unesco

unicef
for every child

Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Southeast Asia

Sub-regional Report

UNESCO – a global leader in education

Education is UNESCO's top priority because it is a basic human right and the foundation for peace and sustainable development. UNESCO is the United Nations' specialized agency for education, providing global and regional leadership to drive progress, strengthening the resilience and capacity of national systems to serve all learners and responding to contemporary global challenges through transformative learning, with special focus on gender equality and Africa across all actions.

The Global Education 2030 Agenda

UNESCO, as the United Nations' specialized agency for education, is entrusted to lead and coordinate the Education 2030 Agenda, which is part of a global movement to eradicate poverty through 17 Sustainable Development Goals by 2030. Education, essential to achieve all of these goals, has its own dedicated Goal 4, which aims to **"ensure inclusive and equitable quality education and promote lifelong learning opportunities for all."** The Education 2030 Framework for Action provides guidance for the implementation of this ambitious goal and commitments.

UNICEF

UNICEF believes that every child has the right to learn, irrespective of gender, disabilities, poverty, ethnic and linguistic backgrounds, or nationality/ migration status. UNICEF promotes equity and inclusion in all its work around the world to provide learning opportunities that begin in early childhood and prepare every child everywhere with the knowledge and skills needed to thrive, and to build a better world for everyone.

unesco

unicef
for every child

Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Southeast Asia

Sub-regional Report

October 2021

October 2021

Cover photo: ©UNICEF/UN0479447/Karki

ISBN 978-92-806-5262-8 (UNICEF)
ISBN 978-92-9223-682-3 (UNESCO)

UNICEF Regional Office for South Asia (ROSA)
P.O. Box 5815, Lekhnath Marg, Kathmandu, Nepal
www.unicef.org/rosa

UNICEF East Asia and Pacific Regional Office (EAPRO)
19 Pra Athit Rd, Chana Songkhram, Pra Nakhon,
Bangkok,10200, Thailand
www.unicef.org/eap

UNESCO Bangkok Office
Asia and Pacific Regional Bureau for Education
920 Sukhumvit Road, Klongtoei,
Bangkok, 10110, Thailand
https://bangkok.unesco.org/

TH/C4-6227/IQE/21/038-SEASRR

Foreword

> The pandemic caused a major children's rights crisis: all service sectors being profoundly impacted, with the most disadvantaged being disproportionately affected.

COVID-19 – possibly the largest pandemic the world has ever seen- led to an economic crisis probably more radical and global than ever before; as well as disruption of learning on an unprecedented scale. The pandemic caused a major children's rights crisis: all service sectors being profoundly impacted, with the most disadvantaged being disproportionately affected.

In response, with support from the Global Partnership for Education, UNICEF and UNESCO joined forces with Mott MacDonald, Cambridge Education to carry out a situation analysis, primarily to generate analyses to inform strategic responses to the crisis going forward. While the extension and duration of the pandemic required to invest more time to produce the final analyses and reports, fortunately information had already been discussed through webinars and national conversations with Ministries of Education and other partners across large parts of the Asia Pacific region.

Furthermore, the reports continue to be of utmost relevance given subsequent waves of COVID-19 sweeping across the world in 2021 and very likely in 2022 as well. The task of learning from the crisis and how to mitigate its effects in education is on-going. More than one academic year has now been lost for many children. To ensure continuity of learning whilst schools are closed, the delivery of education is radically changing today through distance education: digital, blended or hybrid learning have become part of the new learning reality which all Governments, teachers and learners will have to adjust to.

While major efforts are needed to mitigate the learning loss of those children who return to school in the post-COVID-19 recovery phase, we must also remember that many children were not learning before the crisis and several million were not even in schools. The reports therefore also explore opportunities to build back better and to re-imagine education; to shift from fact-based didactic methodologies to competency-based approaches, which are more flexible, better respond to the holistic needs and aspirations of all children, and provide opportunities for life-long learning as per the Sustainable Development Goals (SDG) 4 agenda.

While the suite of reports provided within the Regional Situation Analysis are particularly relevant to the Asia Pacific region, contexts of course vary considerably across our huge region. At the same time, the reports may also provide insights that are relevant to other regions around the world. Hopefully the findings, including the country case studies, and regional budget needs analysis will help governments resume and accelerate progress towards SDG 4. The way education is conceptualized and delivered is changing fast, and the transformation journey will be steep and full of challenges. Governments, donors, all partners and the private sector will need to work together, not only to get the strategies and levels of investment right, but to build more resilient, effective and inclusive systems, able to deliver on the promise of education as a fundamental human right for all children, whether schools are open or closed.

Shigeru Aoyagi
Director
UNESCO Bangkok

Marcoluigi Corsi
Director a.i.
UNICEF East Asia Pacific

George Laryea-Adjei
Regional Director
UNICEF South Asia

Contents

Figures

Tables

Tables - Appendices

Maps

Figures - Appendices

Acknowledgements

We would like to sincerely thank the following people who assisted with the development of this sub-regional report and the country case studies that formed much of the evidence on which it was written:

- Central and sub-national government stakeholders in each of the three case study countries, as well as other partners who gave their time to share the lessons they have learned during the COVID-19 pandemic;
- UNICEF and UNESCO colleagues from country offices in the three case study countries (Lao PDR, Indonesia, Viet Nam), who arranged for interviews and shared data, key documents, and insights into their experiences and the topics selected for the deep dives;
- Ivan Coursac, Education specialist/Economist from the UNICEF Regional Office for South Asia (ROSA) for expertly leading this rapid situation analysis of the effect of COVID-19 in the education sector in Asia;
- Nyi Nyi Thaung, Programme Specialist, Amalia Miranda Serrano and Wang Shutong, Project Officers from the UNESCO Bangkok office, Akihiro Fushimi, Education Specialist, Dominik Koeppl, Education in Emergency specialist and Maria Qureshi, Education Consultant, from the UNICEF East Asia and Pacific Regional Office (EAPRO), for their reviews and guidance in the finalization of this document;
- Emma Hamilton Clark, Knowledge Management Consultant for reviewing and providing quality assurance support;
- Emma Mba, Cambridge Education Project Director, and Ray Harris, Education consultant, who were the main authors for the report;
- Matthew Townshend, Cambridge Education Finance Consultant, for the design of the Covid-19 Financial Shock Model and financial analysis in the report;
- Ira Sangar, Cambridge Education Project Manager, for her coordination between authors and support in the finalization of the document.

Finally, we also wish to express special appreciation to the Global Partnership for Education (GPE) for their financial contribution to the production of this report.

List of acronyms

ASEAN	Association of Southeast Asian Nations
CBE	Community-Based Education
CFR	Case fatality rates
CHC	Child Helpline Cambodia
CSOs	Civil society organizations
CWD	Children with disabilities
COVID-19	Coronavirus disease
DoH	Department of Health
ECE	Early childhood education
ECD	Early childhood development
EMIS	Education Management Information System
GDP	Gross Domestic Product
GEM	Global Education Monitoring
ICT	Information and communications technology
IEA	International Energy Agency
IPC	Infection Prevention and Control
LGBQTI+	Lesbian, Gay, Bisexual, Queer, Trans and Intersex plus individuals
LMICs	Lower-Middle-Income Countries
LTR	Learner-teacher ratio
MHPSS	Mental health and psychosocial support
MoE	Ministry of Education
MoEC	Ministry of Education and Culture
MoET	Ministry of Education and Training
MoH	Ministry of Health
MOOC	Massive Open Online Course
MoRA	Ministry of Religious Affairs
MoWCP	Ministry of Women and Child Protection
MPI	Multidimensional Poverty Index
NCD	Non-communicable disease
NGO	Non-governmental organization
ODA	Overseas Development Assistance

OMT	Online Management Training Company
OOSC	Out-of-school children
OPHI	Oxford Poverty and Human Development Initiative
PDR	People's Democratic Republic
PISA	OECD's Programme for International Student Assessment
RCCE	Risk communication and community engagement
SARS	Severe acute respiratory syndrome
SDG	Sustainable Development Goals
SEA	Southeast Asia
SEA-PLM	South East Asia Primary Learning Metrics
SOPs	Standard operating procedures
TVET	Technical and vocational education and training
UNICEF	United Nations Children's Fund
UNESCO	United Nations Educational, Scientific and Cultural Organization
WASH	Water, sanitation and hygiene
WFP	World Food Programme
WHO	World Health Organization

Executive summary

Background

The global nature of the COVID-19 pandemic was unique as it affected the whole world with the twin shocks of a health emergency and an economic recession. There will be a long-term negative impact on human capital accumulation, development prospects and welfare. The pandemic has affected all parts of the world and the responses to the situation have disproportionally affected the most vulnerable and marginalized members of society.

This situation analysis has been undertaken as part of the broader analysis initiated by UNICEF and UNESCO to provide a snapshot of the educational responses and effects of COVID-19 across Asia. It considers the direct effects of school closures and reopenings and identifies the initial impact that this may have on learners, their families as well as on the overall education system. The objectives of the analysis are:

- to assess and estimate the various impacts of the COVID-19 pandemic on the education sector and stakeholders in Asia;
- to examine policy and financial implications on progress towards achieving SDG 4-Education 2030 and;
- to identify examples of promising responses and strategies in education and associated social sectors, which can be shared with other countries.

This report looks at Southeast Asia, a diverse group of 11 mainland countries and island states. Across the 11 countries, five political models are used, which provide a diversity of responses to crises within the sub-region: four democratic republics (Indonesia, the Philippines, Singapore and Timor-Leste), three constitutional monarchies (Cambodia, Thailand and Malaysia), one absolute monarchy (Brunei Darussalam), a pair of socialist republics (Lao PDR and Viet Nam) and one Unitary parliamentary provisional government under military control (Myanmar).[1] Income and wealth are highly disparate as two of the wealthiest countries in the world (Brunei Darussalam and Singapore) and two of the poorest countries in the world (Cambodia and Timor-Leste) are found in the sub-region.[2] The three case study countries looked at in more detail in the situation analysis are Indonesia, Lao PDR, and Viet Nam.

COVID-19 in Southeast Asia

The first cases of COVID-19 appeared in Southeast Asia in February 2020. A year later the pandemic is still affecting lives in the region. Countries that swiftly brought in national lockdowns and closed their borders (such as Brunei Darussalam, Cambodia, Lao PDR, and Viet Nam) managed to keep the numbers of infections and deaths low, whereas those with higher population density such as Singapore found this more difficult.

The Southeast Asia sub-region is experienced at managing natural disasters, and mechanisms were in place to respond quickly and across sectors. As would be expected, the pandemic was seen first and foremost as a health emergency with actions taken to keep lives safe and prevent the spread of infection. All countries imposed a lockdown on their populations which closed schools, businesses, industry, shops and affected all aspects of people's lives including access to healthcare. These measures, while protecting life had a major impact on the economy and also on household finances, and while social protection systems were mobilized and reached some of the population, they were not enough to support all families, leaving many people vulnerable.

The main policy response to the pandemic which affected children was the closure of schools. This meant that countries had to act fast to provide alternative access to learning for as many children as possible. With uneven access to services and resources across many countries in the sub-region, a far greater challenge was to reach the most vulnerable and marginalized children and try to address any widening of the learning divide. The level of school closures in the sub-region varied widely, from year-long school closures in the Philippines to countries with lower infection rates such as Brunei Darussalam, Lao PDR and Timor-Leste, which opened all schools between June and August 2020 and have kept them open. In many of the other countries, schools have opened and closed and reopened based on peaks in infection rates (second and third waves) and localized spikes in transmission.

