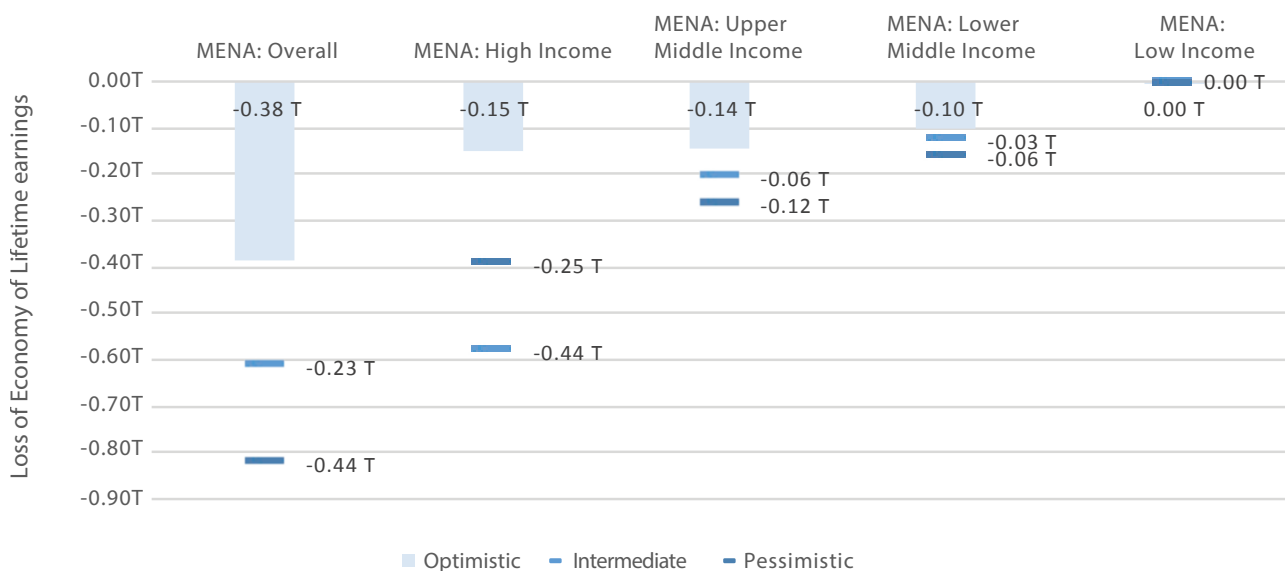
Losses to lifetime earnings of close to US\$0.8 trillion are expected due to COVID-19 learning losses in MENA

Loss of learning (as measured through learning-adjusted years of schooling) can have a negative impact on lifetime earnings, based on existing evidence on return to schooling, life expectancy, whether people are able to utilise their human capital through paid employment, and labour market earnings⁷⁹. Under a pessimistic scenario, the simulations project that approximately US\$0.8 trillion of aggregated lifetime earnings (at present value in 2017 purchasing power parity) could be lost for the current cohort of learners because

of decreased learning adjusted years of school. In the intermediate scenario, the loss is projected to be US\$0.6 trillion (see Figure 19). For a single individual in MENA, these projected losses translate to close to US\$15,000 loss in lifetime earnings based on the optimistic scenario, increasing to almost US\$24,000 and almost US\$33,000 per individual in the intermediate and pessimistic scenarios respectively (see Table A8).

As shown in Figure 19, low-income countries are projected to experience relatively smaller earning losses compared with high-income countries, primarily because their earning levels (and learning-adjusted years of schooling) are already low. However, this does not diminish the seriousness of the setback they potentially face: low-income countries, with already lower levels of earnings and learning outcomes, cannot afford further worsening prospects for future generations.

Figure 19. Aggregate economic cost of foregone lifetime earnings at present value (PV) (US\$ trillions)



Note: “MENA: High Income” includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. “MENA: Upper Middle Income” includes 4 countries: Iran, Iraq, Jordan, and Lebanon. “MENA: Lower Middle Income” includes 5 countries: Algeria, Egypt, Morocco, Tunisia, and Palestine/Palestinian territories. “MENA: Low Income” includes 2 countries: Sudan and Yemen. “MENA: Overall” includes all the countries listed previously. Regional and sub-regional estimates are simple sums in trillions of US dollars. Sub-region aggregates are sums of values for each country in the sub-region, and the MENA total is the sum of aggregates for each sub-region. Regional and sub-regional estimates are not population weighted. Results are obtained using the expected returns to education of each country and labor market earnings from [ILO \(2020\)](#) and [World Bank \(2020\)](#), as well as the results from the LAYS simulation. We use the economic forecasts from the Global Economic Prospects June 2021 publication. Results are conditional on the country’s life expectancy, expected work life of a typical adult as well as their human capital utilization, and assume that none of these aspects will be affected by the COVID-19 crisis. The results also assume that the returns to education remain constant at 8% in the long run. See [Azevedo et al. \(2020\)](#) for further details about the methodology. For Iraq, we do not have regionally disaggregated data for LAYS.

CHAPTER 5

'Building back better':

enabling quality education for all

5. 'Building back better': enabling quality education for all



It's not enough for schools to simply reopen their doors. Students will need tailored and sustained support to help them readjust and catch up after the pandemic. We must help schools prepare that support and meet the enormous challenges of the months ahead.

UNESCO/World Bank/UNICEF Mission:
Recovering Education in 2021⁸⁰

It was clear in 2020, when the pandemic was still far from over, that its impact on schooling and learning was significant, yet it was still too early to assess the effects in the MENA region and generate evidence on how learning was progressing. Understanding and quantifying the learning losses caused by the pandemic is crucial, as is identifying what will drive improvements in learning.

Based on the data on school closure, responses so far and projected learning loss (from the simulation model) included in the report, this section outlines the lessons learned and provides policy recommendations for remediation of lost learning and building equitable, effective and resilient learning systems⁸¹ in MENA. The recommendations are also aligned with the Framework for Reopening Schools⁸² developed jointly by UNESCO, UNICEF, the World Bank, and WFP, as well as the ongoing commitments to SDG 4⁸³ and the Education 2030 agenda⁸⁴.

5.1 Lessons learned

The key lessons learned from the preceding analysis of school closures, responses so far to enabling learning, and simulations of the possible future impact of COVID-19 on learning and earning in MENA, are:

i. Access to learning

The response to the pandemic highlighted the importance of strengthening different modalities to ensure all learners have access to both learning and services to support their wellbeing

MENA governments turned to remote learning and other alternatives to facilitate learning continuity, mitigate the COVID-19 impact and recover the learning losses. However, 40 per cent (37 million) were not reached, for reasons including low internet penetration (in nine of the 20 countries) and learners living in low-resource or remote settings or refugee camps. There was also very limited access to learning for pre-primary children. Lack of access to other services such as school meals and psycho-social support has also impacted learners' wellbeing.

Data collection and monitoring system is not well established to track learners' learning status and inform policy-making.

⁸⁰ UNESCO, World Bank, UNICEF (May 2021). Mission: Recovering Education in 2021.

⁸¹ OECD (2020). A framework to guide an education response to the COVID-19 Pandemic of 2020

⁸² UNESCO, UNICEF, World Bank, WFP (April 2020). Framework for reopening schools

⁸³ <https://sdg4education2030.org/the-goal>

⁸⁴ UNESCO (2016). Education 2030 framework for action.

Due to limitations in data systems, most MENA countries lack accurate and objective data on learning, how children and youth were able to access and engage in remote learning activities on offer, or on effectiveness of what was being offered - in terms of the learning modality, learning content, and teachers' instructions. This lack of data limits the development of strategies and concrete plans to ensure equitable access to learning opportunities and services, including for the most vulnerable.

Pre-existing **learning disparities** are growing

Students are affected by the pandemic disproportionately⁸⁵, with significant variations in access to and ability to engage in remote learning, support received from parents and caregivers and quality of teaching. Learners from vulnerable and disadvantaged backgrounds – including refugees (as described in Box 6), internally displaced people, girls, people with disabilities and minority groups – are falling further behind during the pandemic and have a higher risk of dropping out⁸⁶. School drop-out is expected to increase, especially among adolescents, due to increased child labour and early marriage associated with the deteriorating economic situation^{87 88 89}.



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Box 6. Refugee children face challenges in accessing remote learning

'2020 was an exceptional year,' observed Mervat Sweidan, a Palestinian refugee living in Beddawi refugee camp in northern Lebanon with her two young girls. 'Lebanon went into lockdown and our lives were upended. As adults this was difficult, but for our kids the disruption was severe.'

Lebanon was experiencing economic and political turmoil well before the outbreak of COVID-19. However, the nationwide lockdown, movement restrictions and closure of schools in early 2020 affected refugee children more than any previous measure. Children's daily rhythms were disrupted and social interaction with other children became more difficult as play shifted from the safe confines of the school playground to the dimly-lit alleyways of the refugee camps.

Accustomed to frequent internet blackouts and low bandwidth, many refugee families struggled initially. How could they help their children focus in a crowded environment with lots of distractions and little privacy? Who should receive the family's single phone to follow classes and for how long? 'At the beginning, we found online education very difficult,' Mervat recalled. 'However, we received guidance and support from UNRWA teachers and counsellors who are engaging with our children, sending them learning materials, responding to their questions and sharing feedback. Now we are more adapted to the situation.'

Lebanon Field Office reports that UNRWA is supporting Mervat and other refugee parents with online information about COVID-19 risks and by offering tips on how to stay safe. The Agency offers online psychosocial support to help refugee families manage stress, fear and anxiety and has rolled out a tablet-for-loan programme to help improve families' access to online learning.

Source: UNRWA: Remote learning in Lebanon for a Palestine refugee⁹⁰

⁸⁵ UNESCO (March 2021). One year into COVID-19 education disruption: Where do we stand?

⁸⁶ McKinsey & Company (December 2020). COVID-19 and learning loss - disparities grow and students need help.

⁸⁷ ILO, UNICEF (2020). COVID-19 and child labour: A time of crisis, a time to act.

⁸⁸ Save the children (2021). Lebanon education in crisis: raising the alarm.

⁸⁹ UNFPA, UNICEF (2021). Child marriage in the context of COVID-19: Analyses of trends, programming and alternative approaches in MENA.

⁹⁰ UNRWA (2020). COVID-19 response summary August-December 2020.

ii. Engaged learners

Teachers and parents need support to cope with the challenges created by the disruption of face-to-face learning and shift towards digital and other modes of remote learning

The disruption to face-to-face learning highlighted the importance of supporting teachers in adapting both content and strategies to enable remote and hybrid learning. Though governments and development partners offered support, including instructions on remote learning, resources and lesson plans, very few countries prioritised supporting teachers psychosocially and emotionally, and approximately half of the countries reported not giving any support based on 2020 surveys⁹¹. Only four in ten of countries supported parents with materials on home-based learning (mainly for primary and secondary) and regular telephone calls from schools.

Many MENA countries could experience a learning catastrophe if urgent action is not taken to provide catch up with a specific attention given to digital and social-emotional learning.

Priorities for ongoing learning design include remedial and/or accelerated learning to enable students to catch up and incorporating digital skill-building to enable online and hybrid learning. In the MENA region, many children were already falling behind and suffering from psycho-social distress and anxiety due to the prolonged conflicts and crises, which were exacerbated by the COVID-19 school closures. Learning design focusing on social and emotional learning, as well as mental health and psychosocial support services, is urgently needed^{92,93}.

Learner, teacher and parent/caregiver perspectives and data on learning are needed to assess effectiveness of learning recovery

Government perspectives on the effectiveness of learning recovery vary in different countries across the region, as per local contexts and different teaching and learning strategies. However, voices of teachers, parents and learners

themselves are still limited when reflecting on the education effectiveness. More reliable and regular data on learning outcomes and data on learner, teacher and parent/caregiver perspectives are needed for a clearer understanding of effectiveness and how to build back better.

iii. Enabling environment

Comprehensive data are required to plan and monitor responses and develop mitigation and recovery strategies for learning

Though the findings regarding government perceptions of the effectiveness of COVID-19-related learning responses are useful up to a point, strong data systems including systematic tracking of learning outcomes for all learners in MENA are urgently needed to plan and monitor ongoing responses, develop strategies for recovery and the effective targeting of limited resources. Simulations of learning poverty focusing on the ability to read and understand a simple sentence, suggest worsening outcomes across MENA due to COVID-19 school closures (Figure 15), making the monitoring of foundational learning skills absolutely critical. Learner and teacher perspectives are also needed to triangulate government perspectives on effectiveness.

Education systems need to become more equitable, adaptive and resilient to enable all MENA's learners to access learning at all times.

This pandemic has brought to light the need for education systems to find ways of engaging all their students in learning, both at school and at home. The unprecedented level of disruption to teaching and learning therefore provides an opportunity to reimagine and reinvent the education system, leveraging collaboration between sectors to promote innovation and engage a wide range of stakeholders in the learning process.

Despite the COVID-19 related challenges and budget cuts experienced due to the deteriorating economic situation, education systems need to remain responsive to all their learners and other stakeholders. This requires both understanding and meeting their needs in flexible ways as the situation evolves and requires increased resources to support education recovery. It is clear from the findings

⁹¹ UNESCO/UNICEF/World Bank (2020). What Have We Learnt? Overview of Findings from a Survey of Ministries of Education on National Responses to COVID-19.

⁹² UNICEF (March 2021). Mental Health and Psychosocial Support in the context of COVID 19: Implications for the Arab Region.