Participation and learning in Southeast Asia

When COVID-19 emerged in early 2020, Southeast Asia was already off-track to achieve the Sustainable Development Goals (SDGs) by 2030, lagging behind in all but two of the 17 Goals. Despite strong economic growth, the sub-region is characterized by high levels of inequality, low levels of social protection and a large informal sector.[3] Marginalized and vulnerable children are defined in this report based on the UNICEF dimensions of exclusion and in Southeast Asia this includes: poor children (including those in poor urban areas); those in rural or remote areas or living on small islands and those who migrate from rural to urban areas; children with disabilities; girls who are affected by poverty, residence or harmful social norms; boys who participate and perform academically less than girls; and those from ethnic or language minority groups.

The number of out-of-school children, adolescents and youth has significantly reduced in Southeast Asia region in the last 20 years. Most of the gains in access have been at the upper and lower secondary levels, and for girls at all levels. While the proportion of out-of-school primary aged children has dropped in most countries in the sub-region, the absolute number of out of school primary aged children has remained steady at around 7 million children since 2000. This demonstrates the challenges faced by countries in reaching the most vulnerable and excluded children.[4]

Learning Poverty[5] in Southeast Asia ranges from less than 3 per cent (in Viet Nam and Singapore) to a third of children (in Indonesia) and just over half of children (in Cambodia). In general, Learning Poverty in Southeast Asia is higher for boys than for girls.[6] The findings from the South East Asia Primary Learning Metrics (SEA-PLM) (2020) show that there are alarming trends of inequities and poor learning in the sub-region, with 1 in 3 children in Grade 5 still performing at the level expected in the early years of primary education. The percentage of children in Grade 5 who are only able to read and write simple words and do basic mathematics range from 2 per cent to 50 per cent across the six participating countries.

Effects of COVID-19

One of the effects of these long school closures is the likely increase in the number of learners dropping out of school. Children may get out of the habit of going to school, girls may find themselves more likely forced into an early marriage and increased family pressures could mean that families prioritize survival, with children, especially boys, taking on income-generating activities. These latter effects will be seen more at the secondary level.

Evidence shows that lost opportunities for learning even for a short period, have long-term impacts on future learning outcomes and earning potential. The World Bank's Simulation Model[7] presents three different scenarios for potential future learning and earning loss based on the severity of the "shock" and the effectiveness of the response. The countries of Southeast Asia, particularly the case study countries, fall into the 'intermediate' or 'pessimistic scenario', defined as systems where schools were closed for more than three months of a ten-month school year, and the effectiveness of mitigation measures put in place by government, such as remote learning, is low or does not reach the majority of children (especially the most marginalized).

Despite poverty rates dropping in recent decades in Southeast Asia, near poor and lower-middle-income groups remained at risk of poverty, and the impoverished at risk of extreme poverty, in the event of another crisis.[8] All Southeast Asian countries have announced fiscal packages to help affected businesses and households, with a median value of about 3.5 per cent of GDP.[9] Governments across the sub-region acted quickly to provide social protection payments, although due to the large number of undocumented migrants and women in informal work, many have 'slipped through the net'.[10] The Oxford Poverty and Human Development Initiative (OPHI) developed a global Multidimensional Poverty Index (MPI),[11] which looked at factors linked to increased vulnerability to COVID-19.

Across all case study countries, studies showed that declining household income during the pandemic has resulted in a deterioration in nutrition, which *"increases the risk of acute and chronic malnutrition or stunting in children."*[12] The continuity of essential child health services has been affected by the pandemic across the sub-region due to national and localized lockdowns. This, alongside increased malnutrition, will set some countries back on their achievement of SDG 3 (ensure healthy lives and promote well-being for all at all ages) as they are likely to have a long-term impact on child health as well as on their development and learning. Children with disabilities and underlying health conditions not only face increased risk of serious complications from COVID-19[13] but are likely to face obstacles in accessing the support and response measures they need. They are more likely to be subjected to hunger and poverty,[14] and are more likely not to return to

school or will make a delayed return due to their feelings of exclusion and isolation being magnified by school closures.[15]

The well-being of children, parents and teachers and the protection of children have been affected by COVID-19 across Southeast Asia. This ranges from fears around the virus itself such as getting sick or losing family members, to financial concern, anxiety about learning loss, isolation and protection issues around violence, online bullying, and discrimination.

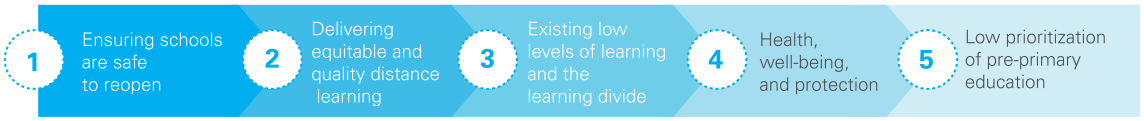
The financial impact of COVID-19

The economic growth shocks in 2020 due to COVID-19 are striking, with an average-3.1 per cent real change in GDP across the sub-region. This means that governments have fewer funds to allocate at a time when increasing demand, especially for healthcare and social protection is high. As part of this situation analysis, a model has been created to estimate the marginal impact of COVID-19 education budgets through to 2030, when SDG 4 is hoped to be achieved, based on three scenarios – baseline, optimistic and pessimistic. The context of each country will define how these additional financial resources can be funded, with low- and lower-middle-income countries more likely to use a combination of additional domestic financing and external donors, and high-income countries financing the resources through budget reallocations. Countries with weak GDP forecasts are less likely to be able to mobilize more domestic revenue. However, in Southeast Asia deficit financing is an option for many countries due to moderate levels of gross government debt and stable debt forecasts. The marginal shocks to the education budgets must be viewed in relation to the opportunity costs of neglecting these expenditures. It is therefore critical that governments prioritize education to avoid detrimental effects on education outcomes that will undermine progress towards SDG 4.

Challenges faced by countries due to COVID-19

There were five major challenges that governments in the region had to manage during the COVID-19 pandemic. The issue of marginalization and inequality is a thread running through the narrative.

FIVE COMMON CHALLENGES FACED BY COUNTRIES



Challenge 1: Reopening schools safely and effectively

Schools in more than half of the sub-region are still not fully open and governments continue to grapple with the challenges related to opening and reopening safely. School reopening is particularly important as associated services may be lost (such as school feeding, health monitoring, vaccination, sexual health information, counselling). School reopening can help break cycles of oppression such as domestic violence, girl's domestic exploitation, early marriage, online cyberbullying and sexual predation. Breaking learner isolation can also mark improvements in mental health as well as provide support for children with disabilities who will need extra accommodation.

1. A primary concern in countries of Southeast Asia has been on the development of guidelines and procedures concerning the safe operations for reopening of schools to protect school communities from risk of infection. This has required different sectors, such as education, health and social services to work much more closely together through cross-sector coordination and collaboration. It has also revealed gaps in monitoring systems at all levels from community and school to sub-national and national levels, which have hampered decision making and resource allocation.
2. The communication of health protection messages to communities is essential. In many countries in the sub-region, teachers felt unsafe teaching face-to-face, parents were afraid to send their children back to school and children were unaware of health protocols for staying safe.
3. Despite well-managed WASH facilities being a key requirement for safe reopening, this remains an ongoing challenge in many Southeast Asian countries, with rural and marginalized communities being most disadvantaged in terms of service levels. While communities provided local solutions, this is insufficient in the longer term to ensure resilience to future shocks.

Positive responses: Viet Nam is noted for its speed of response to the pandemic based on the establishment of effective health structures and a well-developed public health system following the country's experience of SARS in 2003. The MoH instructed relevant Government agencies prior to the first case. Local authorities were given the power to lock down villages where necessary. One challenge faced by the Ministry of Education and Training (MoET) was how to coordinate with the MoH and other ministries on a daily basis given changes in transmission rates. The Government of Viet Nam and UNICEF developed a cross-sectoral preparedness and response plan which covers 5 priority areas: communication, WASH and IPC support, access to healthcare and nutrition services, access to continuous education, social protection, child protection and gender-based violence services, and data collection and social science research on the social impacts of COVID-19.

Lessons learned on safe school reopening

1. Schools can reopen safely, when stakeholders at all levels collaborate and make it a key priority.
2. The spotlight on the lack of WASH facilities during COVID-19 has emphasized the inequality in education provision in many countries.
3. While responses were collaborative and quick, information and accountability, especially for more marginalized communities are critical so that additional resources are targeted to reduce inequities.

Challenge 2: Delivering equitable and quality distance learning during full or partial school closures

The closure of schools had significant effects on the most disadvantaged. Learning losses threaten to extend beyond this generation and erase decades of progress, not least in support of girls' and young women's educational access and retention.[16] When the pandemic struck the sub-region, education systems were challenged with the problem of trying to provide continued learning for all using different learning modalities. Without contingency plans in place, the immediate response was to try to reach learners through the internet, despite many children, especially those living in rural and isolated areas or living with a disability, lacking access to internet, devices or digital literacy. Even where devices are present, there is often competition with other members of the household, including siblings, for access to any devices that do exist.[17]

The most marginalized were not reached. In the East Asia and Pacific region, 20 per cent of girls and boys (80 million children in total) were not reached by distance learning delivered online or through TV or radio, due to the lack of devices and/or policies geared towards their needs.[18] Girls and boys from rural and poor households in particular are facing barriers to accessing distance learning during school closures, especially those who speak minority languages. Children with disabilities were also marginalized with 59 per cent of countries in the Southeast Asia region not adopting measures around the provision of instruction for children with disabilities. There is also a major risk that children with disabilities may not return to school or will return but with extended delay with their feeling of exclusion and isolation being magnified.[19]

Finally, the level of support available from parents was inequitable, limiting their participation in learning and their future learning levels. Throughout the sub-region, it was noted that low literacy levels of parents, especially those from marginalized communities have an impact on the proficiency levels of children.

Positive responses: In Indonesia the Learning from Home programme was developed as both an offline and online alternative to attending school. Materials were provided for those who could not access online lessons and home visits were provided in some remote areas.[20] In Timor-Leste, reading materials were developed in local languages and uploaded on the Learning Passport platform as well as other learning materials with an accessible format, featuring audio and interactive elements to engage children with disabilities. In Lao PDR the Government adopted online, radio, TV and campaign approaches to reach out to parents and communities, using 14 languages, with tips on parenting, mental health and psychosocial support.[21]

Lessons learned on delivering equitable and quality distance learning during full or partial school closures

1. Countries were not prepared to deliver for high quality, high reach distance learning, especially for children with disabilities.
2. Increased technology use has created an opportunity for more rapid education reform.
3. Planning focused on the majority, leading to a widening of the learning divide.
4. Disaggregated data on participation and learning during school closures was unavailable and therefore the true extent of exclusion was unknown.
5. Alternative learning solutions were seen to work and there is potential to scale up these responses.

Challenge 3: Existing low levels of learning and the learning divide

As discussed earlier, learning levels in some countries in the sub-region prior to COVID-19 were low and part of the reason for this was the availability of teaching and learning resources, and the availability, quality and management of teachers.[22] It was unrealistic to expect the same teachers who were unable to deliver face to face, to be able to adapt to a distance learning modality, assess learning and learning loss, and to be able to deliver remedial learning on the reopening of schools, within a very short space of time, without considerable retraining, and access to materials and support.

1. When governments pushed the continuation of learning online, most teachers were unprepared to provide relevant learning materials and tasks remotely. Some teachers have been trained to use ICT within the classroom, for example, using PowerPoint for lesson presentation, but few were competent to prepare online lessons for effective learning at a distance. For example, in Viet Nam, especially in disadvantaged areas (i.e., Central Highlands and Northern Mountainous areas) were not well prepared to facilitate online learning, with 93 per cent of teachers[23] in remote provinces reporting never having used modern technologies in class, prior to the COVID-19 crisis. Many teachers across the sub-region found it difficult to interact, monitor and assess learners remotely, although some did manage to visit students who lived with a disability and some used social media to interact with students and their parents.
2. Reopening schools demands an adapted timetable and curriculum as teachers will have to assess learning loss, provide remediation and adapt pedagogy. Learners will have had different learning experiences while schools have been closed and will also possibly need psychosocial support. Due to home circumstances and lack of provision of learning modalities, some learners will have learned little in terms of their formal education, and thus will need considerable remediation. As schools begin to reopen, countries are slowly beginning to put plans in place to compensate for learning loss during school closures.[24] As learning was not systematically measured during school closures many teachers have little knowledge of the extent of learning loss or gain. Formative assessment is critical so that teachers can understand what students are able to do on their return to schools, governments can adapt the curriculum and teachers can plan remediation programmes accordingly.

Positive responses: In Malaysia, Timor-Leste and Viet Nam large-scale online teacher training was implemented to prepare for school reopening. Lao PDR and Cambodia mobilized the small local clusters to instruct teachers in the most remote areas, and gather small groups of children for learning, in recognition of their lack of access.

Lessons learned on maintaining learning levels

1. Teachers need to be trained in new skills so that they can effectively facilitate distance or blended learning, assess learning and adapt their teaching to meet students' needs.
2. Alternative learning solutions are an opportunities to take learning out of the classroom, expanding access and creating linkages between what children learn and the needs of their communities.
3. A range of content for different media, age and language groups and types of disability and is one of the first steps to continue access to learning, but this needs to be integrated and consistently based on a prioritized curriculum.
4. Monitoring learning is not yet effective in most countries. In countries where long-term remediation measures such as assessing learning, accelerated learning, and prioritized curricula are not in place, future learning loss will be greater.

Challenge 4: Health, well-being and protection

Apart from loss of learning, being out of school also increases the risk of teenage pregnancy, sexual exploitation, child marriage, violence and other threats. Further, prolonged closures disrupt essential school-based services such as immunization, school feeding, and mental health and psychosocial support, and can cause stress and anxiety due to the loss of peer interaction and disrupted routines. These negative impacts will be significantly higher for marginalized children, such as those living in countries affected by protracted crises (e.g., natural disasters), migrants, refugees and the forcibly displaced, minorities, children living with disabilities, and children in institutions.

1. **Health.** A strong health response is vital to education, not only to protect children and their families against risk of COVID-19 infection but to ensure that the myriad of other interlinked health, mental health, nutrition, social and WASH services required to support child and adolescent well-being remain accessible to those most in need. Essential services have been severely reduced or have ceased as a result of the pandemic. Increased household poverty has reduced food consumption, resulting in higher levels of malnutrition and stunting, which is associated with weakened immune systems and impacts future educational and economic attainment.[25] Research has demonstrated that those with disabilities and their families are more likely to be subjected to hunger and poverty.[26]
2. **Well-being and Protection.** During school closures, children face social isolation and increased levels of stress. Prolonged stress has been shown to impair students' learning and threaten their future development.[27] Those with working parents or caregivers may be forced to stay home alone, which puts them at risk of a wide range of protection issues.[28] The socio-economic fallout of the pandemic increases the risk of exploitation in the form of child labour, trafficking for sexual exploitation and child marriage. For learners, particularly girls, who are spending more time online, the risks of cyber-bullying and sexual exploitation have also risen.

Positive responses: In Timor-Leste, UNICEF, WHO, and the Ministry of Health are continuing with the catch-up immunization campaign in schools to ensure children's vaccinations are up to date. With the economic impact of the pandemic leading to reduced family incomes, governments across the region (many with support from WFP) responded by increasing and widened existing social assistance schemes to low-income households such as food assistance/vouchers (Cambodia, Indonesia, Myanmar) and cash transfers (Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste, Viet Nam).

Lessons learned on health, well-being and protection

1. Effective responses require cross-sector collaboration of education, health and social services to ensure all of the needs of children can be addressed so that they are able to learn safely.
2. The severe mental health implications of COVID-19 on parents, teacher and students have raised awareness on the issue, but more needs to be done to address this.
3. There is a lack of evidence of monitoring of health and welfare issues or that systems such as EMIS are being used to track those at most risk of drop out and safeguarding issues.
4. Children's future capacity to learn will have been affected as more families fall into poverty, and this will impact marginalized children more.

Challenge 5: Low prioritization of pre-primary and ECE provision

SEA-PLM, 2019 data found that in all countries, children who had attended at least one year of pre-school education consistently performed better at primary school than children who had not. Despite this, ECE still does not have the prioritized political and budgetary support in the sub-region and according to latest available data, access to pre-primary education in Southeast Asia remains far below the targets set for 2030.[29] There are high levels of inequality in access to ECE in Southeast Asia and the most vulnerable children – those who would most benefit from ECE – are the least likely to be enrolled.[30] Research has shown that every $1 spent on pre-primary education results in $9 of benefits to society through increases in lifetime earnings (as participation and completion rates increase) and savings to the education system as repetition rates decrease.[31] The effects of COVID-19 on pre-primary age children's long-term health and development will be significant, making additional investment and the implementation of specific ECE policies more important than ever.

1. Providing remote learning for ECE. Remote learning is not effective for pre-primary age children, as face-to-face stimulation and social interaction are essential, and their learning and development require facilitation as they are less able to learn independently than older children. From available data, sanitation and hygiene facilities in ECE settings are insufficient, especially during the COVID-19 pandemic, which prolonged school closures. Despite the challenges of remote learning, many countries did not prioritize the reopening of ECE centres, and therefore younger children were left at home, requiring supervision and stimulation for long periods of time.
2. Parents support for stimulation and learning opportunities at home. This put the responsibility for childcare on parents and caregivers, "with a disproportionate burden placed on women."[32] Guidance for parents was provided within the sub-region,[33] [34] but it was only accessible to those who could read or access the internet and only implementable by those who had the financial security for a member of the family to spend time on childcare. Poor and marginalized families were able to provide the least levels of support as they had to provide income for the family and in many cases, do not have the literacy levels (especially in their own language) to support young children's learning at home.

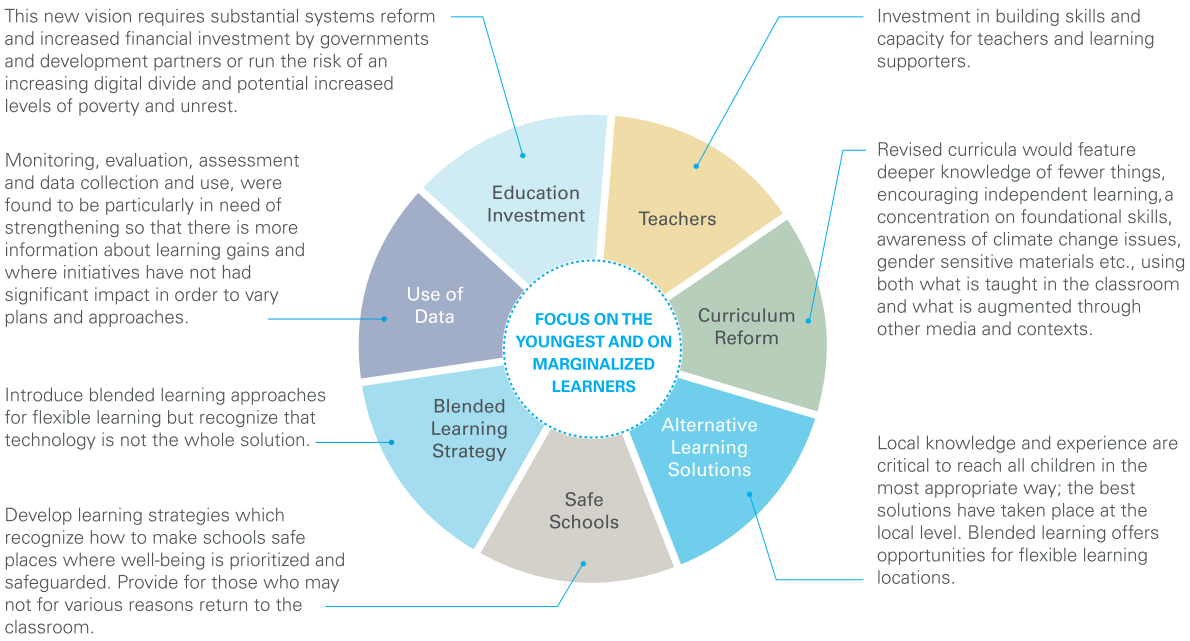
Positive responses: The "My Hero is You" storybook promotes MHPSS for children, parents and caregivers. To promote disability inclusion, there is a child with disabilities among the main characters. Eight UNICEF country offices in the region were supported to translate the storybook into 18 languages, including ethnic minority languages in Indonesia, Myanmar, the Philippines and Viet Nam.

Lessons learned on low prioritization of pre-primary and ECE provision

1. Research shows that the effects of COVID-19 on the youngest age groups is very low, although malnourished children and those with low immune systems are at higher risk, so effective solutions to continuity of learning for ECE children need to include feeding programmes.
2. Reopening schools for young children must be prioritized as they are likely to lose most during a most important phase of their development due to their inability to learn independently and their need for social interaction.
3. Distance learning for young learners puts immense strain on parents and caregivers, which can result in protection issues, which can be mitigated by social protection for the poorest and most marginalized families.
4. Countries are unable to make informed decisions about ECE due to a lack of disaggregated data.

> A new way of planning and working which will enable all children, including girls and the most marginalized children to access learning at the appropriate level and with appropriate help and support.

FIGURE 1 | INCREASING RESILIENCE AND BUILDING BACK BETTER



Building Back Better

A new vision for education in the future includes:

Implementation of the new vision will assist all children to develop capacity for learning, acquire the necessary resilience and curiosity to pursue life-long learning, and prioritize foundational skills. This new way of working needs to recognize and address harmful social norms and provide alternative learning solutions to encompass the likelihood that significant numbers of children may not return to school and that the learning gap has increased as a result of inequalities. This will be a complex undertaking, so each country needs to plan for explicit short, medium, and long-term objectives, to show how they are building a new shock-resistant system.

Each government will need to significantly increase the level of funding for basic education and be more equitable and efficient in spending as COVID-19 has created a new kind of humanitarian disaster which unless addressed fully could undo decades of investment and especially impact further on the education of vulnerable and marginalized children.

Recommendations

As demonstrated through this report and the case studies, there have been some good responses to the pandemic in all countries and there are some examples of excellent initiatives that could be adapted and expanded to other contexts. It is recognized that budgets for investment are constrained, yet it is vital that children and young people are prioritized. Consideration of the challenges, lessons learned and the vision for building back better has led to the development of the following recommendations.

1. Reopening schools safely. Strengthen evidence-based decision making on when to reopen schools.

Decentralize decision making and provide support for safe reopening. Monitoring and evaluation systems at all levels need strengthening to provide timely data on which schools are operating safely, which ones are not and why. Prioritize WASH infrastructure and facility needs for ECE centres and schools serving the most marginalized groups and identify short- and long-term financing solutions to address these.

2. Use data to identify and reach the most marginalized learners. Establish or strengthen real-time data collection and use systems continuous comprehensive monitoring. Improve access to different learning modalities. Strengthen provision for the most marginalized learners.
3. Strengthen teaching and teacher support to address existing low levels of learning and help narrow the learning divide. Assess learning loss on reopening and conduct ongoing formative assessment of learning as face-to face classes resume. Provide guidelines for schools and teachers on delivering long-term remediation based on a revised curriculum. Review teacher development and support systems. Increase student agency and make learning more relevant.
4. Provide a package of support to ensure children's health, nutrition and well-being. Strengthen pandemic response planning and cross-sector collaboration. Promote and fund outreach services for teachers' and young people's MHPSS. Identify, record and address protection issues especially for girls. Address issues of household poverty and child labour through social welfare and child benefit.
5. Provide holistic support for children in pre-primary and ECE. Prioritize funding, policy development, data collection and use of cross-sector pre-primary child development. Increase provision and enrolment in quality pre-primary childcare and ECE, especially for the most marginalized children and communities. Prioritize WASH facilities for ECE centres to enable continuity of safe learning within school, especially in the most marginalized communities.