⁹³ UNICEF (November 2020). COVID-19 leaves profound impact on children in the Middle East and North Africa.

of this report that reaching all students and stakeholders with key messages relating to education also requires a clear **communication strategy** using multiple channels, involving community leaders, and ensuring inclusivity in messaging⁹⁴.

5.2 Recommendations

Based on the findings of the government survey, simulations, and lessons learned to date, this section provides recommendations for policy-makers and decision-makers at national and school levels for short, medium and long-term strategies aimed at remediating learning loss in MENA and creating equitable, effective and resilient teaching and learning systems which support **access to learning, engaged learners** and **enabling environments**.

The most urgent priorities for policy and practice in the region can be categorised in three phases⁹⁵, according to the stage of the global pandemic⁹⁶:

1 Pandemic period: continuity and engagement

Ensuring young children and youth have continuous access to quality education with a robust support system that engages learners, teachers, parents and caregivers; focusing on foundational skills, ensuring health and psycho-emotional well-being for all stakeholders.

2 Early recovery period: reopening and remediating

Ensuring schools are reopening safely, comprehensive assessments are being conducted and education services for learning loss recovery are being provided and showing results for all learners starting from the early years.

3 Post-pandemic period: accelerating and improving

Accelerating learning, enhancing the quality of education, and establishing enabling learning systems for all learners.

→ Pandemic period: continuity and engagement

1. Continue to improve access to and engagement in remote learning, ensure effectiveness of teaching and learning, focus on foundational skills and prevent students from dropping out

To ensure the continuous provision of education services during school closures and prepare for reopening, governments should continue to improve access to remote education, including online and hybrid learning. This provision should be focused on developing foundational skills, closing the digital divide and ensuring that all learners are engaged in learning, including disadvantaged groups and young children. Key issues such as accessibility, curriculum and pedagogy, teacher support, student support, along with evaluation and assessment, should be clarified.

Governments need to develop and implement inclusive remote education policies and strategies, including expansion of remote education infrastructure to reach all students, condensing the curriculum to focus on foundational skills, and providing learning packages to promote learning recovery.

Either face-to-face, hybrid, or full remote learning settings need to be planned contextually, in high-tech, low-tech, or no-tech scenarios⁹⁷, to meet the diverse needs of learners from different backgrounds, especially the most vulnerable ones, including girls, learners with disabilities, refugees, internally displaced children and children in poor and rural areas. See Box 7 below for guiding principles for provision of remote learning.

⁹⁴ The World Bank (April 2021). Communicating with Stakeholders.

⁹⁵ Countries in the MENA region are going through different phases of the COVID-19 pandemic, and tremendous efforts have been already made by the governments to mitigate the learning loss. Policy-makers could use this phasing as a reference to reflect and adjust the education response plans based on the actual situation in their countries.

⁹⁶ World Bank (May 2020). The COVID-19 Pandemic: Shocks to Education and Policy Responses.

⁹⁷ UNESCO (April 2020). Distance learning strategies in response to COVID-19 school closures.

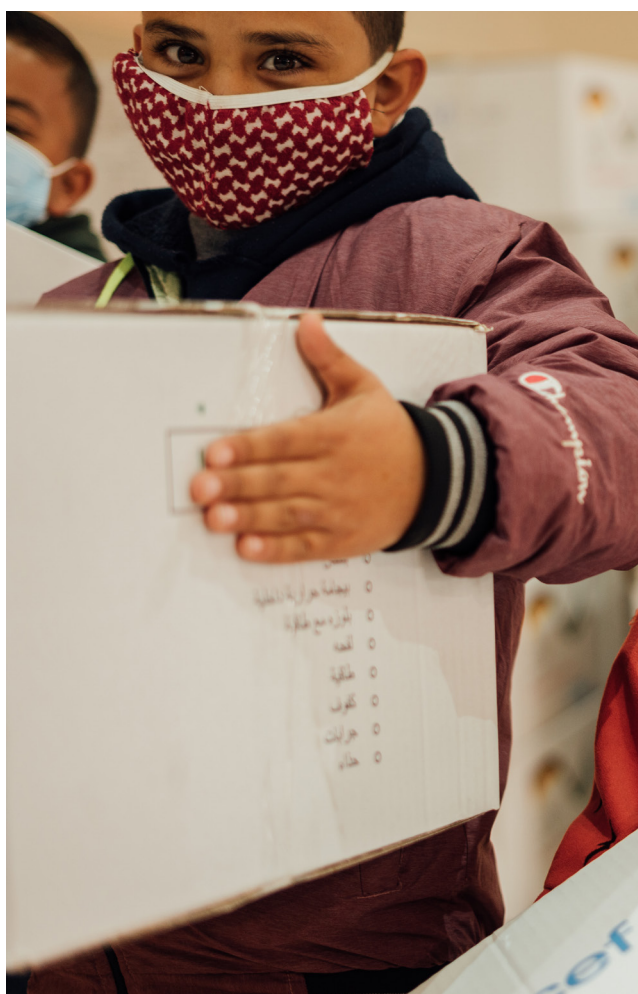


Strengthening monitoring of remote learning

There are various types of information management systems that may be adopted to support monitoring of remote learning, such as:

- Content Management System;
- Learning Management System (LMS);
- Computer-Supported Collaborative Learning System; and
- Knowledge Management.

Each of these systems has a role to play in terms of monitoring access to material, usage of these materials, use of collaborative learning strategies and the virtual community using knowledge management strategies, respectively. In particular, LMS can provide effective tracking of learner activities as well as allowing for evaluation of learner performance. LMS can also be used for formative and summative assessment, providing further evaluation of learning quality.



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Box 7. Guiding principles for remote learning

School systems can use the following principles to engage ALL students in meaningful and productive ways to enhance their learning:

- 1 Develop a short- and medium-term remote learning plan** based on an initial assessment of a system's capacity and resources to support a multi-faceted remote learning model, including a combination of technologies and delivery mechanisms. The short-term plan focuses on emergency response to keep students learning, and the medium-term plan prepares for schools to reopen and support remedial and accelerated learning.
- 2 Consult outside stakeholders** (e.g. ICT ministries, broadcast regulators/companies, EdTech startups), ensuring the rapid development and scale-up of the designated remote learning modality. Equity should be a top consideration in all planning efforts, as the most vulnerable students are the most disproportionately affected.
- 3 Create an inventory of existing content to be deployed via remote learning** (and plan for how to make additional content available). Rather than developing new content, which takes significant time and expertise, focus on curating existing (especially free, 'open') content and aligning it to the curriculum.
- 4 Organise content** to align with existing curricula, ensuring the learning opportunities correspond to educational objectives, and that students, their caregivers, and teachers understand what is available, and the sequence in which it should be taught.
- 5 Create a virtual helpdesk** to support caregivers, teachers, and students.
- 6 Implement an offline** remote learning model to support student learning at home in settings with limited technology.
- 7 Implement a broadcast** remote learning model where broadband access is not widely available or where online learning is simply not a viable option.
- 8 Utilise educational radio** to deliver the curriculum in an engaging and interactive way

in settings where other connectivity options are unavailable and education radio stations exist. Radio programming schedules must be communicated to reach the appropriate audiences.

- 9 Utilise educational television** in settings where most of the population has access to a television, and where education channels exist.
- 10 Implement an online/mobile remote learning model** in contexts that have the infrastructure, funding, and capacity to host the technology. For countries with the infrastructure and bandwidth, improving connectivity is the first step in reaching a large audience and mitigating access inequities. Key actions include: (a) Partnering with mobile operators, telecom providers, and other providers to increase access to digital resources. (b) Using a variety of operating systems and software applications. (c) Ensuring that online learning opportunities can be accessed using mobile devices to ensure access by the widest possible user base. (d) Supporting the use of low bandwidth (including offline) solutions. (e) Mandating that online learning opportunities be optimized for low bandwidth and poor latency conditions. (f) Using a combination of remote learning models to support students. (g) Providing supplemental guidance and support on how to use and access remote learning content to students, caregivers, and teachers. (h) Using multimedia to share information with students, families and communities about remote and online learning opportunities, materials available, and where to find additional support or guidance.
- 11 Deliver remote learning for different education levels** using multi-modal, with different technologies for different education levels. For instance, younger students require more audio/visual stimulation/ edutainment programs.
- 12 Use Learning Management Systems** for monitoring engagement and effectiveness, communication, collaboration, and videoconference facilitated "check ins" between teachers, parents and students.

For a comprehensive list of recommendations for the rollout of remote learning, see Remote Learning and COVID-19 rapid response <https://www.worldbank.org/en/topic/edutech> The World Bank 2020



Saudi Arabia and Jordan's experience of providing remote learning and reflecting on the lessons learned for 'building back better' post-pandemic are described in Boxes 8, 9 and 10.



Box 8. One of the largest virtual schools implementation in the Arab world - Saudi Arabia's Madrasati ('My School') platform⁹⁸

Within one day of school closures due to the COVID-19 pandemic in March 2020, distance education was made available to over 5 million K–12 children across Saudi Arabia. This immediate implementation of distance education at a large scale was made possible because of previous investments in e-learning, significant accumulated experience in education technologies, quick decision-making, and well-coordinated efforts across multiple entities.

Before the start of the 2020–21 school year, the MoE made a decision to further enhance the dedicated iEN TV channels (one for each grade) and iEN YouTube channels by requiring virtual live connections between students and teachers for all lessons (synchronous learning), wherever possible. This required infrastructure was capable of hosting over six million students online at the same time. The result was the Madrasati ('My School') platform.

Building a virtual school experience for children and teachers

Madrasati is more than a learning management system. It is a unified e-learning platform containing links to a comprehensive and connected set of tools and services required by students, teachers, school leaders, and parents. The tools include Microsoft Teams, Office 365, iEN Portal, and interactive tools including learning resources, question banks, homework, virtual laboratories, and self-assessments, among others. Dedicated resources were made available for children with special educational needs.

A key feature of the virtual school experience was adhering to a school routine, including a structured start to the school day and required attendance in virtual classes with students' regular teachers, following a timetable that was reduced in hours to minimize screen time. The hours for elementary school students were moved to later in the day to allow working parents and older siblings to support younger family members and the sharing of devices.

Preparing for rollout and continuous improvement

The rollout of Madrasati was supported by a 'Back to School' information awareness platform, bringing together in one place all the user guides, video training packages, expectations, and regulations for teachers, students, and parents. Infographics were used extensively through social media to raise awareness and continue to encourage engagement with remote education.

Preparing more than 400,000 teachers to use the new digital tools and significantly alter their teaching methods in a short period of time was required, and teacher training was made widely available. A teacher in each school was designated as the e-learning focal point to support their colleagues, and networking support across the teaching profession was widespread. Supervisors played a key role in the professional development of teachers, communicating and sharing good practices across subject areas and schools. Technical support was provided in multiple ways, which was essential in helping students, parents, and teachers connect, particularly in the first few weeks, including a dedicated call centre, integrated live chat, support staff based in district offices, and guidance to schools on how to help with log-in enquiries. Feedback was frequently sought from stakeholders and used to continue to improve the platform.

'Building back better'

The MoE has carefully studied the experience of digital and distance education during the COVID-19 pandemic and has found several benefits that will help to improve education provision post-pandemic. These include enhanced communication between schools, teachers, students, and parents; greater parental and family engagement with schools; exposure of students and teachers to model lessons (recorded); better organisation of learning materials and resources; and more.

The innovations and disruption to business-as-usual in Saudi Arabia's schools during this period of digital and remote education is set to transform children's learning experiences well beyond the pandemic.

Source: World Bank team based on interviews with KSA's MoE.

⁹⁸ For more information about Madrasati, please see: <http://schools.madrasati.sa/>.



Box 9. Jordan's Learning Bridges: a national blended learning recovery programme

In Jordan, schools have been fully or partially closed since March 2020. From September 2021, all schools reopened but with half of students attending only 2-3 days a week. During this time, students have continued learning remotely, through televised lessons and a national online learning platform. Over 90 per cent of students have accessed the platform, but they may face challenges such as a lack of parental support or access to technology, whilst teachers had limited skills and resources to support online or blended learning.

The MoE, with UNICEF support, launched **Learning Bridges** in September 2020 to address these challenges. It is a national blended learning programme that links printed materials with online resources to provide weekly activities based on core curricula. By the end of 2020/2021, Learning Bridges had reached over half a million students in grades 4 to 9 in over 70 per cent of schools, including refugee camps, with a target of one million students by the end of 2021/22.

What is Learning Bridges?

This innovative approach links textbooks and technology, school and home, and subject knowledge with applied learning. Every child in grades 4 to 9 receives a printed A3 activity weekly, with guidance on how parents can support. Every activity pack has its own QR code linking to an online resource with audio content and extra resources. Teachers receive weekly guidance and an online resource to support teaching. Audio files are embedded to provide accessibility or children with visual impairments or that have difficulty reading.

This blended and remote learning offer is designed to support students to recover lost learning from the previous year, and accelerate learning in the new academic year, regardless of the availability of face-to-face teaching. Learning is accelerated by using a cross-curricular approach where students are given an activity pack that links together the key learning outcomes in the core subjects of Arabic, English, mathematics and science for that week's planned curriculum. Learning is recovered as students have access to a range of carefully chosen media resources that ensures they can work at their own pace, selecting resources where they need to build up understanding from the previous year's curriculum.