Prioritize education funding. Consider the impact of COVID-19 on progress towards education targets and its implication on funding needs. Prioritize and increase funding to the education sector. Target funding so that it reaches the most marginalized children. Review education expenditure and make it more efficient.

Conclusion

The impact of COVID-19 on the education sector in Southeast Asia has been severe and will have long-lasting consequences on the region's economic and social development. Prior to the pandemic, many countries in the sub-region were off-track to achieve SDG 4, were facing varying degrees of Learning Poverty, and had a consistent number of primary-aged children out of school, who are also the most marginalized in society. Due to school closures and the rapid move to online learning, the digital divide has resulted in increased marginalisation of the sub-region's most vulnerable children. Deepening poverty, lack of access to health systems and school feeding, and increasing levels of mental health and protection issues, added to the learning loss due to school closures, will result in reductions in future earnings of many of the sub-region's children, particularly the most marginalized.

On the positive side, as a result of the pandemic, countries have begun to re-envisage education, to reflect on these levels of marginalization and how to address them, to work across sectors and with strengthened partnerships at all levels and to see the opportunities that technology can create, if planned for in an inclusive way.

The financial implications of the pandemic on countries' GDP will be significant, which will have a resultant impact on education budgets. One of the first steps countries will need to take, is to consider the long-term financial implication of the reforms that will need to be brought in to get them on track to meet SDG 4 in 2030. Underpinning these reforms will be the need to focus on the most marginalized, to develop teachers to implement long-term remediation plans for their students and to integrate social protection and health programmes into education provision.

Across the Southeast Asia sub-region, there has been immense effort to address the challenges raised by COVID-19 and many examples of good practice have emerged that can help to guide other countries as they begin to build the resilience of their education and emergency response systems. If these levels of energy, commitment, effort and partnership are put into driving long-term reforms in the sub-region, then countries will be better positioned to face, address and solve their existing challenges as well as the new challenges created by the COVID-19 pandemic, and be in a stronger position to face disruptions in the future. This is the only way to achieve the SDG 4 targets and to give opportunity to the millions of marginalized children to fulfil their potential in life.

01
Introduction

1.1 Background

The global nature of the COVID-19 pandemic makes it unique, affecting the whole world with the twin shocks of a health emergency and an economic recession. This will lead to long-term costs on human capital accumulation, development prospects and welfare. The pandemic has affected all parts of the world and the responses to the situation have disproportionally affected the most vulnerable and marginalized members of society. The contexts within which the people of South Asia, Southeast Asia and East Asia, are having to cope with the virus are vastly different, with a disparity in living conditions and varying degrees of access to and quality of essential services such as health and education. Across the continent there is vast inequality between the rich and poor and therefore different levels of resilience to the shocks that this disease has brought, putting the poor at long-term risk far beyond contracting the virus.

Some of the most vulnerable children felt the side-effects of COVID-19 from the moment nationwide lockdowns were put in place to control the spread of the disease. Initially, schools, markets, workshops, farms and factories closed, leaving children and families stranded. Throughout this situation, deep-rooted inequalities in societies are being exposed. A year on from the start of the crisis, for many people the fear and uncertainty continue, whereas for others in the region life has almost returned to normal.

This situation analysis has been undertaken as part of the broader analysis initiated by UNICEF and UNESCO to provide a snapshot of the educational responses and effects of COVID-19 across Asia. It considers the direct effects of school closures and reopening and identifies the initial impact that this may have had on learners, their families as well as on the overall education system. It seeks understanding on the contextual factors that may have supported or hindered learning with particular attention on the most disadvantaged groups who will be most affected by the pandemic, particularly highlighting girls and learners with disabilities. The aim of this is to identify interventions which have been able to successfully reach the most marginalized communities and how their different needs were addressed to increase accessibility and participation for all.

Objectives of the study

- to assess and estimate the various impacts of the COVID-19 pandemic on the education sector and stakeholders in Asia;
- to examine the policy and financial implications on progress towards achieving SDG 4-Education 2030; and
- to identify examples of promising responses and strategies in education and associated social sectors, which can be shared with other countries.

1.2 Methodology

Three sub-regional reports give an overview of the situation and are drawn from key documents, including 14 detailed country case studies, which provide a more in-depth look at specific areas. The sub-regional reports were developed with support from the regional UNICEF and UNESCO offices, and were presented to governments and other stakeholders at two webinars.[35] This report focuses on Southeast Asia and includes feedback gathered from the webinar.

1.3 Structure of the report

The sub-regional report is structured in six chapters. After this introduction, Chapter 2 outlines the situation prior to COVID-19, as well as the effects of COVID-19 on: access and participation, and learning levels; health, well-being and safe learning operations; and the financial implications of reaching the SDG 4 targets. Chapter 3 presents the overarching challenges, examples of positive responses and lessons learned. Chapter 4 looks to the future, considering what building back better could look like in the region. Chapter 5 provides specific recommendations for building back better and increasing the resilience of the education system to future shocks. Finally, Chapter 6 concludes the report, with a summary against the three objectives of the study.

02

Background and Context

MAP 1 | MAP OF SOUTHEAST ASIA SHOWING CASE STUDY COUNTRIES

2.1 Introduction to Southeast Asia

Southeast Asia (SEA) is a sub-region of Asia, made up of 11 mainland countries and island states. Ten countries[36] in SEA are member states of the Association of Southeast Asian Nations (ASEAN). The association is an intergovernmental organization established for economic growth, political stability, active collaboration, mutual assistance, and educational and cultural integration.

Across the 11 countries, five political models are used, which provide a diversity of responses to crises within the sub-region: four democratic republics (Indonesia, the Philippines, Singapore and Timor-Leste), three constitutional monarchies (Cambodia, Thailand and Malaysia), one absolute monarchy (Brunei Darussalam), a pair of socialist republics (Lao PDR and Viet Nam) and one Unitary parliamentary provisional government under a military junta (Myanmar).[37]

Income and wealth are highly disparate as two of the wealthiest countries in the world (Brunei Darussalam and Singapore) and two of the poorest countries in the world (Cambodia and Timor-Leste) are found in the sub-region.[38] Map 1 shows the 11 countries and highlights the three case study countries looked at in more detail in the situation analysis – Indonesia, Lao PDR, and Viet Nam.

When COVID-19 emerged in early 2020, Southeast Asia was already off-track to achieve the Sustainable Development Goals (SDGs) by 2030, lagging behind in all but two of the 17 Goals. Despite strong economic growth, the sub-region is characterized by high levels of inequality, low levels of social protection and a large informal sector.[39]

"To thrive in the global economy, where new technologies will create industries that have yet to be imagined, and where the changing nature of work prizes higher-order skills, ASEAN countries will have to go back to basics – and invest in its children." [40]

Children born in Southeast Asia today will only achieve 59 per cent of their potential productivity compared to children born in regions with high-performing health and education systems.[41]

"Disparity, poverty, education and health, remain a challenge in ASEAN. We have to make Human Capital Development an integral part of our development," ASEAN Secretary-General Lim Jock Hoi told the ASEAN High-Level Meeting on Human Development on September 9, 2019.

From these statements, just a few months before the pandemic, it can be seen that without significant investment in education and health ASEAN countries will not be making enough of their human capital to realize a promising vision, and certainly will not reach SDG 4 targets (particularly equity and quality).

2.2 COVID-19 in Southeast Asia

The first cases of COVID-19 appeared in Southeast Asia in February 2020. A year later the pandemic is still affecting lives in the region. Table 1 shows where the highest levels of infection have been throughout the region. Countries that swiftly brought in national lockdowns and closed their borders managed to keep the numbers of infections and deaths low, whereas those with higher population density such as Singapore found this more difficult.

TABLE 1 | NUMBER OF COVID-19 INFECTIONS[42]

COUNTRY	INFECTIONS PER 100,000	No. OF INFECTIONS
Malaysia	1,307	417,512
Singapore	1,053	61,235
Philippines	982	1,062,225
Indonesia	622	1,682,004
Myanmar	264	142,842
Timor-Leste	195	2,524
Thailand	105	72,788
Cambodia	93	15,361
Brunei Darussalam	52	227
Lao PDR	13	966
Viet Nam	3	2,985

TABLE 2 | CHARACTERISTICS OF MARGINALIZED AND VULNERABLE CHILDREN IN SOUTHEAST ASIA[44]

CHARACTERISTIC	MARGINALIZED GROUP
Socio-economic status	Especially those from the poorest 20 per cent of households and those who live in poor urban areas.
Residence	Those in rural areas, remote areas or small islands. Those who migrate from rural to urban areas.
Disability	Children with disabilities are disadvantaged in both access to and quality of provision across all levels of education.
Gender	Girls are more likely to participate at all levels, but are affected more by poverty or residence and by harmful social norms such as child marriage than boys. Boys participate less than girls, and perform less well, but have more access to further education and work opportunities.
Minorities	Ethnic or language minority groups.

The Southeast Asia sub-region is prepared for sudden natural shocks which disrupt life, such as floods and earthquakes, and these shocks can often result in school closures and interruption of learning. While countries in the region have comprehensive emergency plans in place to deal with these major disasters, because of the nature of the shocks, they tended to focus on safety, medical and infrastructure responses rather than continuity of learning. This meant that mechanisms were in place to respond quickly and across sectors, but COVID-19 required a focus on preventing the spread of infection, while providing alternative means of education.

As would be expected, the pandemic was seen first and foremost as a health emergency with actions taken to keep lives safe. All countries imposed a lockdown on their populations which closed schools, businesses, industry, shops and affected all aspects of people's lives including access to healthcare. These measures, while protecting life had a major impact on the economy and also on household finances as it prevented many people from earning money, particularly those on daily wages, and while social protection systems were mobilized and reached some of the population, they were not enough to support all families, leaving many people vulnerable.

Who will be most affected?

In 2019, the UNICEF East Asia and Pacific Regional Office developed a synthesis of the latest data and evidence on out-of-school children and adolescents in the region.[43] The report used the Five Dimensions of Exclusion model to identify the characteristics of the most marginalized and vulnerable groups across the levels of education (Table 2). These characteristics intersect, and the most marginalized "are characterised by several combine factors of disadvantage." For the purposes of this report, references to marginalized and vulnerable children refer to these definitions.

> The main policy response to affect children was the closure of schools.

The Lancet describes vulnerable groups as those people who *"are disproportionately exposed to risk,"*[45] and the most likely to be affected by the policy responses to the pandemic. It goes on to describe vulnerability as a dynamic state which people could move in and out of during the course of the pandemic. 2018 figures from the World Bank put the number of people in poverty in Southeast Asia as 1.2 per cent, against a baseline of $1.90 per day. This was a significant decrease from 60.9 per cent in 1990[46] and poverty levels have continued to decline throughout the region.[47] The COVID-19 pandemic threatens this progress as people become more vulnerable to falling further or back into poverty.[48]

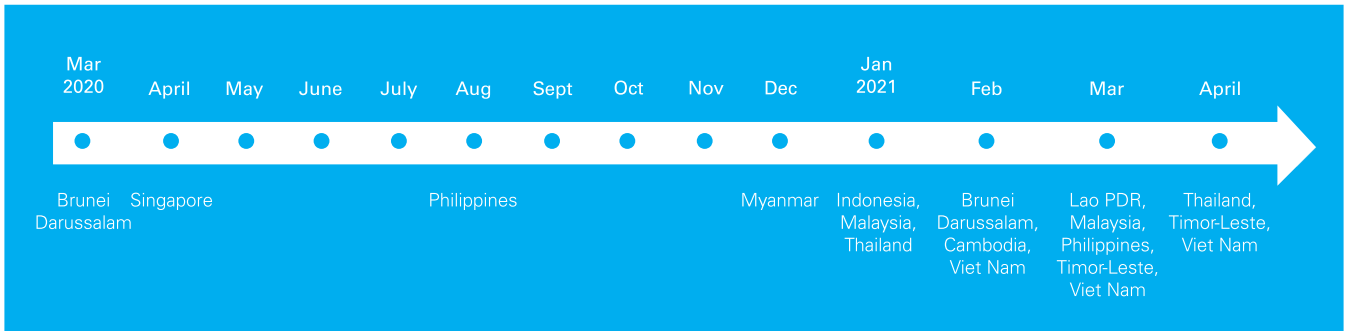
2.3 How did the spread of the pandemic affect learning?