To support teachers, UNICEF and the MoE developed an online training programme. For every activity pack, teachers receive a guidance sheet on how to introduce the activity, support the student's learning and give feedback. By using the QR code, teachers also have access to extra resources to help them and their students.

Every student activity pack comes with instructions to parents on what they can do to become involved in their child's learning, without expecting parents to replace the role of the teacher. UNICEF has also developed a short series of videos and social media messages to encourage parents to support their children's love of learning.

'Building back better'

- 1 Challenging thinking: UNICEF's investments during COVID19 are being used to strengthen the education system. Teachers have been challenged to break away from the textbooks and think creatively about curriculum and pedagogy. Online teacher education has been used to reach 30,000 teachers – a first in Jordan.
- 2 Curricula integration: Learning Bridges has enabled the MoE to identify core learning objectives. Weekly Learning Bridges activities are all cross curricula, aligned directly with the weekly content taught to each grade group. This makes curriculum delivery more effective and accelerates learning. In a recent impact study, the cross curricula approach was viewed by the MoE as one of the greatest successes of Learning Bridges.
- 3 Teacher Innovation: **Good practice padlets** are like large notice boards of children's work. These are used by schools and supervisors and have had an average of 100,000 views a month. Learning Bridges Champions support teachers to be flexible and innovate in their delivery of the curriculum.

Source: UNICEF, Ministry of Education and UNICEF launch "Learning Bridges" to help one million children recover learning in Jordan



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Box 10. Bridging the digital divide with public-private partnerships⁹⁹

The MoE in Jordan reacted quickly to minimise learning disruptions caused by school closures. Collaborating with the Ministry of Digital Economy and Entrepreneurship, along with private sector entities including Edraak and Abwaab, the MoE developed remote learning platforms including Darsak (an e-learning portal with video courses for grades 1-12 in line with the national curriculum), in addition to televising and broadcasting lessons nationally¹⁰⁰. The MoE also launched ‘Teachers’, a web page hosting professional development courses for teachers focusing on new technologies.

These initiatives require ongoing technical and financial support to be effective in improving learning outcomes for children across the country at scale. Regarding their reach so far, MoE data from November 2020 shows that 88.5 per cent of students in public schools have accessed Darsak, although the figure is lower for vulnerable groups such as refugee children and those living in temporary settlements.

Severe, lifelong impacts can result from deprivations in care, nutrition, health, stimulation and learning during the early years. Strategic investments in early childhood development (ECD) and early childhood education (ECE) should therefore be prioritised to protect this generation of young children and support productivity in the longer term. Countries can leverage a range of interventions and mechanisms to support ECD as part of the COVID-19 response. The best way to reach young children is by supporting parents and caregivers. Box 11 provides some examples of support.

⁹⁹ UNICEF (2020). COVID-19 Education Response in Jordan, March to November 2020

¹⁰⁰ UNICEF (2020). COVID-19 Education Response in Jordan, March to November 2020



Box 11. Supporting young children and their families - COVID-19 response



During school closure:

- 1 Provide information for parents** encouraging reading stories to children and reading with them (if able) through TV, radio, apps, information campaigns or specific outreach to groups or individuals.
- 2 Distribute books, learning and play materials** through existing distribution networks such as cash transfer programmes, food distribution or community resource drops, with accompanying materials for parents.

Example: Kenya engaging parents in early literacy



Include ECE in school re-opening efforts:

- 1 Include ECE in re-enrolment campaigns**
- 2 Provide accelerated learning programmes** to promote school readiness (prior/at start of Grade 1)
- 3 Introduce hygiene practices** in schools that include young children

Example: Preschool Health and Nutrition Guidance (Save the Children)



Distance education platforms:

- 1 Include preschool programming** in remote learning platforms that are being developed for basic education
- 2 Provide support and learning materials for parents and children** via video, radio, social media, apps, USB sticks and SD platforms in areas with low connectivity

Example: Costa Rica online education platform



Use radio and interactive audio instruction if internet connectivity is low:

- 1 Use interactive audio instruction or radio programmes** to reach parents and children with entertainment and learning activities to promote early learning.
- 2 Share key messaging** around nutrition, health, parenting, coping, hygiene, early learning and play, as part of national and local communications campaigns

Example: Interactive Audio Instruction in the DRC



Use social media (especially Facebook and WhatsApp) to amplify messaging and create support networks:

- 1 Share key messages for parents** on parenting, coping, health, nutrition, sanitation and early learning as part of national and local communications campaigns
- 2 Create support networks**, particularly using social media, to ensure parent support communities around coping and parenting

Example: Instagram resources on parenting in the United Arab Emirates



Use television where TV penetration is high, especially when internet connectivity is low:

- 1 Use TV entertainment and learning for children** to deliver entertainment and serve as an early learning platform
- 2 Use TV to share messages** around parenting, hygiene, children's early learning and development and coping mechanisms.

Example: Sesame Street Caring for Each Other



Use mobile phones:

- 1 Texting** can be used to share key messages on parenting, nutrition, health, and early stimulation
- 2 Call centres** can support parents with coping techniques and ideas to promote ECD
- 3 Teachers can use phones** to reach parents and share early learning ideas

Example: Nicaragua texts to caregivers on parenting



National communication campaigns

- 1 Information for parents** around water, sanitation and hygiene (WASH) for children, early stimulation, nutrition, health and child protection can be integrated into communications campaigns which are part of the COVID-19 response.

Example: Kenya ECD toolkit

Source: World Bank (2020). 15 Ways to Support Young Children and Their Families in the COVID-19 Response, p. 2-3.

2. Provide support and guidance to teachers to deal with the challenges and opportunities of the pandemic, strengthening teacher policy and investment in teachers

The pandemic has challenged education systems to ensure learning continuity and has substantially increased the demands placed on teachers. In addition, teachers now fear contracting COVID-19 when schools reopen. Countries need to support teachers to improve their well-being, provide continuing professional development to strengthen their pedagogical and digital skills to use remote learning modalities, including concrete guidance on:

- enforcing health protocols as schools reopen;
- implementing a revised curriculum using appropriate pedagogy and ICTs;
- assessing student learning; and,
- identifying and engaging children at risk of dropping out.



Empower teachers in the era of pandemic and remote/hybrid learning

To cope with the drastic changes in teaching and learning modalities, teachers require:

- **Hands-on guidance** on daily teaching practice, and how to achieve learning objectives within the national curriculum under the new (online/hybrid) teaching and learning environment;
- **Capacity development** on effective teaching and learning, digital skills and teaching inter-activeness,
- **Practical and adaptable guidelines** on remedial learning, accelerated learning and teaching in emergencies.

Teachers' digital and pedagogical skills development is the basis for enabling teachers to teach effectively

while teaching remotely. The shift to teaching and learning remotely should also come with guidance on how the learning objectives within the national curriculum are expected to be achieved, and how the diagnostic assessments will be conducted to enable adaptive teaching. Continuing support should also ensure social dialogue to protect teachers' rights and ensure they are actively engaged in shaping the education recovery^{101 102 103}.

Support to ensure teachers' physical and psychosocial well-being is also urgently needed.

Working on the front lines of education, teachers should be considered as a priority group in national vaccination rollout plans to curb virus transmission, to protect both teachers and learners¹⁰⁴, and to ensure learning continuity and safe school reopening^{105 106}. In addition, providing psycho-social support to teachers helps improve their well-being and enables them to better support their students' well-being. Examples of initiatives to support teachers' health and well-being in the region include: prioritising teachers for vaccination (in Egypt¹⁰⁷, Saudi Arabia and Algeria¹⁰⁸) and establishing professional development platforms to enable teachers to support students' learning during emergencies (in Saudi Arabia¹⁰⁹ and Jordan¹¹⁰).

A teacher policy that reflects the current context is essential.

In order to meet the often new and challenging expectations during and after the pandemic, teachers need to be supported with clear-cut and forward-looking education policies as well as flexible, cost-effective and sustainable implementation measures. Teacher education policies need to spell out expectations towards teachers and the skills/competencies they need to acquire and develop, with regard to adjusting learning modalities to their local conditions and sanitary situation, keeping learners and parents engaged, including the most vulnerable. At the same time, teachers should be supported in being aware of and mastering different modalities of teaching and learning by combining paper-based resources, radio-TV resources and the possibilities that online/digital platforms offer. In order to empower

¹⁰¹ UNESCO. (April 2020). Supporting teachers and education personnel during times of crisis.

¹⁰² World Bank. (April 2021). Preparing and Supporting Teachers.

¹⁰³ International Task Force on Teachers for Education 2030, UNESCO, ILO. (May 2020). Supporting teachers in back-to-school efforts: Guidance for policy-makers.

¹⁰⁴ UNICEF. (December 2020). Teachers should be prioritized for vaccination against COVID-19.

¹⁰⁵ UNESCO. (March 2021). Where are teachers being prioritized in COVID-19 vaccination efforts?

¹⁰⁶ UNESCO. (July 2021). UNESCO urges all countries to prioritize teachers in national COVID-19 vaccine rollout plans to ensure education can continue safely and schools remain open.

¹⁰⁷ Egypt Today (August 2021). WHO, UNICEF calls for prioritizing vaccinating teachers against COVID-19.

¹⁰⁸ UNESCO (2021). Prioritization of teachers in COVID-19 vaccine rollout.

¹⁰⁹ "Madrasati" is a unique global model compared to the top platforms in 174 countries.

¹¹⁰ <https://www.edraak.org/en/>

teachers to fulfil their expected roles, education policies and subsequent implementation measures need to envisage structured and long-running support for teachers through continuous professional support. In addition to the mastery of their subject areas, such competencies include:

- Mastering the pedagogical usage of traditional and new teaching and learning modalities.
- Adjusting curricula to remote/online and hybrid/blended learning, including through implementing appropriate measures to cope with learning losses, such as remedial and accelerated learning.
- Investing in formative and classroom-based assessment in order to provide timely feedback to their learners and using assessment as learning opportunities.
- Keeping their students and themselves motivated and engaged and communicating quality, equity and inclusion goals with parents and the community at large.
- Receiving and providing appropriate psycho-social support and developing social and emotional skills for themselves and their learners, in the context of remote/online and hybrid/blended learning.
- Establishing effective partnerships with colleagues and communities (i.e. businesses, associations, NGOs, universities) to enhance the sharing of resources and learning.
- Carrying out action and/or research to monitor and assess what is working and what measures might be scaled-up.

Teacher policies and measures need to consider teachers working conditions and physical and psychological wellbeing as well as their salaries, benefits and incentives. Measures include: career advancement opportunities; rewards and special celebrations to enhance teacher visibility; and acknowledgment of their crucial impact on both students and society.

3. Ensure ongoing engagement of parents and caregivers with clear and inclusive communication strategies and supportive policies

With the transition to home-based learning during school closures, parental engagement and support have become critical factors. Communication early and clearly has been especially important in engaging stakeholders regarding school closures and reopening, the availability of remote learning opportunities, decisions around high-stakes

assessment, and other issues.

The major principles for engaging stakeholders include:

- **communicating early and often**, using multiple channels
- **localising communication** efforts to involve community leaders
- **ensuring inclusion** by using multiple languages and a variety of modes

Opening feedback channels to hear from parents has been found effective in engaging students and their families, in addition to communications around health and safety. Clear and frequent communication is crucial to ensure that students and their families are well informed and reassured around the uncertainty and disruption of school routines.

Children learn best when they feel safe, affirmed, and deeply engaged within a supportive community of learners. Therefore, creating an enabling home learning environment with parents and caregivers who support children's learning is crucial for learners' engagement¹¹¹. This includes academic support as well as ensuring children's well-being¹¹². Psycho-social distress and anxiety are expected to increase, irrespective of socio-economic categories, during prolonged school closure due to the potential for greater exposure to physical, emotional and sexual violence, exploitation and abuse.

In the MENA region, especially in low-income households, parents are often occupied by heavy workloads leaving little time for supporting children academically. While many caregivers - mostly mothers - have low literacy and digital skill levels, older siblings are in many cases supporting the learning of their younger siblings. It is important to understand parents' experiences of home-based learning - and the support they need - and to develop innovative and sustainable ways of family support that contribute to students' home-based and school-based learning in the local context. Developing adaptive strategies may also help to ensure timely school enrolment.

¹¹¹ UNESCO (April 2020). Unlocking the potential of family and intergenerational learning.

¹¹² World Bank (April 2021) Supporting Learning From Home.



Practical tips to engage parents and caregivers in learning

- Prepare reader-friendly and practical guidelines for parents and caregivers on home-based and remote learning support, as well as health and nutrition.
- Enhance the connection between school and family, keeping close contact between teachers and parents/caregivers to monitor students' learning status and better support home learning.
- Integrate contextualised family learning activities into education programme design and implementation.
- Provide regular check-ins to monitor how families are coping and to determine whether additional academic and/or socio-emotional resources as well as training for parents are needed.

→ Early recovery period: reopening and remediating

1. Ensure safe school reopening based on evidence-based decision-making

Given the different pandemic situations across the MENA region, school reopening status varies from country to country (and within countries). Preparing a safe environment with strict health protocols is essential to controlling disease transmission, protecting learners, teachers and staff, and enabling the safe return to school¹¹³.

Reopening plans should be guided by health and well-being, including behavioural and mental health needs, of all children, youth, their families and communities, as well as educators and other school staff.

Reopening decisions and policies should be based on adequate information from health and education experts¹¹⁴, include consultation with students, teachers and parents at the school level, and be updated regularly in line with emerging information about the pandemic and lessons learned. It is vital that national strategies are reviewed, revised, and adapted as well as school and community level responses.

¹¹³ World Bank (April 2021). Minimizing Disease Transmission in Schools.

¹¹⁴ World Bank (April 2021). Communicating with Stakeholders.

¹¹⁵ World Bank (April 2021). Preparing and Supporting School Leaders.

¹¹⁶ Ibid.

¹¹⁷ UNESCO/UNICEF/World Bank/OECD (June 2021). What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic

In addition, a robust communication mechanism should be established to support close communication and coordination¹¹⁵ between schools¹¹⁶, households, communities, and district level education administrations and state and/or local public health authorities, to ensure policies are translated into practice efficiently and effectively. Clear, strategic, and timely communication is needed to clarify the necessary information, build trust, and encourage families who would not otherwise send their children back to school/learning.



Practical tips to prepare for the safe school reopening:

- Collect adequate and timely data and information from the school/community level.
- Prepare clear protocols for preventive measures.
- Rehabilitate school infrastructure with adequate WASH facilities and ventilation.
- Provide financial support to procure hygiene products for education institutions, and support extensive COVID-19 testing upon reopening.
- Prepare "Back-to-school" campaign and raise awareness on the importance of health and safe school reopening.
- Adjust school hours, or implement staggered timetable to reduce classroom density.

“Measuring learning loss is a critical first step towards mitigating its consequences... As education systems forge ahead, measuring learning levels will prove more important than ever”

2. Conduct comprehensive assessments to inform education planning and enable the provision of compensatory quality education to all learners

Assessing the effectiveness of education responses enables the provision of quality education. Thus, it is vital to complement government perspectives on effectiveness with regular collection of reliable data on learning outcomes. Box 12 details the role of different forms of assessment. It is important to consider learning assessment activities as part of a comprehensive instructional strategy and situate assessment plans as an integral part of broader systemic initiatives that Ministries of Education and schools are implementing in the context of ensuring learning for all in MENA.

As schools reopen, students will return with different levels of knowledge and skills, with disadvantaged students being most likely to exhibit the greatest learning losses. Ongoing classroom-based assessments highlight learning gaps, enabling provision of personalised instruction and improvement of learning equity. These should initially prioritise students in the early grades or transition years. When resources (including time until reopening) are limited, diagnostic classroom assessment on core subjects, such as language and mathematics, can be prioritised to ensure students acquire the foundational knowledge and skills which will scaffold other skills and competencies¹¹⁸. In addition to assessment at the time of reopening, progress towards learning goals can be measured using ongoing formative and summative classroom assessment, enabling learning design which is responsive to students' progress. This will provide real-time evidence of the extent to which students are catching up with their pre-pandemic trajectories or accelerating their learning.

Large-scale assessment allows policymakers to monitor system-wide learning trends and make evidence-based decisions. In the context of school reopening, large-scale assessments can help quantify learning losses and identify needs at the system level, enabling targeted resource allocation. Initially, governments may consider developing intermediary benchmarks for the effectiveness of learning programmes (e.g. enrolment, alignment to national curriculum, teacher/student engagement, teacher/parent perceptions). Introducing mechanisms for data collection and monitoring (e.g. text message and phone surveys) is crucial for learning design and resource allocation that meets students' needs on an ongoing basis.



It is vital to complement government perspectives on effectiveness with regular collection of reliable data on learning outcomes



Box 12. The role of different forms of assessment

- 1 **Classroom-based assessments** (diagnostic, formative and summative) help collect evidence of students' learning and provide regular feedback on progress. This enables learning design to be responsive to students' needs and ensure learning equity, especially for the learning poor, whose learning levels may otherwise worsen even further, as shown by simulation results of learning poverty gaps (Table 2.1).
- 2 **System-wide diagnostic assessments** at national or sub-national level, conducted across all grades (especially transitional grades) on school re-opening, could facilitate comprehensive measurement of learning loss at country level. Assessments may focus initially on foundational skills, including literacy, maths, and science.
- 3 **National summative assessments**, including end of cycle examinations and certification processes, should be implemented regardless of the modification of school calendars, as they have a significant impact on students' retention and subsequent study and /or career plans. Appropriate summative assessment plans will help to reduce stress among learners at the end of school cycles, and keep at-risk and vulnerable children and youth engaged in learning, instead of dropping out.

¹¹⁸ These core subjects are relevant learning building blocks for the rest of the curriculum. Understanding literacy and numeracy skills of students as they return to school will help teachers adjust their instructional practices to support students' understanding of the broader curriculum.

Availability of resources is a major consideration in determining assessment options. Critical resources include time until reopening, staff and financial resources of institutions at multiple levels (central, district, school and classroom). Countries with sufficient resources could ideally plan for systematic implementation of both classroom assessment, to target instruction, and large-scale assessments, to monitor learning and support resource allocation at the system level, as soon as schools reopen. See Annex 6 on assessment types and their key differences. Box 13 outlines the role of assessment in advancing SDG 4 of the 2030 Agenda^{119 120 121}.



Box 13. Advancing SDG 4 by improving minimum proficiency in reading and maths

Ambitions for education are captured in SDG 4 of the 2030 Agenda which aims to 'ensure inclusive and equitable quality education and promote lifelong learning opportunities for all' by 2030.

The proportion of children enrolled in education and their proficiency levels in reading and mathematics are crucial indicators to delineate children's learning status, which affects both empowerment and wellbeing at the individual level, and socio-economic and political outcomes at large.

Within SDG 4, there are 11 global and 32 thematic indicators that present access, quality, and relevance of the education outcomes. Countries are expected to report on the progress of the Education 2030 agenda using these indicators. SDG 4 indicator 4.1.1, conducting systematic assessments along with international standards (such as EGRA, EGMA, TIMSS, PIRLS) allows us to monitor progress and evaluate students' proficiency level in literacy skills at different ages and/or grades. In countries with scarce education resources, it is encouraged to develop and deliver national assessments when international assessments are not feasible.

In 2021, countries in the Arab region confirmed the regional benchmark of seven selected indicators as a target for the year 2025 and 2030, including indicator 4.1.1. Countries are therefore encouraged to strengthen their national assessment to quantify quality of learning, including of foundational skills. The data collected is expected to improve teaching and learning practices, optimise education policies and ultimately advance SDG 4.



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¹¹⁹ <https://www.education-progress.org/en/articles/learning#4.1.1a>.

¹²⁰ SDG4 indicator 4.1.1: Proportion of children and young people (a) in Grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex.

¹²¹ EGRA: Early Grade Reading Assessment; EGMA: Early Grade Mathematics Assessment; TIMSS: Trends in International Mathematics and Science Study; PIRLS: Progress in International Reading Literacy Study.



Box 14. Learning data compact in MENA

In many low- and middle-income countries, learning data are not collected frequently and, in some countries, not collected at all. In MENA, less than half of the countries have collected recent learning data that can be used for reporting on SDG 4.1.1, and many of these countries are low- and middle-income countries.

COVID-19 has given a new impetus to the global learning monitoring agenda. The expected learning losses in MENA, whose estimates are derived largely from simulations so far, need to be measured to help countries allocate the resources and effort needed to address the learning crisis and identify effective mitigation strategies, which can be replicated, improved, and scaled-up for a stronger learning recovery and acceleration

The Learning Data Compact is a commitment to ensure that all countries, especially low- and middle-income countries, have at least two quality measures of learning by 2030.

UNESCO, UNICEF, and the World Bank have formed the Learning Data Compact (LDC) to support coordinated efforts to close the learning data gaps that still exist worldwide. Building on shared principles, process, and accountability, the LDC provides a framework for coordinating processes, initiatives, and resources to measure learning and to increase their joint impact by avoiding fragmentation and duplication of effort. It aims to leverage existing and new technical and financial

resources to improve the production and use of learning data effectively and transparently.

Measuring learning at different stages of the school cycle, particularly in earlier grades, is critical to ensure that children acquire the necessary competencies to master learning goals in higher grades, and beyond school. At the core of the Learning Data Compact is the vision that all countries, especially low- and middle-income countries, assess learning for students in at least 2 subjects, at least 2 grades, and with at least 2 planned rounds of measurement by 2030.

The Compact will support developing holistic and programmatic approaches to large-scale assessment, data on the drivers of learning, and classroom assessment. Depending on each country's national strategy and context, and capabilities, governments may decide to implement one or more of these data collection activities for monitoring student learning outcomes. However, measurement of learning outcomes can't be a one-off activity, and it must be aligned with other policies of the education system that facilitate use of learning data through building analytical capacity and leveraging the results of assessments to make decisions about education policy. Through these efforts, the LDC aims to end the learning data crisis, which is essential to ensure that all children receive a good quality of education and countries achieve their national learning goals. Read more about the Learning Data Compact [here](#).

Figure 20. Learning data gaps in MENA

Two or more SDG measurement points in the last 3 years	Bahrain - Iran - Kuwait - Lebanon - Malta - Morocco - Oman - Qatar Saudi Arabia - United Arab Emirates
Two or more SDG measurement points from more than 3 and less than 7 years ago	Egypt - Tunisia
Only one SDG measurement point over last 7 years	Algeria - Jordan
No SDG measurement point in the last 7 years	Djibouti - Iraq - Libya - Sudan - Syrian Arab Republic Palestine/Palestinian territories - Yemen

Source: Learning Data Compact groups from UIS Database

Table 5 displays recommendations regarding the implementation of diagnostic classroom assessments under four different resource scenarios.

Table 5. Implementation of diagnostic classroom assessment under four resource scenarios

Extremely limited resources			Moderate resources	
Key areas	Key considerations	How to Implement	Key Considerations	How to Implement
Assessment strategy	Use existing classroom assessment tools for core subjects; otherwise use existing tools particularly to assess foundational knowledge and skills.	1. Ministries of Education distribute to schools existing classroom assessment tools and existing supplementary training materials to administer and score these tools. 2. Once schools reopen, teachers administer the existing classroom assessment tools. Teachers can first focus on re-establishing the classroom culture, ensuring student well-being and reviewing critical material from foundational subjects covered during the previous school year. 3. Teachers score the assessments and interpret the results to guide personalised instruction, as well as communicate the results to school principals, who allocate support and additional interventions to students with greatest need.	Develop new diagnostic classroom assessment tools aligned to the curriculum. Use some content from already developed tools, if needed.	1. Ministries of Education identify the curriculum content to be assessed for each assessed subject and school grade based on the previous school grade's curriculum. 2. Ministries of Education develop and distribute to schools detailed plans of the classroom assessment tasks and activities to assess the selected curriculum content. 3. Teachers are trained on the administration, scoring, interpretation and use of diagnostic classroom assessment tools. 4. Once schools reopen, teachers administer comprehensive diagnostic assessments of students' knowledge and skills in relevant subjects of the curriculum within the first few weeks using the diagnostic classroom assessment tools made available by the MoE. 5. Teachers score and interpret the assessment results for each student in the classroom, and use this information to support personalised instruction, provide constructive feedback, and promote learning recovery.
Subjects	Core subjects or core foundational skills (e.g., literacy and numeracy).		Prioritise core subjects and one additional relevant subject per grade. If possible, expand to all school subjects.	
Grades	Prioritise early school grades.		As many school grades as possible.	
Assessment inputs	Archived information of existing classroom assessment tools. Otherwise, publicly available frameworks (e.g., EGRA or EGMA) for foundational literacy and numeracy skills.		National curriculum. Additional sources of information, such as teacher guides, lesson plans, and textbooks, consulted as needed.	
Timeline	Start as soon as possible. Consider time for logistics.		Start at least three months before schools reopen.	
Teacher training	Distribute existing supplementary guidelines to support teachers in assessment administration, scoring, results interpretation and use.		Develop supplementary written guidelines for assessment administration, scoring, and results interpretation and use.	

Source: adapted from Luna-Bazaldúa et al., 2020¹²²

¹²² Luna-Bazaldúa, D., Levin, D. and Liberman, J. (2020). Guidance note on using learning assessment in the process of school reopening <http://documents1.worldbank.org/curated/en/856951606239586214/pdf/Guidance-Note-on-Using-Learning-Assessment-in-the-Process-of-School-Reopening.pdf>



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3. Implement remedial and catch-up learning programmes to remediate lost learning

Remedial or accelerated education services can be effective strategies to tackle the issue of learning loss caused by extended school closures, disruptions in the academic calendar, and uneven access to remote learning opportunities^{123 124}.

The accumulated learning and skills loss associated with school closures make the back-to-school process very challenging for all students¹²⁵. Immediate and contextualised remedial education programmes with compensatory education policy support at a national level are urgently needed¹²⁶ to minimise learning loss, reduce the possibility of school drop-outs, and potentially help reduce COVID-19-related education costs in the long run, by as much as 75 per cent¹²⁷.

Governments should develop practical guidance on remedial education, including clear learning standards

and curriculum adjustment, assessment methods and effective delivery formats and settings, incorporating these in national education policy and providing immediate support for its implementation at the school level.

Online remedial programmes may be feasible for high income countries, while in low-income countries, face-to-face remedial interventions with strict health protocols are more appropriate and may be considered as a long-term investment, given the limited human and financial resources.

Possible approaches include increasing in-person interactions¹²⁸ between teachers and students in the coming months, e.g. by extending school days, providing programs during holiday breaks (such as summer school) and hybrid experiences to extend inclusive learning opportunities¹²⁹.

Countries should also consider condensing the curriculum to focus on core subjects and fundamental competencies within those subjects¹³⁰. See more detailed examples in Box 15.