The infection rates peaked at different times in each country over the course of the year as shown in Figure 2, with Brunei Darussalam and Singapore having early peaks, compared to most other countries in the sub-region who peaked in late 2020 or early 2021. The Philippines is the only country in the sub-region to peak mid-2020.

Schools were initially closed for about 4 months across the region, reopened as infection rates dropped, but then closed again as second spikes occurred, as is shown in Figure 3.

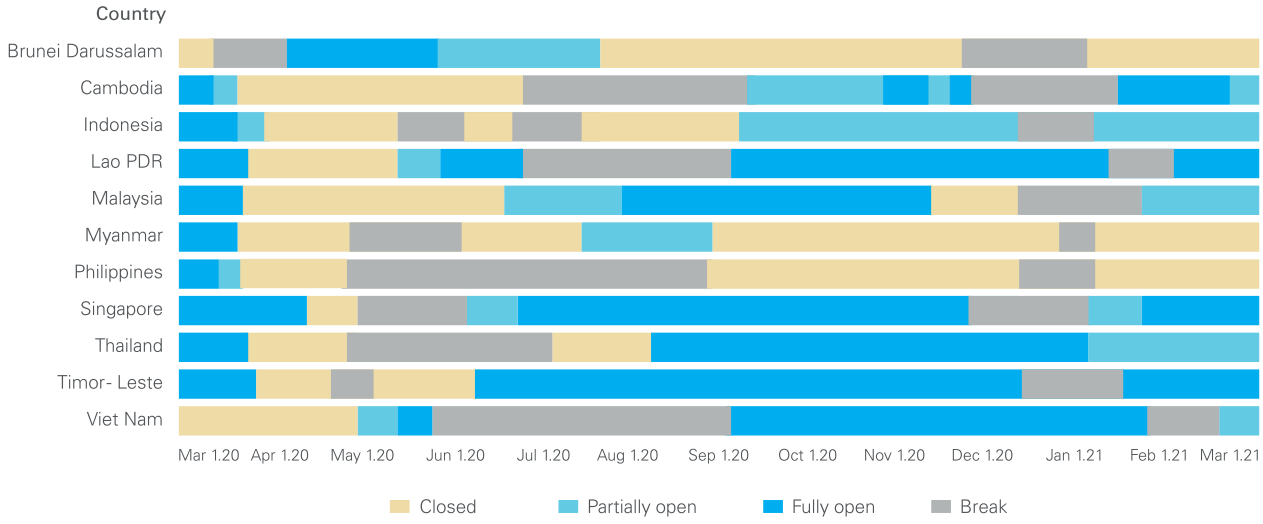
- Countries such as Lao PDR (June), Timor-Leste (July) and Brunei Darussalam (August), with lower infection rates (as seen in Table 1) opened all schools and have kept them open.
- Interestingly, Singapore, with the highest infection rates, was able to reopen all schools in July as their peak happened early in the pandemic (April 2020). Some schools closed briefly in January 2021 due to localized outbreaks, but since then all schools have been open.
- All schools reopened in Viet Nam and Thailand, although some schools have been closed since their infection peaks in February and January 2021 respectively.
- Since September 2020, Cambodian and Indonesian schools been either partially or fully reopened depending on localized spikes.
- The Philippines have not reopened their schools since the beginning of the crisis in March 2020.
- While Myanmar temporarily reopened some schools in August, all schools have been closed since September, and their peak happened in December 2020. Similarly, Malaysia opened some schools in July 2020 and soon after opened all schools, but had to close all schools again in December as their infection rates climbed.

FIGURE 2 | PEAK INFECTION MONTHS[49]

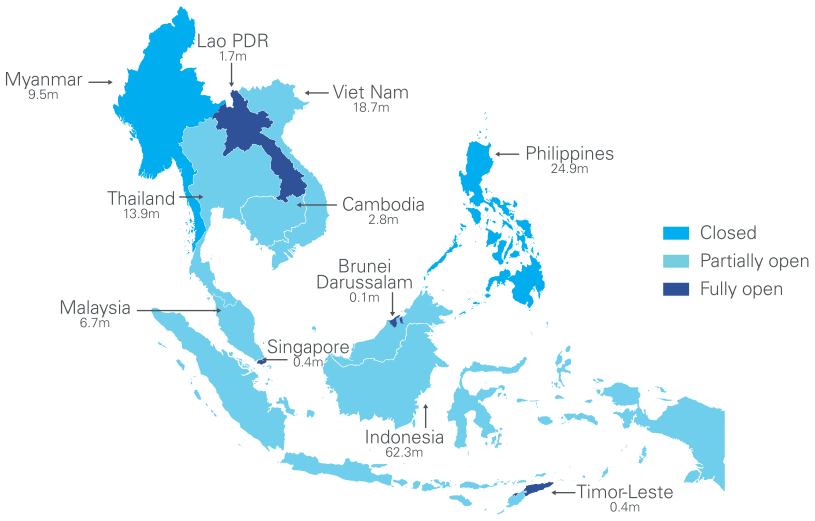


Most countries in the region prioritized older children for return as they were facing high-stakes exams, important for the children's future and the economy of the country, although it could be argued that it was the youngest who were the most in need of face-to-face interaction. Map 2 shows the current status of schools as of March 2021.

FIGURE 3 | MONTHS OF SCHOOL CLOSURES AND REOPENING[50]



MAP 2 | MAP OF SOUTHEAST ASIA SHOWING SCHOOL OPENING STATUS AS OF MARCH 2021[51]



Resource constraints, particularly in low-income countries make it increasingly important that decisions are based on evidence of the effectiveness of the measure proposed as well as the level of risk. Much of the evidence regarding the effectiveness of school closures and social distancing measures has been based on influenza transmission which tends to be driven by children.[52] COVID-19 transmission is known to differ but is not yet well understood.

Studies suggest that alternative social distancing interventions are more effective in preventing deaths than school closures alone and that further research is needed to improve understanding of decision makers on the effectiveness of the school measures being widely implemented. Decisions about school openings were taken mainly based on the health situation. These variations in transmission are important considerations in response planning and in the decisions taken locally around safe operations, particularly in terms of time spent in and away from school i.e., phased return to school, staggered attendance, etc. Where there is widespread community transmission or the number of cases is rising, effective safe operating measures in schools are even more important while public health measures in the community are essential to protect schools from amplifying transmission.[53] Significant outbreaks in schools are not widely recorded but there are examples of where these have been associated with overcrowded classrooms and weak preventive measures.[54]

Consideration needs to be given to other less disruptive interventions for schools especially if measures are imposed for lengthy periods of time, particularly as such restrictive measures have the potential to result in major detrimental effects on the health and well-being of children and adolescents particularly the most vulnerable.[55]

2.4 Access, participation and learning

Pre-COVID-19 situation

Even before COVID-19 struck, Southeast Asia was suffering from a learning crisis, which has now been exacerbated.

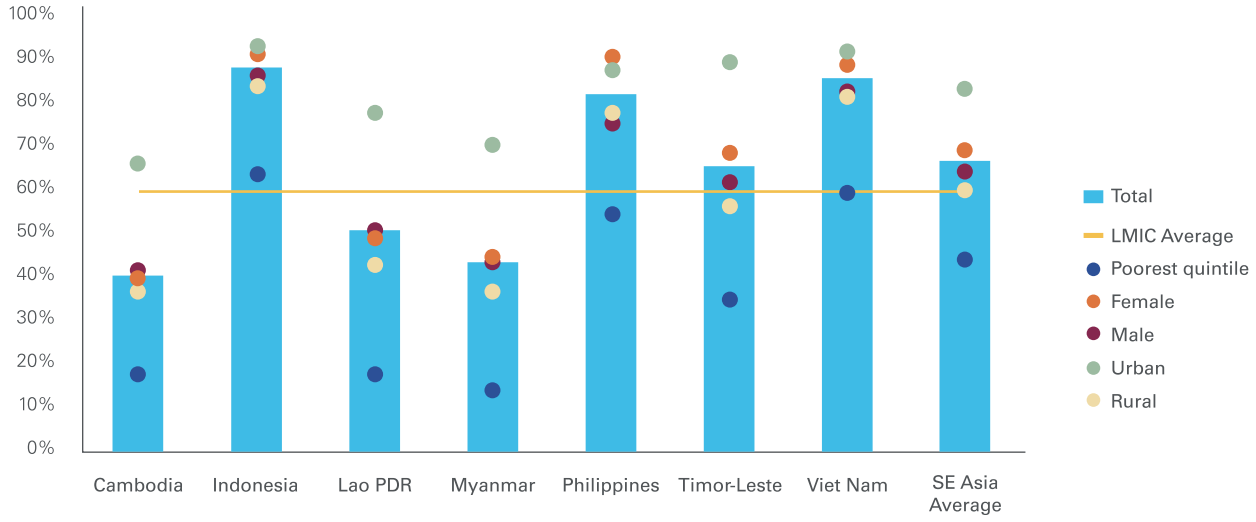
- The number of out-of-school children, adolescents and youth has significantly reduced in Southeast Asia and the Pacific region in the last 20 years. Most of the gains in access have been at the upper and lower secondary levels, and for girls at all levels. While the proportion of out of school primary aged children has dropped in most countries in the sub-region, the absolute number of out-of-school primary-aged children has remained steady at around 7 million children since 2000. This demonstrates the challenges faced by countries in reaching the most vulnerable and excluded children.[56]
- A large proportion of children completed primary education in the past years, but many are yet to complete secondary education. Gender disparity in completion rates tends to be more prominent among the poorest households in some countries.
- The findings from the 2019 South East Asia Primary Learning Metrics (SEA-PLM) show that there are alarming trends of inequities and poor learning in the sub-region, with 1 in 3 children in Grade 5 still performing at the level expected in the early years of primary education. The percentage of children in Grade 5 who are only able to read and write simple words and do basic mathematics range from 2 per cent to 50 per cent across the six participating countries.

Were children in school and participating?

Net enrolment in primary school in seven countries of Southeast Asia (Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, Timor-Leste, and Viet Nam) is measurably above the average for all Lower-Middle-Income Countries (LMICs). They all, with the exception of Cambodia, also do reasonably well on primary completion.

At primary level, wide disparities exist in completion rates between the poorest pupils and rural children and between rural and urban children, except in Indonesia and Viet Nam. These disparities continue and widen into lower- and upper-secondary education. While boys participate more in primary education than girls in the region, the reverse if the case for lower- and upper-secondary education. Boys are more likely than girls to leave education early, if they can obtain employment.[57]

FIGURE 4 | COMPLETION RATE, LOWER-SECONDARY[58]



The range among the countries for lower-secondary enrolment is wider than for primary, and even more so for completion rates (Figure 4):

- Timor-Leste, Cambodia, and Lao PDR fall below the Low Middle Income Country (LMIC) average for lower-secondary enrolment.
- Indonesia, Viet Nam and the Philippines all have lower-secondary completion rates of over 80 per cent, while Cambodia and Myanmar's rates are half of this at 41 per cent and 44 per cent respectively.