¹²³ Azevedo, J.P., Hasan, A., Goldenberg, D., Iqbal, S.A. and Geven, K. (2020). Simulating the potential impacts of COVID-19 school closures on schooling and learning outcomes: a set of global estimates. World Bank.

¹²⁴ UNESCO (2021). Recovering lost learning: what can be done quickly and at scale?

¹²⁵ UNESCO, World Bank, UNICEF (2021). Mission: Recovering Education in 2021

¹²⁶ World Bank (April 2021). Remediating Learning Loss.

¹²⁷ UNESCO. UNESCO warns that the funding gap to achieve SDG 4 in poorer countries risks increasing to US\$ 200 billion annually due to COVID-19 if we do not take urgent action.

¹²⁸ Ultimately a return to face to face learning is the goal for all learners.

¹²⁹ UNESCO, UNICEF, World Bank, OECD (June 2021). What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic

¹³⁰ The World Bank (April 2021). Adapting the Curriculum.



Box 15. Examples of approaches to remediation

1 Catch-Up Programme. In Syria, there has been a significant drop in general and vocational secondary education for the 15-17 age group. Between 2010 and 2018, there was an 8.2 per cent decline in general secondary education and a 24.1 per cent decline in vocational secondary education, primarily due to forced displacement inside and outside the country. Even with those who managed to stay in school, the pass rate of Grade 9 national examination recorded a decline of approximately 8 per cent, while the number of candidates who undertook the Grade 9 and Grade 12 national examinations declined by 34 per cent and 63 per cent, respectively. Learning loss, increasing dropout rates, and inequality in educational systems are the direct results of the COVID-19 pandemic on youth; there is no doubt that these adverse effects will impact poor children disproportionately. In coordination with the MoE, as a response, UNESCO delivered a Catch-up Programme in June-July 2020 and February-April 2021.

The Programme sought to support the needs of learners/students in Syrian public schools by offering remedial classes for students in key subjects: Arabic, Math, Science, and English/French language to compensate for their pandemic-related education loss and to strengthen students and increase their ability to pass the national exam successfully. In total, more than 73,000 Grade 9 and Grade 12 students benefited from the Programme. Overall, the impact of the Programme was positive, where the average pass rate of those students that underwent the 2020 Programme was 75 per cent. The governorates with highest pass rates were Tartous (91 per cent), rural Damascus (82 per cent), and As Sweida (82 per cent).

2 Teaching at the right level involves grouping children by their level of achievement, not by their age or grade. This approach includes specific activities and instruction designed to move students to the next level and is combined with close tracking of children's progress. The learning activities focus on foundational skills in language and mathematics. It can be accomplished by allowing extra dedicated

time to the school day, for students to move from grade-based classrooms to classrooms based on their level, as determined by the diagnostic assessment. In these level-based classrooms, trained volunteers or government schoolteachers deliver specialised instruction designed to help students quickly advance from level to level. When used in India, in 50 days of focused teaching by lightly trained volunteers, this approach raised achievement levels for students in grades 3 to 5 from close to the lowest achievement levels, to the level of learning of the third-highest achieving state¹³¹. Similarly positive results were achieved in Ghana using this approach under Ghana's Teacher Community Assistant Initiative¹³².

3 Small group tutoring programmes can substantially increase student achievement, especially among low-achieving students. Teachers and school leaders decide which approach best fits their needs, which partners with whom to work, and which students will benefit most from additional tutoring.

4 Individualised self-learning programmes, including computer-assisted instruction, can be used with limited teacher input and guidance, enabling students to progress incrementally towards mastery of foundational skills. These activities can be pencil-and-paper based, or, in systems where the adequate technology is available in schools or homes, using computer-assisted self-learning programmes. Computer-assisted instruction can use interactive animation, sound and demonstration, followed by opportunities for students to complete tasks at their own pace while providing immediate feedback. Adaptive software programmes assess students, assign practice of particular skills, and monitor student progress. This approach operationalises teaching at the right level, in a cost-effective way. Examples from India and Uruguay show that computer-assisted instruction can increase learning, with evidence suggesting a larger positive impact for students from disadvantaged backgrounds¹³³.

¹³¹ Banerjee, A., Rukmini, B., James, B., Esther, D., Harini, K., Shobhini, M., Marc, S., and Michael W. (2016). Mainstreaming an Effective Intervention: Evidence from Randomized Evaluations. India. NBER Working Paper 22746. Cambridge, MA: National Bureau of Economic Research.

¹³² Beg, S., Fitzpatrick, A., Lucas, A., Tsinigo, E., and Atimone, H. Strengthening Teacher Accountability to Reach All Students (STARS).

¹³³ Global Education Evidence Advisory Panel (2020). Cost-Effective Approaches to Improve Global Learning: What Does Recent Evidence Tell Us Are 'Smart Buys' for Improving Learning in Low- and Middle-Income Countries?



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5 Summer school is another approach to providing more instructional time for remediation. While summer school is a fairly common intervention, it may need to be expanded to more students due to COVID-19 disruptions¹³⁴. Belgium offered free summer school for all in 2020¹³⁵ and a summer school programme in Tanzania was successful in providing remediation for vulnerable students¹³⁶. Summer school programmes are associated with learning gains when they are intensive, well-resourced, involve small group instruction by trained and experienced teachers, and focus on academic content.

6 Grade retention - given the extended school closures and the reduction in instructional time, grade retention may emerge as a potential option to remediate students who have fallen behind. However, some research shows that the benefits of retention are unclear and that the risk of negative socio-emotional outcomes, such as increased stress and decreased self-esteem, are high¹³⁷. Available evidence points to using retention only when students are truly unprepared for the next level of instruction and when complementary remedial interventions are provided¹³⁸.

Sources: UNESCO. Learning initiative for vulnerable youth in Syria. The World Bank (2021). Remediating Learning Loss.

Given that many countries in the region have long-term experience implementing remedial education programmes^{139 140 141}, it is also important to **review existing policies and practices on remedial learning**, ensuring an explicit and systematic approach to improve the effectiveness of these initiatives.

→ **Post-pandemic period: accelerating and improving**

1. Develop and implement policies that enable accelerated learning for all learners, including the most vulnerable, while building more resilient systems

The COVID-19 crisis provides an opportunity to **reimagine education systems, recover learning loss, while building more resilient and equitable education systems** with strategies to ensure learning for everyone, everywhere. The pandemic has highlighted the urgency for MENA countries to build systems that are geared towards improving and accelerating learning for all students. Low learning outcomes were a major challenge before the COVID-19 pandemic, which has exacerbated the challenge and made it clear that 'recovering lost learning' is not sufficient for MENA, especially in countries where the majority of students were already not achieving the minimum competencies.

In addition, the pandemic has demonstrated the importance of learning continuity at home, the need to close the digital divide for schools and households, and the critical role of teachers and parents. The changing nature of education systems and learning provision can be embraced as an opportunity to innovate, for the benefit of both present and future learners; Box 16 explores the key principles for effective and innovative use of education technology. Building on the investments made in remote learning systems will contribute to creating resilient systems that can withstand the impact of future crises¹⁴².

¹³⁴ Perry, A. (2020). Every student needs summer school this year to combat coronavirus learning loss.

¹³⁵ UNESCO (2020). COVID-19 Response—Remediation.

¹³⁶ Ibid.

¹³⁷ Peixoto, F., Vera, M., Lourdes, M., Cristina, S., Joana, P., and Leandro, S. A. (2016). To Be or Not to Be Retained... That's the Question! Retention, Self-esteem, Self-concept, Achievement Goals, and Grades.

¹³⁸ Education Endowment Foundation (2018). Small Group Tuition.

¹³⁹ Jusoor (June 2017). Evaluating Remedial Education Programs for Refugee Children.

¹⁴⁰ UNICEF (February 2006). Remedial education helps millions of Palestinian children.

¹⁴¹ American Institutes for Research (February 2015). A Second Chance: Remedial Reading in Egypt.

¹⁴² UNESCO, UNICEF, World Bank, OECD (June 2021). What's Next? Lessons on Education Recovery: Findings from a Survey of Ministries of Education amid the COVID-19 Pandemic



Box 16. Five Key Principles for Education Technology (EdTech) Investments

Ask why: EdTech policies and projects need to be developed with a clear purpose, strategy, and vision of the desired educational change. EdTech considerations should focus on “education” and not just on the “technology”.

Design and act at scale, for all: The design of EdTech initiatives should be flexible and user-centered, with an emphasis on equity and inclusion, in order to realize scale and sustainability for all. EdTech has exacerbated inequalities, and this need not be the case. Understanding users’ needs and contexts will lead to more inclusive investments in EdTech.

Empower teachers: Technology should enhance teacher engagement with students through improved access to content, data, and networks, helping teachers to better support student learning.

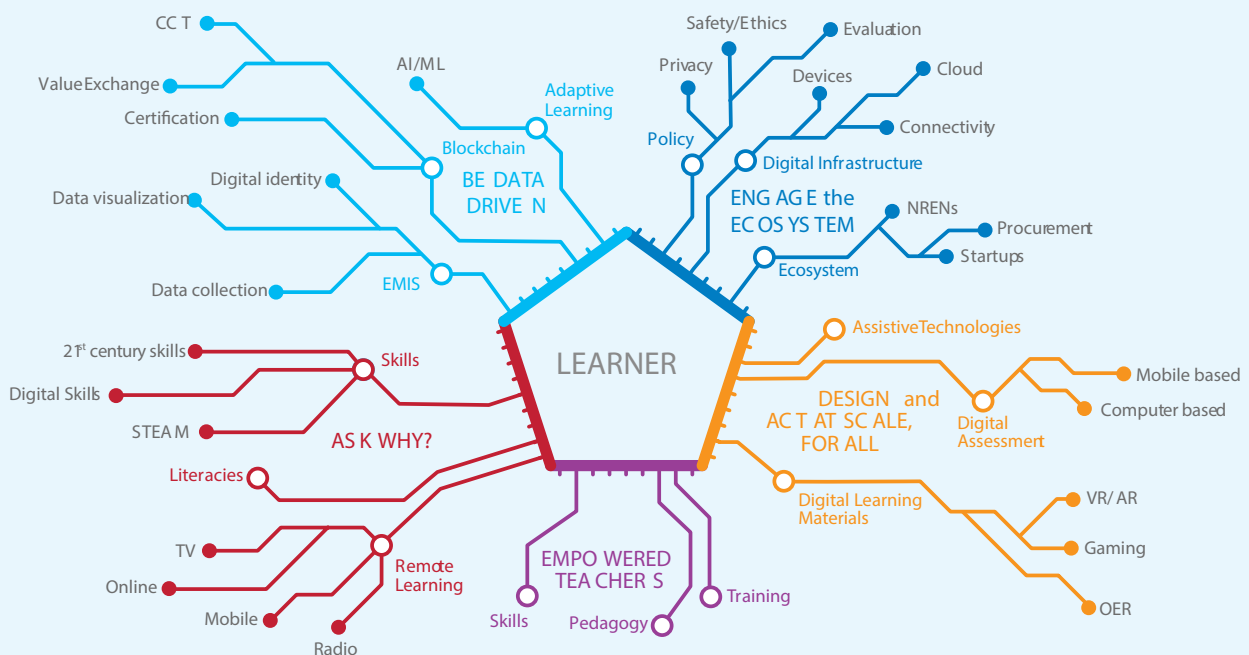
Engage the ecosystem: Education systems should take a whole-of-government and multi-stakeholder approach to engage a broad set of actors to support student learning, including as well governmental agencies, students, teachers, school leaders, parents/caregivers, non-governmental organizations, academia, and the private sector.



adriaticfoto/Shutterstock.com

Be data-driven: Evidence-based decision making within cultures of learning and experimentation, enabled by EdTech, leads to more impactful, responsible, and equitable uses of data. There will be an abundance of data, and therefore a need for capacity to utilize data and evidence to inform decisions that improve teaching, learning, and the management of the education system.

The diagram below illustrates these key principles and interconnected areas:



Source: World Bank (2020). Reimagining Human Connections: Technology and Innovation in Education at the World Bank, p. 7.

Education systems need to ensure equitable access to learning, learner engagement and enabling environments, and well-managed education systems, that are essential to the learning process. These thematic areas are also reflected in a recent WB publication¹⁴³ which stresses five pillars which could guide countries in developing strategies towards improved learning for all (see Box 17).



Box 17. Five pillars for 'building back better' education systems

Learners are prepared and motivated to learn with a stronger emphasis on whole-child development and support to learning continuity beyond the school.

Teachers are effective and valued and ready to take on an increasingly complex role as facilitators of learning at and beyond the school, using education technology.

Learning resources, including curricula, are diverse and high-quality to support good pedagogical practices and personalised learning.

Schools are safe and inclusive spaces with a whole-and-beyond-the-school approach to preventing and addressing violence and leaving no child behind.

Education systems are well-managed with school leaders who ensure effective pedagogy and a competent educational bureaucracy adept at using technology, data, and evidence.

Source: Saavedra, Aedo and Arias Diaz (2020)

The reach and effectiveness of the remote education provided during the pandemic varies, exacerbating learning poverty and inequality among children¹⁴⁴. Building on the efforts made to recover learning loss, accelerated education is a critical strategy which not only helps students catch up and continue grade-level instruction in less time¹⁴⁵, but also facilitates the integration of marginalised children into learning, especially girls, refugees, out-of-school children, children with disabilities and children from poor and rural areas¹⁴⁶. It is critical to keep in mind the extent of learning inequalities among the learning deprived populations, which will likely rise even further, as shown by simulation results of learning

poverty severity (Table 2.2), and will therefore require targeted instructional support to address the heterogenous learning needs of both the children below the minimum proficiency threshold and of those out of school.

To maximise the effectiveness of accelerated learning programmes, governments need to establish policies and strategies that align regular assessment, professional development of teachers (including initial teacher education), and customised curricula¹⁴⁷ with accelerated education based on local contexts and needs. Such support should emphasise student engagement and reflection on the actual needs of the learners, especially the most vulnerable children¹⁴⁸.

2. Strengthen cross-sectoral coordination and provide holistic support for the rebuilding of equitable, effective and resilient education systems for all learners



It is important to use this opportunity to strengthen multisectoral approaches to programming and support bold government actions and investments in comprehensive school health, mental health, psycho-social support, WASH, protection and nutrition. This will require strong partnerships, including supporting communities, teacher education institutions, parent-teacher associations and civil society in the planning, implementation and monitoring of these services¹⁴⁹.



¹⁴³ Saavedra, A. and Arias D. (2020). Realizing the future of learning: from learning poverty to learning for everyone, everywhere..

¹⁴⁴ UNICEF. (November 2020). The impact of COVID-19 on children in the Middle East and North Africa.

¹⁴⁵ Linda Darling-Hammond, Adam K. Edgerton. (April 2021). Accelerating Learning as We Build Back Better.

¹⁴⁶ UNICEF. (2020). Supplemental Content F: Accelerated Education as COVID-19 Responses In Guidance for COVID-19 Prevention and Control in Schools.

¹⁴⁷ Andrew Myers. (May 2021). To Catch Students Up, Don't Remediate. Accelerate.

¹⁴⁸ National Centre for Learning Disabilities. (February 2021). Promising Practices to Accelerate Learning for Students with Disabilities During COVID-19 and Beyond: State-Level Policy Recommendations and Actions.

¹⁴⁹ UNESCO, UNICEF, World Bank (March 2021). Framework for reopening schools supplement: from reopening to recovery

The COVID-19 pandemic has presented the challenge to global education systems of combining urgent, crisis-induced responses with building greater resilience and responsiveness to the needs of all learners. Holistic support to children and youth is needed more than ever to enable them to develop the skills, knowledge, and values required to navigate the world effectively.

Education policy and service provision (including donor policy) needs to be coordinated with policies related to health, social protection, child protection, information technology and national statistics, in partnership with the relevant ministries. Cross-sectoral discussions at both policy and practice level are vital, as are cross-sectoral data collection, management, and analysis, to identify the most effective learning pathways and ensure a holistic approach to learning and wellbeing. Equity and inclusion should also be at the centre of learning design and delivery, paying special attention to the most marginalised and vulnerable children and youth, leaving no one behind.

The 'new normal' of education has shifted the way teaching and learning takes place, and to adapt to this transformation, education stakeholders must build open, resilient mindsets, appreciating people, especially teachers, as the core of education systems, while leveraging the innovative role of technology in teaching and learning. 'Building back better' by creating environments in which learners influence their own learning experiences and pathways within an enabling ecosystem, supported by stakeholders across the whole system, will equip them to thrive as lifelong learners in contexts of uncertainty, disruption and change.

3. Identify mechanisms to finance the pandemic response in the education sector and advocate for efficient, effective and equitable investment in education

The economic impact of the pandemic over the past two years and additional economic risks, such as the oil price implosion and lingering debt distress, has led to a fiscal squeeze on governments in MENA. However, countries need to identify mechanisms to finance the pandemic response and minimise disruptions to the development of their education sector. Many countries will find it challenging to protect their education budgets over the next few years. However, it will be critical to include funds to cover the pandemic response in education. Countries such as Algeria are making efforts to ensure that social spending, including education, is protected during the current crisis¹⁵⁰.

Countries whose governments find it impossible to protect their overall levels of spending will need to explore ways to reallocate their overall budget to provide funding to priority sectors, including education. Decisions over how to allocate public spending involve difficult trade-offs, but in the immediate COVID-19 pandemic, priority has to be given to funding health and social protection to protect lives and livelihoods. These priorities will also help to minimise learning losses. Where it is not possible to make intersectoral budget adjustments, reallocations within the education budget will be needed to ensure that frontline services are protected. In these cases, it will be critical to prioritise existing funds to cover the additional costs associated with the pandemic response and to minimise disruptions to the quality of education services.

There is therefore an urgent need for advocacy to protect the current levels of public investment in education amid the tough budgetary choices governments have to make, and to expand public investment in education in areas where contractions have been experienced. Flexible, multi-year funding is required to make government education systems more resilient to shocks, and ensure the implementation of adjusted learning modalities. Lack of such funding will exacerbate education challenges, creating long-term obstacles for the most vulnerable populations of learners. Cross-sectoral and skills development efforts in close collaboration with ministries beyond the MoE, including Ministries of Finance and Planning, are essential to mobilise urgently-needed funding (both domestic and foreign) for education.

Governments, together with local education administrations, are therefore recommended to gather data on costing needs for ensuring learning continuity, followed by robust policy and financial simulations to enable more efficient, effective and equitable investments in education. Technical assistance may also be mobilised to introduce key concepts and techniques used in simulation modelling, and their effects on education policies and planning.

In all countries, the pandemic places a spotlight on the need to use resources as efficiently and equitably as possible. In many countries, there are significant inefficiencies in education spending, which often drive large inequalities in spending between different regions and children from different socioeconomic backgrounds. The sources of this inefficiency and unequal use of public funding differ across countries, but often include the uneven distribution of teachers, and fiscal transfer formulas that fail to take account of differences.

¹⁵⁰ The World Bank (2021). Accelerating Reforms to Protect the Algerian Economy.

CHAPTER 6

Conclusion: call to action

6. Conclusion: call to action

In response to COVID-19 pandemic school closures, governments across the MENA region have implemented a variety of remote teaching and learning strategies. Although the majority of school-age children were reached by some form of learning in 2020-21, **37 million (40 per cent) children were not reached** and pre-existing learning disparities continue to grow.

The simulations present a sobering picture, projecting worsening educational outcomes for millions of children in the region, as measured by learning poverty, LAYS and PISA. The loss in schooling and learning is likely to impact lifetime earnings, with **losses projected to be as high as US\$1 trillion** for the region as a whole, in the worst-case scenario.

To mitigate these losses, there is an urgent need for all education stakeholders and policymakers to ensure children's safe return to school, and until that is possible, to ensure that all children have equitable access to remote or hybrid learning. Furthermore, it will require a concerted effort to accelerate learning by allowing opportunities for remedial and catch-up learning for all children, in order to tackle the worsening learning crisis that predated the COVID-19 pandemic.

Simulations suggest that COVID-19-related school closures are likely to set back the learning and future prospects of MENA's current school-aged learners in a number of significant ways, including increasing learning poverty, reducing learning proficiency in PISA, and reducing lifetime earnings. However, though these projections underline the severity of current and (potentially) future learning loss, these negative outcomes are not inevitable.

The disruption caused by the pandemic has created an opportunity, not only to recover lost learning, but also to build stronger, more resilient education systems, better able to serve their students and societies. We must therefore seize this opportunity and take immediate action to ensure effective teaching and learning for all of the region's children.

Recovering lost learning in MENA will require reimagining education systems in several important ways:

- 1 During the pandemic and early recovery period, it is important to address inequalities in learning access, as school closures can disproportionately impact marginalised and vulnerable groups, such as girls, ethnic minorities, and children with disabilities, potentially worsening inequality and exclusion. It is also critical to provide access for the early years and make remote instruction more effective through stronger support for teachers, parents and caregivers, more learner-centered pedagogical practices, and personalised and adaptive learning.
- 2 As children return to in-person schooling, it is critical to ensure safe school reopening, assess potential learning losses, and support teachers to ensure that teaching is adapted to the learning levels of the students, so they can catch up and recover lost learning. This requires monitoring and evaluating learning and wellbeing to generate better evidence on effective teaching and learning strategies (online, hybrid and face-to-face) and to inform ongoing learning provision.
- 3 Policy-makers and educators must integrate the lessons emerging from the provision of remote and hybrid instruction over the past two years. Education systems will need to strengthen their infrastructure (including education technology) to become more adaptive and resilient. They will also need to be able to pivot quickly to provide effective remote and hybrid learning as required in the face of future crises, in order to ensure effective learning on a sustainable basis for all children across the MENA region.

ANNEXES

- Annex 1:** Remote education delivery systems used in MENA: country details (10 March 2021) World Bank data and assumptions
- Annex 2:** Simulation model: data and assumptions Learning and earning losses
- Annex 3:** Assessment types and their key differences

Annex 1

Remote education delivery systems used in MENA

Remote education delivery systems used in MENA: country details [10th March 2021]:

Which of the following education delivery systems have been deployed as part of the national (or subnational) distance education strategy for different levels of education?

	Paper based take-home materials for parents/students				Television				
	Pre- primary	Primary	Lower secondary	Upper secondary	Pre- primary	Primary	Lower secondary	Upper secondary	
Algeria	✗	✗	✗	✗	✗	✗	✓	✓	
Bahrain	✗	✗	✗	✗	✓	✓	✓	✓	
Djibouti	✗	✓	✗	✗	✗	✓	✓	✓	
Egypt, Arab Rep	!	!	!	!	!	✓	✓	!	
Iran, Islamic Rep	!	✗	✗	✗	!	✓	✗	✗	
Iraq	!	✗	✗	✗	!	✓	✓	!	
Iraq (KRI)	!	✗	✗	✗	!	✓	✓	✓	
Jordan	✗	✓	✓	✓	✓	✓	✓	✓	
Kuwait	!	✗	✗	✗	!	✗	✗	✗	
Lebanon	✗	✓	✓	✓	✗	✗	✗	✗	
Libya	!	!	!	!	!	✓	✓	✓	
Morocco	✓	✓	✓	✓	✓	✓	✓	✓	
Oman	✓	✓	✓	✓	✓	✓	✓	✓	
Qatar	✗	✗	✗	✗	✓	✓	✓	✓	
Saudi Arabia	✓	✓	✓	✓	✓	✓	✓	✓	
Sudan	✓	✓	✓	✓	✗	✓	✓	✗	
Syria Arab Republic	✗	✗	✗	✗	✓	✓	✓	✓	
Tunisia	✗	✗	✗	✗	✗	✓	✓	✓	
United Arab Emirates	✗	✗	✗	✗	✗	✓	✗	✗	
Palestine/Palestinian territories	✗	✓	✓	✓	✗	✗	✗	✓	
Yemen, Rep	✗	✗	✗	✗	✗	✗	✓	✓	

Legend

✓ Yes
 ✗ No
 ! No information

Sources: UNESCO-UNICEF-World Bank Survey on National Education Responses to COVID-19 School Closures (2020) and UNICEF Country offices (2020) and John Hopkins tracker.

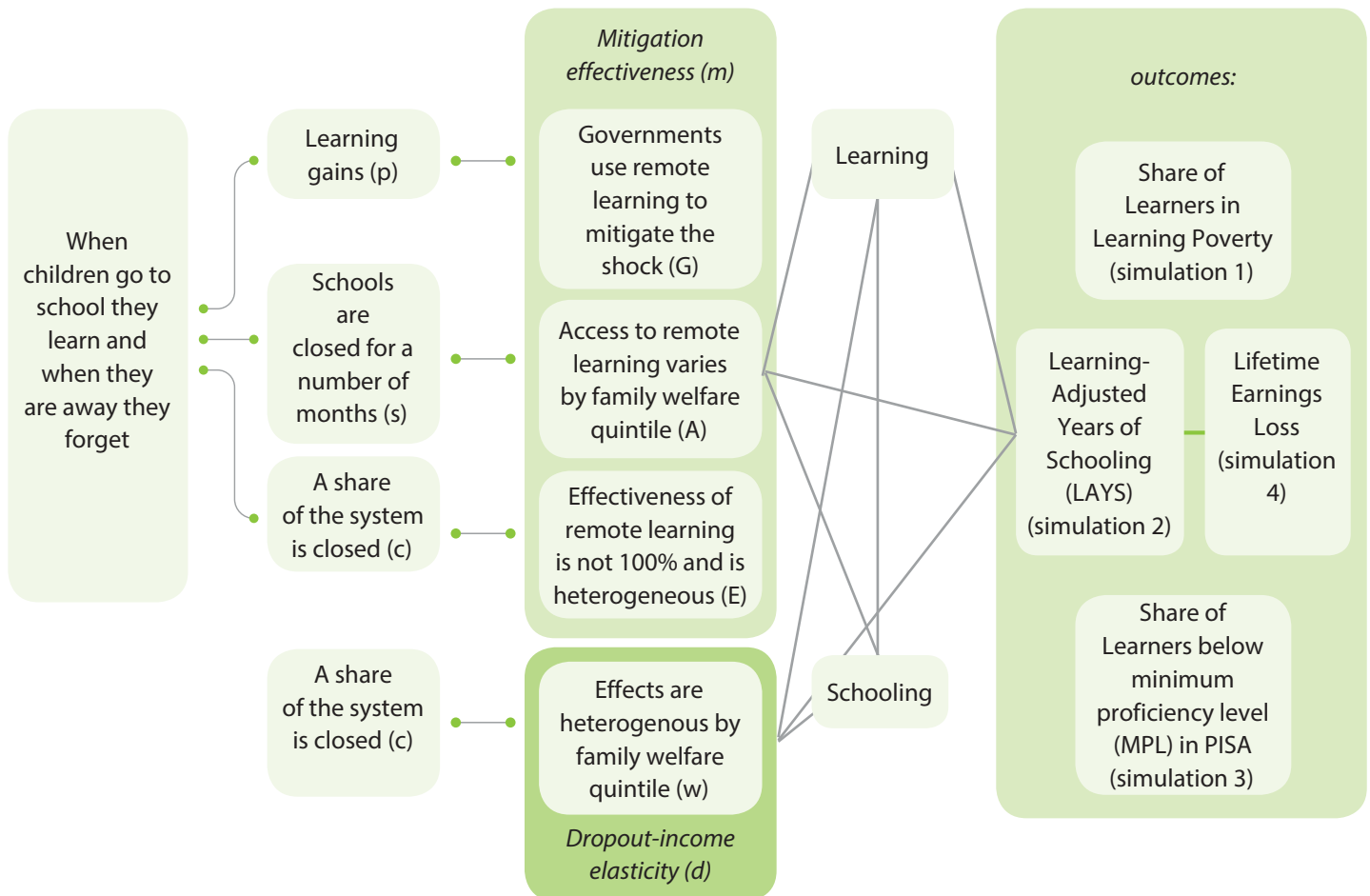
Remote education delivery systems used in MENA: country details [10th March 2021]:
Which of the following education delivery systems have been deployed as part of the national (or subnational) distance education strategy for different levels of education?