The picture for upper-secondary is mixed, but worse than for lower-secondary:

- While Indonesia achieves a 60 per cent NER for upper-secondary, the Philippines, at the other end of the scale only achieves 27 per cent.
- Interestingly, the Philippines has the highest completion rates of the few that do go to upper-secondary (78 per cent), compared to Cambodia, Lao PDR, and Myanmar, which all have upper-secondary completion rates under the LMIC average of 40 per cent.[59]

Enrolment is discussed further in section 2.6 along with the financial impact of COVID-19.

Out-of-School Children (OOSC)

While the main focus is on learners who attend school, an important priority should also be on those out of school. Apart from OOSC being an educational rights issue, the situation also presents significant economic costs to a country (UNESCO, 2015c). In Viet Nam, it is estimated that the economic cost of OOSC is 0.3 per cent of its GDP, and in Indonesia, that figure is as high as 2 per cent of its GDP.[60] OOSC include those who drop out of school as well as those who have never attended school.

The data shown in Figure 5 is pre-COVID-19 data, yet the prediction is that some learners who were in school may never return to school, post-pandemic, increasing drop-out rates and OOSC rates, while others who were OOS before the pandemic, will be less likely to enrol due to socio-economic issues such as child marriage and worsening household incomes.[61] [62] Indonesia has the fourth largest population of children in the world at 85 million, and as a result performs poorly on absolute numbers of OOSC compared to other countries in the sub-region.

Across the sub-region, education is regarded as one of the most important child rights as cited in the ASEAN Declaration on Strengthening Education for Out-of-school Children and Youth.[63] Therefore governments have a responsibility to provide education (formal or non-formal) that meets each individual child's needs. For example, Viet Nam's Education Law of 2005 provides for every citizen, regardless of ethnic origin, religion, beliefs, gender, family background, social status or economic conditions, an equal right of access to learning opportunities (ASEAN, 2014; The National Assembly, 2005).[64]

Were children learning prior to COVID-19?

This section outlines the level of learning in Southeast Asia prior to COVID-19 (Table 3). Data is drawn from global learning assessment (the OECD's Programme for International Student Assessment (PISA), 2015 and 2018) and from regional learning assessment (SEA-PLM 2019).[56] A third measure is a synthetic indicator[66] called Learning Poverty. Learning Poverty means being unable to read and understand a short, age-appropriate text by age 10 and it is calculated by looking at the share of children who have not achieved minimum reading proficiency and adjusts it by the proportion of children who are out of school. In general, Learning Poverty is higher for boys than for girls (e.g., Indonesia- 41.4 boys 29.3 girls).[67] Finally, the World Bank's Harmonized Learning Outcomes are used for countries that did not participate in all or some of the other assessments or do not have a Learning Poverty score.[68]

Some countries were performing well. Viet Nam has the lowest levels of Learning Poverty in the sub-region, despite Singapore performing better in the PISA tests, as Singapore showed the largest disparity of scores between economically advantaged and disadvantaged students within the country.[69] Both countries scored above the OECD average in the PISA assessments for reading and maths. The results of the SEA-PLM 2019 showed that in Viet Nam and Malaysia, the majority of Grade 5 children achieve the reading skills expected of them at the end of primary school, which is the minimum proficiency standard aligned to SDG 4.1.1.b.

FIGURE 5 | OOSC DATA FOR SOUTHEAST ASIA[70]

OOSC DISTRIBUTION IN SEA

Pre-primary: **4 million children (13 per cent).** The largest share is in Philippines, Indonesia and Cambodia.

Primary: **7 million children (4 per cent).** Absolute numbers unchanged over 20 years. 30 per cent live in Indonesia with high rates also in Timor-Leste.

Lower-secondary: **8 million children (8 per cent).** largest share is in Indonesia, Myanmar, the Philippines, and Thailand.

Child labour: working and being OOS in primary and lower secondary school are strongly associated in Lao PDR and Myanmar.

DROP OUT DATA IN SEA

Primary: 1 in 5 children or more drop out in Cambodia, Myanmar, and Timor-Leste.

Lower-secondary: 32 per cent at risk of dropping out in Cambodia (2016). More than 10 per cent do not complete compulsory education (lower-secondary) in Indonesia, Malaysia, Philippines, Thailand, and Viet Nam. Drop-out is more likely in overage children. In 8 countries, 20 per cent or more of children are at least 2 years over-age.

MARGINALIZED OOSC IN SEA

Gender: pre-primary girls are more likely to be OOSC than boys in Brunei Darussalam and Thailand. In Cambodia and Viet Nam, boys are disadvantaged relative to girls among the poorest families, but not among wealthier families.

Ethnic / linguistic minorities: the OOS population across Cambodia, Lao PDR, Myanmar, Thailand, Timor-Leste and Viet Nam, are well above average.

Children with Disabilities (CWD): while data is generally limited in the sub-region, data in Viet Nam, Cambodia and Myanmar strongly confirm that CWD are much more likely to be disproportionately OOSC at all education levels than those without disabilities or with partial disabilities.

The range of learning achievement in the sub-region was wide. Table 3 shows that the range of learning poverty across the sub-region is large, ranging from only 1.7 per cent in Viet Nam to over half of all children (51 per cent) in Cambodia.

Inequalities existed within countries as well and the SEA-PLM 2019 findings may also indicate that countries' efforts in the last decade to reduce the impact of social inequity on children's learning have not been sufficiently effective.[71] In all PISA and SEA-PLM participating countries, socio-economically advantaged students outperformed disadvantaged students. The findings from the SEA-PLM 2019 show that there are alarming trends of inequities and poor learning in the sub-region. Across participating countries, 1 in 3 children in Grade 5 are still performing at the level expected in the early years of primary education. However, this figure hides structural differences among systems, as the percentage of children that are only able to read and write simple words and do basic mathematics range from 2 per cent to 50 per cent across the six participating countries. A UNICEF study in 2019 found that gender differences were negligible for boys and girls from the richest households in countries like Lao PDR and the Philippines, while girls from the poorest households were much less likely to complete their education than boys.[72]

TABLE 3 | LEARNING ACHIEVEMENT BY COUNTRY IN SOUTHEAST ASIA

COUNTRY	LEARNING POVERTY[73] PER CENT	PISA[74]		SEA-PLM[75]	
		READING	MATHS	READING	MATHS
Viet Nam	1.7%	86%	81%	82%	92%
Singapore	2.8%	89%	93%	-	-
Malaysia	12.9%	54%	59%	58%	64%
Thailand	23.5%	40%	47%	-	-
Indonesia	35.4%	30%	28%	-	-
Cambodia[76]	51.1%	8%	10%	11%	19%
Brunei Darussalam	-	48%	52%	-	-
Philippines		19%	19%	10%	17%
Myanmar[77]	-	425*		11%	12%
Lao PDR	-	368*	-	2%	8%
Timor-Leste	-	371*	-	-	-

*Only the average PISA reading score is available for Myanmar, Lao PDR and Timor-Leste.

THE ANALYSIS OF SEA-PLM SHOWED TWO IMPORTANT FACTORS DRIVING LEARNING:

1

Data found that in all countries, children who had attended at least one year of pre-school education consistently performed better than children who had not.

2

In all countries, higher levels of parental engagement were associated with higher reading, writing and mathematics scores in children.


© UNICEF/UN0367658/Raab

> "Economic hardship is linked to school dropout since there is a direct cost to attending school, as well as an opportunity cost, though government social assistance programs may reduce these costs."[78]

Effects of COVID-19 on learning

Effects of COVID-19 on participation once schools reopen

One of the effects of these long school closures is the likely increase in the number of learners dropping out of school.

Children may get out of the habit of going to school, girls may find themselves more likely forced into an early marriage and increased family pressures could mean that families prioritize survival, with children, especially boys, taking on income-generating activities. These latter effects will be seen more at the secondary level.

Case study findings: In Indonesia, the UNICEF-supported Community Based Development Information System has been taken to scale across the country by village governments who use this data to provide targeted support for their children. The data has been very useful during the COVID-19 pandemic as communities try to identify and reach the most marginalized children (see Section 3.2). The latest data on children who had dropped out:

"showed that 74% of these dropping out due to economic reasons. Boys are dropping out more than girls, but girls are ten times more likely to drop out of school due to early marriage. Most children who drop out are 16-18 years old or high school students. The factors that put the children at risk of dropping out include working (52%), lack of learning facilities at home (33%), caring for others (28%), playing all day and not being monitored (both 13%), getting married (2%), disability (1%). Girls and boys are equally at risk of dropping out due to economic reasons. Children with disabilities are twice as likely to have two or more risk factors and therefore are more at risk of dropping out. Regional disparities also exist, with children in the eastern part of Indonesia such as Papua, East Nusa Tenggara and Sulawesi being at higher risk." [79] [80]

Lost opportunities for learning

All countries in the region, after closing schools, quickly developed plans and took action to enable children to continue learning and reach vast numbers of learners. These measures are described more in Chapter 3. Despite this quick response, experience has shown that learning will have been lost for many children across the region, exacerbating the learning crisis and increasing learning poverty.

Evidence from a study after the Pakistan earthquake in 2005, showed that four years after schools had been closed for three months, children were 1.5 years behind in learning outcomes.[81]

Modelling has been conducted by the Brookings Institute to analyse the likely impact of different remediation methods on

learning following school closures (Figure 6).[82] The study found that 3 months of school closure on a Grade 3 pupil, equates to:

- one year of learning loss by Grade 10 if no remediation is in place.
- half a year of learning loss by Grade 10 if one year of remediation is provided.
- over a year of learning gain by Grade 10 if one year of remediation is combined with instruction reorientation (prioritized curriculum, focus on foundational skills, formative assessment, on-going teaching at the right level) which is continued for subsequent years.

The World Bank has also carried out simulations that consider three different lengths of school closures – 3, 5 and 7 months and considered different learning mitigation approaches (mainly remote learning) by their levels of effectiveness. This has created three global scenarios – optimistic, intermediate and pessimistic. The results show that **"both the global level of schooling as well as learning will fall… COVID-19 could result in a loss of between 0.3 and 0.9 years of schooling adjusted for quality… Across the globe, close to 7 million students from primary up to secondary education could drop out due to the income shock of the pandemic alone."**[83]

As is shown in Figure 3, the amount of time that schools were closed varies greatly across the region, with schools in the Philippines closed for a year. The reasons for the variation depended on a number of factors as described in the UNESCO Overview of findings from a Survey of Ministries of Education on National Responses to COVID-19 (2020). **"The duration of school closure varied by whether the academic year had been completed, whether countries deemed remote learning to be effective, and by income group."**[84]

Case study findings: In Lao PDR, World Vision worked with the government to conduct a rapid assessment of eight districts.[85] The survey participants indicated their children not studying in one-third of cases and a huge majority (78 per cent) felt unable to support their children's behaviours and stresses. This was corroborated by UNDP's household survey results, which indicated that 86 per cent of parents from the 1,200 households surveyed believed the disruption caused by the pandemic had a major impact on their children's education.[86]

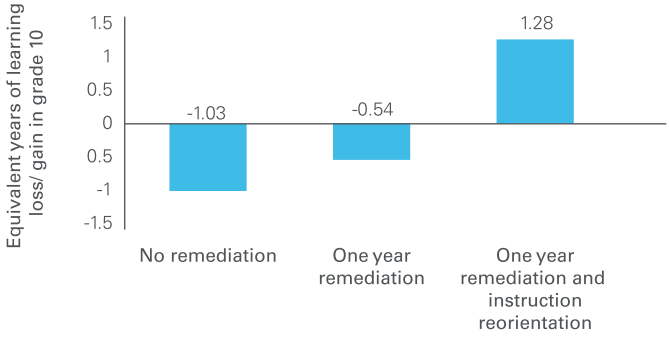
Over a long period of time this absence and lack of face-to-face contact will have significant effects on the levels of performance of children. In a context where literacy levels are already low, and many children are learning below the expected Grade level, the effects of the crisis will make it even more challenging for countries to reach the SDG 4 targets for learning by 2030.