		Online learning platforms				Radio			
		Pre-primary	Primary	Lower secondary	Upper secondary	Pre-primary	Primary	Lower secondary	Upper secondary
	Algeria	X	X	✓	✓	X	X	X	X
	Bahrain	X	✓	✓	✓	✓	✓	✓	✓
	Djibouti	!	✓	✓	✓	X	✓	X	X
	Egypt, Arab Rep	!	!	✓	✓	!	!	!	!
	Iran, Islamic Rep	!	✓	✓	✓	!	X	X	X
	Iraq	!	✓	✓	✓	!	X	X	X
	Iraq (KRI)	!	✓	✓	✓	!	X	X	X
	Jordan	✓	✓	✓	✓	X	X	X	X
	Kuwait	!	✓	✓	✓	!	X	X	X
	Lebanon	✓	✓	✓	✓	X	X	X	X
	Libya	!	✓	✓	✓	!	X	X	X
	Morocco	✓	✓	✓	✓	X	✓	✓	✓
	Oman	✓	✓	✓	✓	X	X	X	X
	Qatar	✓	✓	✓	✓	X	X	X	X
	Saudi Arabia	✓	✓	✓	✓	X	X	X	X
	Sudan	!	✓	!	!	X	X	X	X
	Syria Arab Republic	✓	✓	✓	✓	X	X	X	X
	Tunisia	X	✓	✓	✓	X	X	X	X
	United Arab Emirates	✓	✓	✓	✓	X	X	X	X
	Palestine/Palestinian territories	X	✓	✓	✓	X	✓	✓	✓
	Yemen, Rep	X	✓	✓	✓	X	X	X	X
Legend		✓	Yes			X	No		
						!	No information		

Annex 2

Simulation model: data and assumptions

Figure A1. Pathways of learning loss and simulation parameters



where,

- p , learning gains (school productivity) or what children learn when they go to school;
- s , months of school closures and children are not learning, adjusted by partial closure parameters. Data from UNESCO School Closure database;
- m , mitigation effectiveness is an exogenous parameter determined by:
 1. (G) Government coverage of remote learning, varying from 0-100%, 0 if the government is not providing any alternative learning modality to 100% if a government is supplying alternatives to the entire student population. Intermediate values can be considered if the government is only providing content for a subset of the languages of instruction of the country, or if supply only covers certain geographical locations of the country, leaving a share of students without any provision.

2. (A) Access to alternative learning modalities, reflects the share of learners with access to the remote learning material offered by the government, varying from 0-100%. 0 if no student has access, to 100% if all students have access. This indicator can also capture the take-up of what is being offered by the government through G.
3. (E) Effectiveness of remote learning. This parameter ranges from 0-100%, 0 if the remote learning solutions are expected to have no effect, and 100% if those solutions are expected to be fully effective. More evidence is needed to further build this parameter, and it should ideally capture the expected effectiveness of the alternative modalities offered through G.

Hence, $m = G * A * E$

In the context of the global simulations, the parameter “m” is used as a single parameter which combines all three elements described above.

- γ , families are losing income. The income loss is an exogenous parameter, as is determined by existing GDP projections, from the World Bank and IMF.
- d , countries have age group specific income elasticities to schooling, which may cause some children to drop out.
- Learning, measured in terms of Harmonized Learning Outcomes (HLO), PISA score, PISA Level, or Learning Poverty.

HLO is measured as: $(\text{Total School Weeks of Closure}) / \text{Total School Weeks} (\text{Learning Gains} * ((\text{Total School Weeks} / 43.3) * (1 - \text{Mitigation Effectiveness})))$

- Schooling, measured in Expected Years of Schooling (EYS).
- LAYS, Learning Adjusted Years of Schooling

Source: Azevedo et al. (2020)

Table A1.1: Learning poverty, learning poverty gap, and learning poverty severity by gender

	Learning Poverty			Learning Poverty Gap			Learning Poverty Severity		
	All	Female	Male	All	Female	Male	All	Female	Male
Algeria	-	-	-	-	-	-	-	-	-
Bahrain	32.1%	22.0%	41.9%	7.4%	4.0%	10.9%	3.6%	1.9%	5.3%
Djibouti									
Egypt, Arab Rep.	69.6%	64.9%	74.1%	23.7%	19.4%	28.4%	12.3%	9.0%	15.5%
Iran, Islamic Rep.	35.7%	26.0%	44.1%	8.7%	5.9%	11.3%	3.7%	2.6%	4.8%
Iraq									
Jordan	52.0%	48.2%	55.3%	15.6%	12.2%	19.6%	8.5%	5.8%	10.9%
Kuwait	51.0%	44.1%	58.2%	14.2%	9.9%	19.3%	7.2%	4.0%	10.4%
Lebanon									
Libya									
Morocco	65.8%	61.3%	70.1%	21.4%	19.9%	24.6%	11.6%	10.6%	12.6%
Oman	41.8%	32.8%	50.8%	9.9%	6.7%	13.5%	4.3%	2.8%	5.8%
Qatar	35.3%	29.0%	41.6%	8.9%	7.1%	11.1%	4.4%	3.7%	5.1%
Saudi Arabia	38.3%			9.1%			4.4%		
Sudan									
Syrian Arab Republic									
Tunisia	65.3%	60.7%	69.3%	19.9%	17.3%	22.4%	9.1%	7.6%	10.6%
United Arab Emirates	34.3%	28.7%	39.7%	8.9%	7.9%	10.2%	4.7%	4.7%	4.6%
Yemen, Rep.	94.7%	94.5%	94.8%	58.3%	71.5%	62.6%	44.2%	46.8%	41.3%
MENA: Overall	59.9%	56.9%	67.0%	22.0%	22.4%	26.5%	12.8%	12.3%	14.7%
MENA: High Income	38.8%	32.5%	47.1%	9.4%	7.7%	13.3%	4.6%	3.8%	6.4%
MENA: Upper middle income	38.3%	29.6%	45.8%	9.8%	6.9%	12.6%	4.5%	3.1%	5.7%
MENA: Lower middle income	68.4%	63.8%	72.8%	22.4%	19.8%	25.9%	11.6%	9.6%	13.6%
MENA: Low income	94.7%	94.5%	94.8%	58.3%	71.5%	62.6%	44.2%	46.8%	41.3%

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 2 countries: Iran and Jordan. "MENA: Lower Middle Income" includes 3 countries: Egypt, Morocco, and Tunisia. "MENA: Low Income" includes 1 country: Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [Github](#). We follow UNICEF's classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

Table A1.2: Learning and schooling deprivation by gender

	Learning Deprivation			Schooling Deprivation		
	All	Female	Male	All	Female	Male
Algeria	66.5	64.6	68.4		-	-
Bahrain	30.6	21	40.2	4.12	5.09	3.19
Djibouti				2.10	1.25	2.91
Egypt, Arab Rep.	69.2	64.6	73.6	44.41	47.70	41.19
Iran, Islamic Rep.	35.1	25.4	43.6	1.36	0.82	1.87
Iraq				0.86	0.86	0.86
Jordan	50	46.7	52.8	7.68	13.40	2.27
Kuwait	49.4	43.3	56	4.00	2.76	5.19
Lebanon				3.26	1.42	4.96
Libya				16.35	19.06	13.58
Morocco	63.8	59	68.4	-	-	-
Oman	40.9	31.9	50	5.42	5.59	5.26
Qatar	33.8	27.3	40.4	1.46	1.37	1.55
Saudi Arabia	36.7	23	49.4	2.17	2.39	1.96
Sudan				2.54		
Syrian Arab Republic				42.68	40.42	44.87
Tunisia	65.1	60.6	69.2	32.77	33.48	32.09
United Arab Emirates	32.4	26	38.5	0.37	0.37	0.37
Palestinian territories				2.82	3.65	2.03
Yemen, Rep.	93.5	92.5	94.2	7.68	7.19	8.16
MENA: Overall	59.0	55.9	66.3	4.2	5.2	3.5
MENA: High Income	37.2	30.9	45.7	2.5	2.3	2.7

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 2 countries: Iran and Jordan. "MENA: Lower Middle Income" includes 3 countries: Egypt, Morocco, and Tunisia. "MENA: Low Income" includes 1 country: Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [Github](#). We follow UNICEF's classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

Table A2. Learning poverty

	Baseline	Optimistic	Intermediate	Pessimistic
Algeria	-	-	-	-
Bahrain	32.1%	36.4%	41.6%	47.3%
Djibouti	-	-	-	-
Egypt, Arab Rep.	69.6%	72.5%	73.2%	73.6%
Iran, Islamic Rep.	35.7%	38.7%	39.9%	40.7%
Iraq	-	-	-	-
Jordan	52.0%	57.3%	60.5%	63.5%
Kuwait	51.0%	54.5%	58.7%	62.4%
Lebanon	-	-	-	-
Libya	-	-	-	-
Morocco	65.8%	72.1%	74.1%	76.6%
Oman	41.8%	48.5%	56.1%	62.5%
Qatar	35.3%	37.8%	40.7%	43.4%
Saudi Arabia	38.3%	45.2%	52.2%	59.0%
Sudan	-	-	-	-
Syrian Arab Republic	-	-	-	-
Tunisia	65.3%	71.0%	74.1%	76.9%
United Arab Emirates	34.3%	37.9%	42.6%	47.5%
Yemen, Rep.	94.7%	96.3%	96.6%	97.0%
MENA: Overall	59.9%	63.7%	65.6%	67.3%
MENA: High Income	38.8%	44.8%	51.3%	57.5%
MENA: Upper Middle Income	38.3%	41.6%	43.2%	44.4%
MENA: Lower Middle Income	68.4%	72.3%	73.5%	74.5%
MENA: Low Income	94.7%	96.3%	96.6%	97.0%

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 2 countries: Iran and Jordan. "MENA: Lower Middle Income" includes 3 countries: Egypt, Morocco, and Tunisia. "MENA: Low Income" includes 1 country: Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [Github](#). We follow UNICEF's classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

Table A3: Learning poverty gap

	Baseline	Optimistic	Intermediate	Pessimistic
Algeria	-	-	-	-
Bahrain	7.4%	8.2%	9.2%	10.3%
Djibouti	-	-	-	-
Egypt, Arab Rep.	23.7%	25.0%	25.3%	25.4%
Iran, Islamic Rep.	8.7%	9.3%	9.6%	9.8%
Iraq	-	-	-	-
Jordan	15.6%	17.0%	17.9%	18.7%
Kuwait	14.2%	15.0%	16.2%	17.2%
Lebanon	-	-	-	-
Libya	-	-	-	-
Morocco	21.4%	23.8%	24.6%	25.7%
Oman	9.9%	11.5%	13.3%	15.1%
Qatar	8.9%	9.5%	10.1%	10.7%
Saudi Arabia	9.0%	10.5%	12.0%	13.6%
Sudan	-	-	-	-
Syrian Arab Republic	-	-	-	-
Tunisia	19.9%	22.1%	23.5%	24.8%
United Arab Emirates	8.9%	9.7%	10.8%	11.9%
Yemen, Rep.	58.3%	60.1%	60.5%	61.0%
MENA: Overall	22.2%	23.5%	24.1%	24.7%
MENA: High Income	9.4%	10.7%	12.1%	13.6%
MENA: Upper Middle Income	9.8%	10.5%	10.9%	11.2%
MENA: Lower Middle Income	22.9%	24.5%	25.0%	25.5%
MENA: Low Income	58.3%	60.1%	60.5%	61.0%

Note: “MENA: High Income” includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. “MENA: Upper Middle Income” includes 2 countries: Iran and Jordan. “MENA: Lower Middle Income” includes 3 countries: Egypt, Morocco, and Tunisia. “MENA: Low Income” includes 1 country: Yemen. “MENA: Overall” includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [Github](#). We follow UNICEF’s classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

Table A4: Learning poverty severity

	Baseline	Optimistic	Intermediate	Pessimistic
Algeria	-	-	-	-
Bahrain	3.6%	3.8%	4.2%	4.5%
Djibouti	-	-	-	-
Egypt, Arab Rep.	12.3%	13.0%	13.1%	13.2%
Iran, Islamic Rep.	3.8%	4.0%	4.1%	4.2%
Iraq	-	-	-	-
Jordan	8.5%	9.0%	9.4%	9.7%
Kuwait	7.2%	7.6%	8.0%	8.4%
Lebanon	-	-	-	-
Libya	-	-	-	-
Morocco	11.6%	12.6%	13.0%	13.5%
Oman	4.3%	4.8%	5.5%	6.2%
Qatar	4.4%	4.6%	4.8%	5.0%
Saudi Arabia	4.4%	4.9%	5.4%	5.9%
Sudan	-	-	-	-
Syrian Arab Republic	-	-	-	-
Tunisia	9.1%	10.1%	10.8%	11.4%
United Arab Emirates	4.6%	4.9%	5.3%	5.7%
Yemen, Rep.	44.2%	45.6%	46.0%	46.4%
MENA: Overall	13.1%	13.8%	14.0%	14.3%
MENA: High Income	4.6%	5.0%	5.5%	6.0%
MENA: Upper Middle Income	4.5%	4.8%	5.0%	5.1%
MENA: Lower Middle Income	12.0%	12.7%	12.9%	13.2%
MENA: Low Income	44.2%	45.6%	46.0%	46.4%

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 2 countries: Iran and Jordan. "MENA: Lower Middle Income" includes 3 countries: Egypt, Morocco, and Tunisia. "MENA: Low Income" includes 1 country: Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are population weighted based on population figures for 10-14 year olds for 2017. We use the July 2021 learning poverty data which can be accessed on [Development Data Hub](#), and replication code can be found on [Github](#). We follow UNICEF's classification of MENA countries. The reference window for aggregate calculation is centered on 2015, as described in [Azevedo et al. \(2021\)](#).