Those particularly affected by the crisis and impacted by a technological response will be girls and those marginalized groups, with little access to technology, **"There is also a significant gender digital divide, with girls far less likely to own or have access to digital devices and fewer opportunities to gain digital literacy skills."** [87] The challenge of the digital divide is discussed further in Chapter 3.

Case study findings: In Indonesia, studies concluded that children from less privileged backgrounds spent fewer hours studying, had less access to learning resources and received lower quality support from teachers. Feedback from parents who participated in the UNICEF study showed that children in urban areas tend to study for longer hours each day than those in rural areas. This will only widen the learning divide and increase inequalities as more marginalized children experience more learning loss and take longer to recover – if they ever do.[88]

Case study findings: The existing digital divide in Viet Nam became more prominent once COVID-19 hit, particularly

FIGURE 6 | EFFECT OF REMEDIATION ON LONG-TERM LEARNING



for ethnic minority children, children with disabilities, very young children and girls.[89] Although some materials were provided in ethnic minority languages, this was limited, so ethnic minority students could not greatly benefit from mother tongue-based online learning due to a lack of online materials in their first languages.[90] The commitment to learning led some students from remote or hard to reach communities to walk considerable distances to reach the top of mountains so as to get an internet signal, as reported by Viet Nam Northern Upland High School's Youth Union (northern mountainous province of Thai Nguyen).

As mentioned earlier, many children are living in circumstances where household income has been reduced and there are pressures on them to support their family through increased household chores and outside work. These learners will have found little time to study, thus decreasing learning hours further.

Case study findings: In Viet Nam, some students lost the potential for studying due to their family's need for help with farming and harvesting. Girls were more often asked to undertake household chores and to look after younger siblings, as well as help with farming in rural areas.[91]

Examples of remediation practices used in Southeast Asia are presented in Chapter 3.

2.5 Health, well-being, protection and safe operations

Pre-COVID-19 situation

Health, well-being and protection

From the literature reviewed, health data for Southeast Asia is generally considered along with that of East Asia under the region of Asia Pacific (UN/World Bank data). Thus, some sub-regional data for Southeast Asia is presented below under the general data from the broader Asia Pacific Region.[92]

Poverty rates have dropped in recent decades in Southeast Asia. The proportion of the regional population living on less than $1.25 (in purchasing power parity terms) per day decreased from 47 per cent in 1990 to 22 per cent in 2005 and 14 per cent in 2015. Despite these positive trends, it has been conservatively estimated that nearly 25 million children in the Southeast Asia region were multidimensionally deprived (prior to the pandemic).[93] Despite progress over the previous decade the near poor and lower-middle-income groups remained at risk of poverty, and the impoverished at risk of extreme poverty, in the event of another crisis.[94]

"Almost a third of children in the region have stunted growth due to chronic malnutrition, making them highly prone to life-long cognitive and physical limitations."[95] The region faces a double burden of malnutrition i.e., stunting and obesity. Stunting significantly reduces both the physical and mental capabilities of children and gives rise to huge human and economic costs. As examples in Indonesia, 30.8 per cent of children suffer from stunting with an associated economic loss estimated at 2-3 per cent of GDP[96] while in Viet Nam 41 per cent of 5-year-olds in the lowest wealth quintile are stunted.[97]

Prior to the pandemic, estimates suggested that 10-20 per cent of children and adolescents globally experienced mental health challenges, with half of these conditions beginning by age 14. Adolescents' mental health and well-being, growing incidences of self-harm, and high suicide rates are of increasing concern in Southeast Asia.[98]

Safe operations in schools

To reach universal access to water supply in Southeast Asia, 544 million additional students need to be reached in schools between 2015 and 2030. For universal access to sanitation services and universal handwashing practice in schools, those numbers would be 493 million and 189 million respectively.[99]

FIGURE 7 | UNICEF DEFINITION OF BASIC WASH SERVICES IN SCHOOLS[100]

Drinking water	Water from an improved source (piped water, boreholes or tube wells, protected dug wells, protected springs and packaged or delivered water), and water is available at the school at the time of the survey.
Sanitation	Improved sanitation (flush/pour flush to piped sewer systems, septic tanks or pit latrines; ventilated improved pit latrines, composting toilets or pit latrines with slabs), at the school that are single-sex and usable (available, functional, private) at the time of the survey.
Hygiene	Handwashing facilities with water and soap available at the school at the time of the survey.

FIGURE 8 | SCHOOL HEALTH AND SANITATION SERVICE LEVEL DATA FOR SOUTHEAST ASIA BY LOCATION (2019)[101]

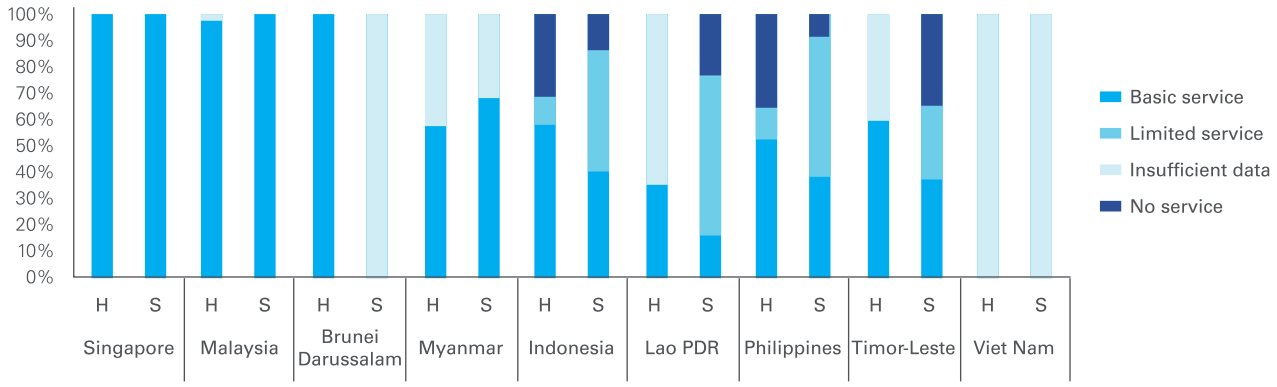


Figure 8 shows the disparity in WASH provision across Southeast Asia.[102] Almost all schools in Singapore, Malaysia and Brunei Darussalam have basic hygiene and sanitation services.[103] However, basic WASH facilities required for hand hygiene remain out of reach for many in some countries in the sub-region, particularly in Indonesia and Lao PDR, the Philippines and Timor-Leste, presenting challenges for the safe reopening of schools.

Effects of COVID-19 on health, well-being, protection and safe operations

Across all case study countries, studies showed that declining household income during the pandemic has resulted in a deterioration in nutrition, which "increases the risk of acute and chronic malnutrition or stunting in children."[104] Acute malnutrition is expected to increase given a lack of dietary diversity due to declines in agricultural production, market access and income which may worsen the incidence, especially on children living in poverty and with disabilities.[105] Good nutrition is essential for young children under-5 years old as the brain is almost fully developed by the age of six so the foundation for the future potential of a child to learn and to be successful is established in this early period of their life.

Case study findings: In Indonesia, 53 per cent of households are unable to provide nutritious food (4 types of balanced nutritional food sources); 97 per cent of children under 2 years old cannot meet the minimum food requirements based on the frequency and variety of food; 61 per cent of households with infants aged 6-9 months and 52 per cent of households with children over 9 months cannot provide main meals with sufficient frequency; 34 per cent of pregnant women and 46 per cent of breastfeeding mothers are not getting enough basic food needs; and 76 per cent of parents with children with disabilities found it more difficult to get food and 47 per cent had a food crisis.[106] [107]

The continuity of essential child health services has been affected by the pandemic across the sub-region due to national and localized lockdowns. This, alongside increased malnutrition, will set some countries back on their achievement of SDG 3 (ensure healthy lives and promote well-being for all at all ages) as they are likely to have a long-term impact on child health as well as on their development and learning.

Case study findings: In Viet Nam, a UNICEF rapid assessment found that 44 per cent of study participants with children reported difficulties in accessing child healthcare services compared to pre-pandemic times.[108] This included interrupted vaccination schedules of many children, including in areas with already low immunization rates prior to the pandemic.[109]

Case study findings: In Indonesia, as a result of COVID-19 related physical distancing measures, 80 per cent of immunization services were suspended in May 2020 and in July, 75 per cent village of health posts reported closures, with over 86 per cent of facilities suspending child growth and development monitoring.[110] [111]

The well-being of children, parents and teachers and the protection of children have been affected by COVID-19 across Southeast Asia. This ranges from fears around the virus itself such as getting sick or losing family members, to financial worry, anxiety about learning loss, isolation and protection issues around violence, online bullying, discrimination.

The subregion is now facing a socio-economic crisis following on from the health crisis and response. Economic and social rights have been affected, exacerbating vulnerabilities, including the right to health, social protection and decent work, as well as the rights to adequate food, water and sanitation. This particularly affects the urban poor, those in rural areas, ethnic minorities, persons with disabilities, migrant workers and informal economy workers.[112]

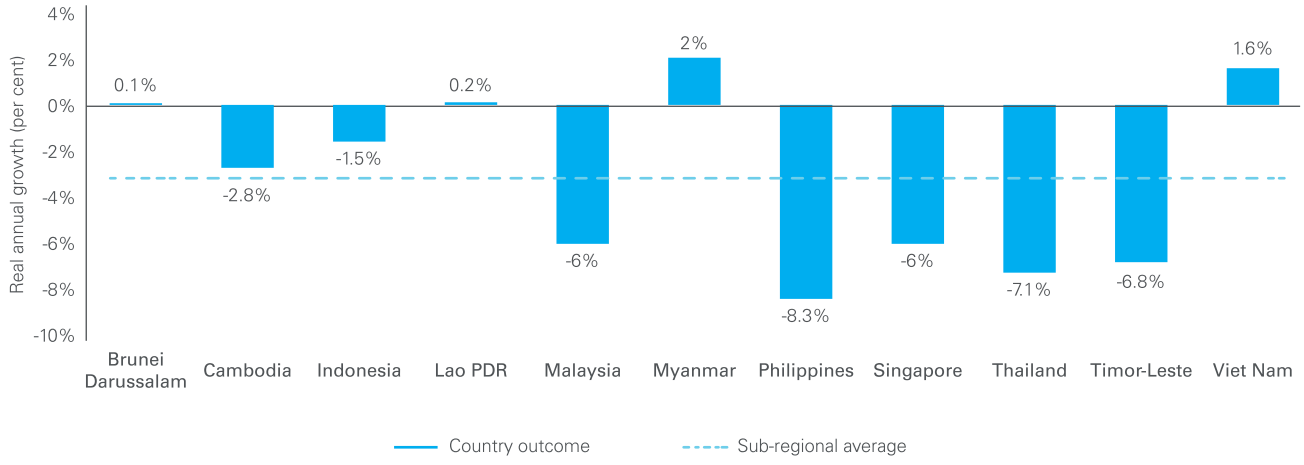
Case study findings: As has been reported all over the world, the frequency of violence against children has increased due to lockdown and become more widespread with a Save the Children Global Report[113] finding that 16 per cent of Indonesian children (compared to 37 per cent globally) experiencing more violence and being at risk of violence. This increased in families with children with disabilities (31 per cent), families who had lost income (40 per cent) or families who had been forced to move (60 per cent). […] The non-governmental organization Girls Not Brides found that one in every seven girls in Indonesia is married before the age of 18.[114] Evidence shows that during the pandemic, the number of child marriages has surged as poor families look to reduce their economic burden.