Table A5: Learning adjusted years of schooling (LAYS)

	Baseline	Optimistic	Intermediate	Pessimistic
Algeria	7.09	6.93	6.87	6.78
Bahrain	9.29	8.82	8.34	7.89
Djibouti	-	-	-	-
Egypt, Arab Rep.	6.53	6.21	6.14	6.10
Iran, Islamic Rep.	8.19	7.85	7.72	7.64
Iraq	4.03	3.51	3.26	3.03
Jordan	7.67	7.20	6.94	6.70
Kuwait	7.38	7.10	6.78	6.52
Lebanon	6.34	5.52	5.09	4.74
Libya	-	-	-	-
Morocco	6.32	5.67	5.47	5.23
Oman	8.64	8.04	7.45	7.00
Qatar	8.78	8.46	8.15	7.88
Saudi Arabia	7.89	7.28	6.76	6.32
Sudan	4.30	3.75	3.63	3.49
Syrian Arab Republic	-	-	-	-
Tunisia	6.49	5.92	5.62	5.34
United Arab Emirates	9.65	9.17	8.64	8.16
Palestinian territories	8.05	7.78	7.68	7.58
Yemen, Rep.	4.18	3.79	3.70	3.60
MENA: Overall	7.1	6.6	6.4	6.1
MENA: High Income	8.6	8.1	7.7	7.3
MENA: Upper Middle Income	6.6	6.0	5.8	5.5
MENA: Lower Middle Income	6.9	6.5	6.4	6.2
MENA: Low Income	4.2	3.8	3.7	3.5

Notes: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 4 countries: Iran, Iraq, Jordan, and Lebanon. "MENA: Lower Middle Income" includes 5 countries: Algeria, Egypt, Morocco, Tunisia, and Palestine/Palestinian territories. "MENA: Low Income" includes 2 countries: Sudan and Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are simple averages, and not population weighted. LAYS are similar between upper middle income and lower middle income countries, however, Iraq's baseline LAYS is 4.0, which brings down the average for upper middle income countries. For Iraq, we do not have regionally disaggregated data for LAYS.

Table A6: PISA below minimum proficiency

	Baseline	Optimistic	Intermediate	Pessimistic
Algeria	79.0%	79.4%	79.9%	80.6%
Bahrain	-	-	-	-
Djibouti	-	-	-	-
Egypt, Arab Rep.	-	-	-	-
Iran, Islamic Rep.	-	-	-	-
Iraq	-	-	-	-
Jordan	41.0%	56.6%	59.8%	62.7%
Kuwait	-	-	-	-
Lebanon	68.0%	85.2%	88.8%	91.5%
Libya	-	-	-	-
Morocco	74.0%	80.8%	82.6%	84.6%
Oman	-	-	-	-
Qatar	51.0%	60.1%	63.8%	67.1%
Saudi Arabia	53.0%	67.7%	74.0%	79.1%
Sudan	-	-	-	-
Syrian Arab Republic	-	-	-	-
Tunisia	72.0%	80.9%	83.4%	85.6%
United Arab Emirates	43.0%	51.2%	57.5%	63.3%
Palestinian territories	-	-	-	-
Yemen, Rep.	-	-	-	-
MENA: Overall	60.1%	79.4%	79.9%	80.6%
MENA: High Income	49.0%	59.6%	65.1%	69.9%
MENA: Upper Middle Income	54.5%	70.9%	74.3%	77.1%
MENA: Lower Middle Income	75.0%	80.4%	82.0%	83.6%
MENA: Low Income	NA	NA	NA	NA

Note: "MENA: High Income" includes 3 countries: Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 2 countries: Jordan and Lebanon. "MENA: Lower Middle Income" includes 3 countries: Algeria, Morocco, and Tunisia. "MENA: Low Income" includes no countries, as denoted by "NA". "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are simple averages, and not population weighted.

Table A7: Present value loss to economy lifetime earnings with adult survival and labour force participation (millions US\$)

	Optimistic	Intermediate	Pessimistic
Algeria	-5.942 M	-8.223 M	-11.403 M
Bahrain	-5.720 M	-11.701 M	-17.203 M
Djibouti	-	-	-
Egypt, Arab Rep.	-29.976 M	-36.801 M	-40.949 M
Iran, Islamic Rep.	-37.068 M	-51.546 M	-60.439 M
Iraq	-23.524 M	-34.626 M	-45.130 M
Jordan	-5.454 M	-8.487 M	-11.165 M
Kuwait	-4.139 M	-8.781 M	-12.591 M
Lebanon	-10.104 M	-15.260 M	-19.570 M
Libya	-	-	-
Morocco	-35.072 M	-45.889 M	-58.932 M
Oman	-14.485 M	-28.815 M	-39.747 M
Qatar	-5.856 M	-11.447 M	-16.282 M
Saudi Arabia	-137.376 M	-254.999 M	-355.461 M
Sudan	-12.916 M	-15.802 M	-19.253 M
Syrian Arab Republic	-	-	-
Tunisia	-11.456 M	-17.483 M	-22.915 M
United Arab Emirates	-22.204 M	-46.775 M	-69.167 M
Palestinian territories	-2.947 M	-4.024 M	-5.145 M
Yemen, Rep.	-3.562 M	-4.398 M	-5.340 M
MENA: Overall	-0.37 T	0.61 T	-0.81 T
MENA: High Income	-0.19 T	-0.36 T	-0.51 T
MENA: Upper Middle Income	-0.08 T	-0.11 T	-0.14 T
MENA: Lower Middle Income	-0.09 T	-0.11 T	-0.14 T
MENA: Low Income	-0.02 T	-0.02 T	-0.02 T

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 4 countries: Iran, Iraq, Jordan, and Lebanon. "MENA: Lower Middle Income" includes 5 countries: Algeria, Egypt, Morocco, Tunisia, and Palestine/Palestinian territories. "MENA: Low Income" includes 2 countries: Sudan and Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are simple sums in trillions of US dollars. Sub-region aggregates are sums of values for each country in the sub-region, and the MENA total is the sum of aggregates for each sub-region. Regional and sub-regional estimates are not population weighted. Results are obtained using the expected returns to education of each country and labor market earnings from ILO (2020) and World Bank (2020), as well as the results from the LAYS simulation. We use the economic forecasts from the Global Economic Prospects June 2021 publication. Results are conditional on the country's life expectancy, expected work life of a typical adult as well as their human capital utilization, and assume that none of these aspects will be affected by the COVID-19 crisis. The results also assume that the returns to education remain constant at 8% in the long run. See Azevedo et al. 2020 for further details about the methodology. For Iraq, we do not have regionally disaggregated data for LAYS.

Table A8: Present value (PV) loss to lifetime earnings of a single individual (US\$)

	Optimistic	Intermediate	Pessimistic
Algeria	-1,728	-2,391	-3,315
Bahrain	-34,163	-69,878	-102,734
Djibouti	-	-	-
Egypt, Arab Rep.	-3,660	-4,494	-5,000
Iran, Islamic Rep.	-6,552	-9,110	-10,682
Iraq	-10,369	-15,263	-19,893
Jordan	-10,414	-16,203	-21,317
Kuwait	-9,042	-19,183	-27,508
Lebanon	-22,421	-33,860	-43,424
Libya	-	-	-
Morocco	-10,858	-14,206	-18,244
Oman	-29,040	-57,770	-79,685
Qatar	-22,198	-43,395	-61,720
Saudi Arabia	-40,716	-75,577	-105,352
Sudan	-4,844	-5,927	-7,221
Syrian Arab Republic	-	-	-
Tunisia	-11,465	-17,496	-22,933
United Arab Emirates	-25,231	-53,151	-78,595
Palestinian territories	-7,033	-9,605	-12,279
Yemen, Rep.	-2,348	-2,899	-3,520
MENA: Overall	-14,828	-26,495	-36,672
MENA: High Income	-160,389	-318,954	-455,594
MENA: Upper Middle Income	-49,755	-74,437	-95,316
MENA: Lower Middle Income	-34,744	-48,192	-61,772
MENA: Low Income	-7,192	-8,826	-10,741

Note: "MENA: High Income" includes 6 countries: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and United Arab Emirates. "MENA: Upper Middle Income" includes 4 countries: Iran, Iraq, Jordan, and Lebanon. "MENA: Lower Middle Income" includes 5 countries: Algeria, Egypt, Morocco, Tunisia, and Palestine/Palestinian territories. "MENA: Low Income" includes 2 countries: Sudan and Yemen. "MENA: Overall" includes all the countries listed previously. Regional and sub-regional estimates are simple averages. Sub-region aggregates are averages of values for each country in the sub-region, and the MENA total is the average of aggregates for each sub-region. Regional and sub-regional estimates are not population weighted. Results are obtained using the expected returns to education of each country and labor market earnings from ILO (2020) and World Bank (2020), as well as the results from the LAYS simulation. We use the economic forecasts from the Global Economic Prospects June 2021 publication. Results are conditional on the country's life expectancy, expected work life of a typical adult as well as their human capital utilization, and assume that none of these aspects will be affected by the COVID-19 crisis. The results also assume that the returns to education remain constant at 8% in the long run. See Azevedo et al. 2020 for further details about the methodology. For Iraq, we do not have regionally disaggregated data for LAYS.

Annex 3

Assessment types and their key differences

Large-scale, system-level assessment				
	Classroom	National	International	Examinations
Purpose	To provide immediate feedback to inform classroom instruction	To provide feedback on the overall health of the system at particular grade/age level(s), and to monitor trends in learning	To provide feedback on the comparative performance of the education system at particular grade/age level(s)	To select or certify students as they move from one level of the education system to the next (or into the workforce)
Frequency	Daily	For individual subjects offered on a regular basis (such as every 3-5 years)	For individual subjects offered on a regular basis (such as every 3-5 years)	Annually and more often where the system allows for repeats
Who is tested?	All students	Sample or census of students at a particular grade or age level(s)	A sample of students at a particular grade or age level(s)	All eligible students
Format	Varies from observation to questioning to paper-and-pencil tests to student performances	Usually multiple choice and short answer	Usually multiple choice and short answer	Usually essay and multiple choice
Coverage of curriculum	All subject areas	Generally confined to a few subjects	Generally confined to one or two subjects	Covers main subject areas
Additional information collected from students?	Yes, as part of the teaching process	Frequently	Yes	Seldom
Scoring	Usually informal and simple	Varies from simple to more statistically sophisticated techniques	Usually involves statistically sophisticated techniques	Varies from simple to more statistically sophisticated techniques

Source: Luna-Bazaldua et al., 2020¹⁵¹

¹⁵¹ Luna-Bazaldúa, D., Levin, D. and Liberman, J. (2020). Guidance note on using learning assessment in the process of school reopening.



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COVID-19 Learning Losses

Rebuilding Quality Learning for All

in the Middle East and North Africa

An entire generation of children in the Middle East and North Africa (MENA) is estimated to be affected by the education crisis determined by the COVID-19 pandemic, with potential impacts that are going beyond the immediate/short term and also well beyond the education domain itself, with consequences on children's socialisation, mental well-being, and future perspective of being active members of their society, including in the labor market. More information on the impact of the crisis would help countries to put in place strategies to mitigate the impacts. Timely investment and action to prevent extreme impacts of this crisis on education are of paramount importance in MENA, which already tackling a learning crisis before the COVID-19 outbreak.

The publication delineates the overall education status in MENA after the breakout of COVID-19 pandemic, by presenting the education responses in MENA, and assessing the potential learning loss through a simulation analysis, recommendations are provided on how to build back better and enhance access and quality learning for all.