All Southeast Asian countries have announced fiscal packages to help affected businesses and households, with a median value of about 3.5 per cent of GDP.[115] Governments across the sub-region acted quickly to provide social protection payments, although due to the large number of undocumented migrants and women in informal work, many have 'slipped through the net'.[116]

2.6 Finances

The COVID-19 pandemic has caused significant fiscal policy challenges, which are set to continue until lasting solutions to the pandemic are found. The economic growth shocks in 2020 due to COVID-19 are presented for the sub-region in Figure 9. The impact is striking, with an average -3.1 per cent real change in GDP. While Brunei Darussalam (0.1 per cent), Lao PDR (0.2 per cent), Myanmar (2 per cent) and Viet Nam (1.6 per cent) managed to avoid a contraction in GDP, their GDP growth still slowed to significantly lower rates than before the pandemic. The other countries in the sub-region all experienced contractions in GDP, with Thailand (-7.1 per cent) and the Philippines (-8.3 per cent) the worst affected.

FIGURE 9 | REAL ANNUAL GDP GROWTH, 2020



Source: IMF, 2021.

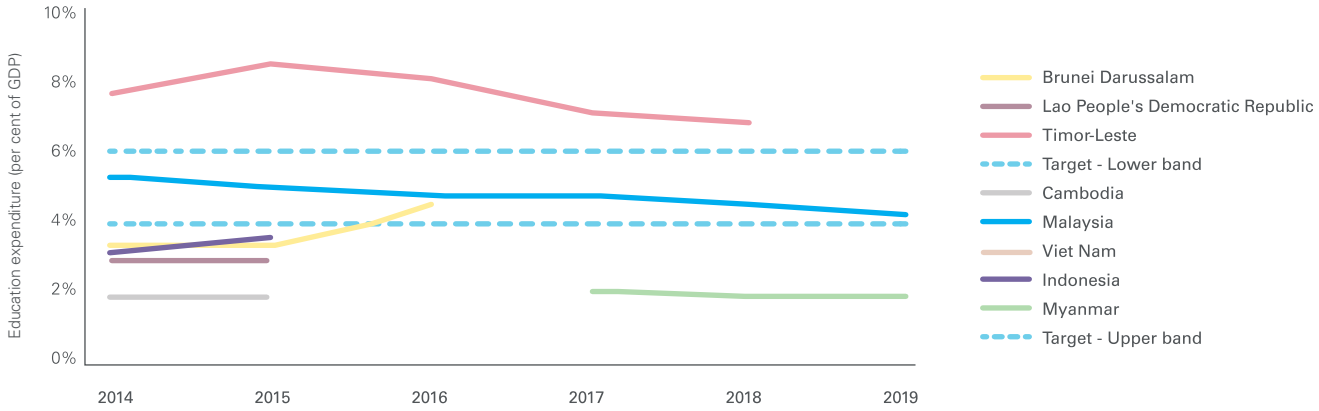
Among the implications of these macroeconomic shocks are downward pressure on government revenues, which reduce fiscal space and force governments to make difficult prioritization decisions. Governments' top funding priorities include the healthcare emergency and strengthening social protection to support the increased numbers of unemployed and underemployed workers. Within this context of deteriorated fiscal balances at the same time as increased expenditure demands, the IMF stressed the risk that other critical public expenditures, notably on education, are crowded out.[117] In fact, UNICEF reported that more than a third of low and lower-middle-income countries have either already experienced or anticipate decreases to their education budget for the current or next fiscal year.[118] This risk is complicated by the negative effect of rising unemployment and underemployed on household income, which is a key supplementary source of education expenditure – especially in countries with high numbers of low-fee private schools, like Indonesia. It is therefore critical that these prioritization decisions are carefully managed to avoid detrimental effects on education outcomes that undermine progress towards SDG 4.

This section of the report therefore estimates the impact of COVID-19 on Southeast Asian countries' education budgets. The objective is to demonstrate how school closures as well as altered teaching environments and modes of delivery are expected to change the resources required by education sectors. The impacts are presented relative to the pre-COVID-19 funding needs to attain SDG 4 by 2030. The modelling results indicate how much governments should additionally budget for education to respond to the challenges presented by COVID-19, which are reviewed in detail in Chapter 3. Stakeholders can apply the findings to reformulate education budgets to maintain progress towards achieving SDG 4 by 2030.

Pre-COVID-19 situation

The relative size of countries' education sectors prior to COVID-19 helps explain the priority governments' assign to the sector as well as the available resources to address the shocks caused by COVID-19. Countries with relatively low education budgets are generally at higher risk of falling education outcomes as those systems likely suffer the most from under-investment and reprioritization. On the other hand, countries with relatively higher education budgets likely have stronger, more resilient systems and a sufficient funding base to allow governments to better respond to the impacts of COVID-19 through funding reallocation or budget reprioritization. Figure 10 presents the countries' government education budgets relative to the guideline in UNESCO's Education 2030 Framework that governments commit at least 4 to 6 per cent of GDP to education. For the countries with available data, only Brunei, Malaysia, and Timor-Leste allocated more than the minimum target of 4 per cent of GDP to education. The other countries in the sub-region all had low education budgets prior to the negative shocks caused by COVID-19, especially Cambodia and Myanmar. The required responses to the COVID-19 shocks represent a large proportional increase in financing for these countries with low education budget baselines. Moreover, budget reprioritization away from the education sector would further undermine education outcomes in these countries with relatively low education budget baselines.

FIGURE 10 | EDUCATION BUDGETS RELATIVE TO UNESCO RECOMMENDATION, 2014-2019



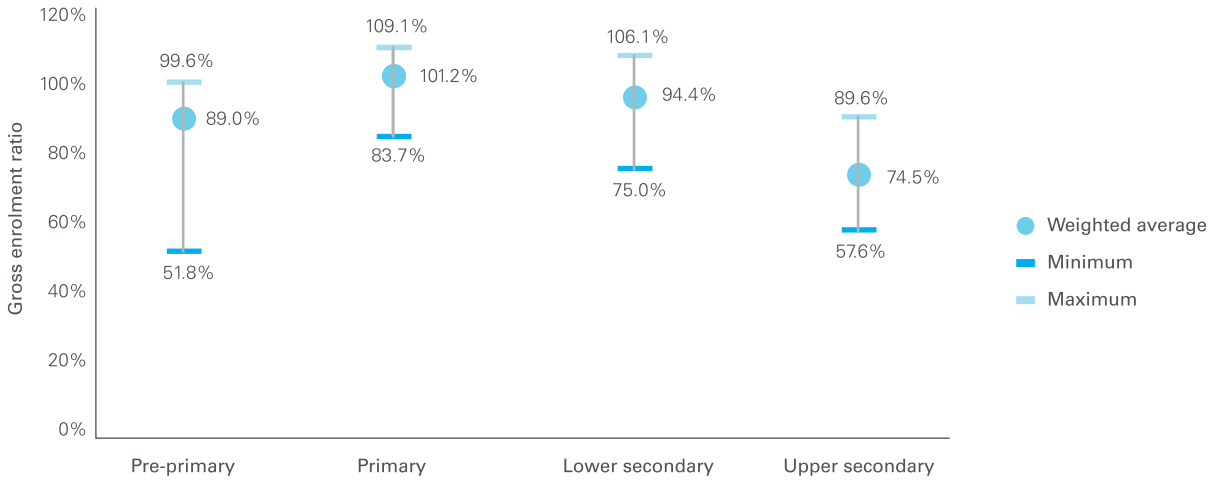
Source: UNESCO, 2021.[119]

The impact of COVID-19 on a country's education budget is linked to the level of education provision pre-COVID-19. The relative strength of an education system, measured in terms of enrolment characteristics and the stock of human and physical capital, helps determine the degree to which COVID-19 disrupted education services and necessitates structural changes to the system. For example, education systems with higher levels of human capital in the form of teaching staff are able to more readily (in terms of time and cost) implement social distancing measures.

Gross school enrolment ratios reflect the number of students affected by the disruptions caused by COVID-19 on the education sector. The relationship between enrolment and the budget impact of COVID-19 is therefore positive (i.e., the better the pre-COVID-19 situation in terms of higher enrolment ratios, the larger the budget impact caused by COVID-19 as more students are affected). Figure 11 presents the sub-regional gross enrolment ratios in 2019. The weighted regional average gross enrolment ratios are 89 per cent for pre-primary school, 101.2 per cent for primary school, 94.4 per cent for lower secondary school, and 74.5 per cent for upper secondary school. This indicates that a large proportion of children in the sub-region attend basic education institutions, being primary and lower secondary school. The data reveal that enrolment outcomes were lowest at the pre-primary and upper secondary school levels. As mentioned in section 2.4, enrolment in upper secondary school was typically low across all countries, with the lowest gross enrolment ratio of 57.6 per cent in Lao PDR.

The characteristics of the private education sector contribute to the impact of COVID-19 on the public education system. Previously, private sector education provision has helped to ease the resource burden on the public education system. While this remains true, many countries have seen a rapid reduction in private education provision as a result of the shocks caused by COVID-19, especially among low-fee private schools. In these cases, the private education sector poses a contingent public liability as privately enrolled students may return to the public-school system. Figure 12 presents the sub-regional enrolment in private schools in 2019. There are large deviations across countries, but overall, the private sector fulfils a significant role in education provision in Southeast Asia.

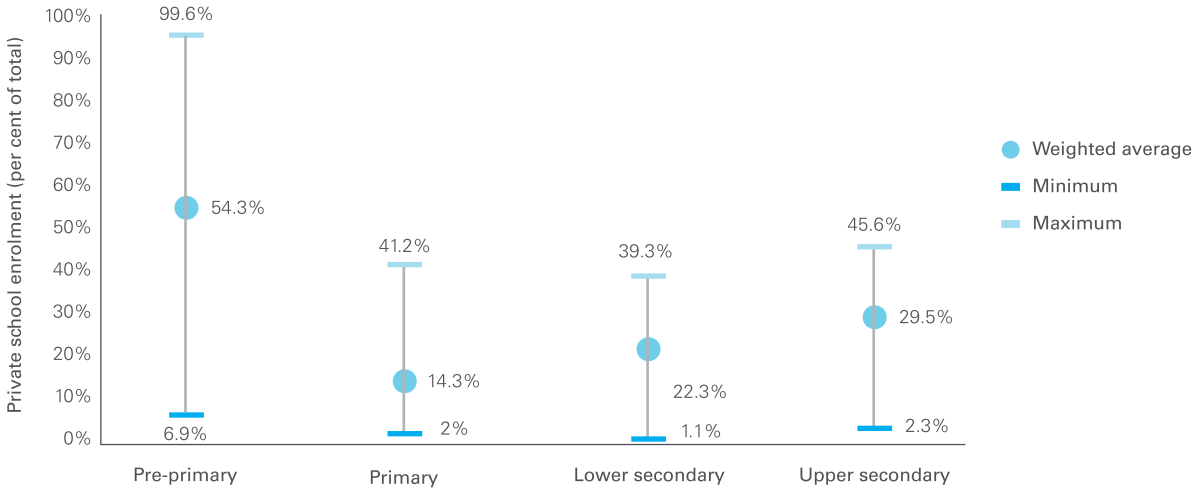
FIGURE 11 | GROSS ENROLMENT RATIOS FOR SOUTHEAST ASIAN COUNTRIES, 2019



Source: UNESCO, 2021.[120]

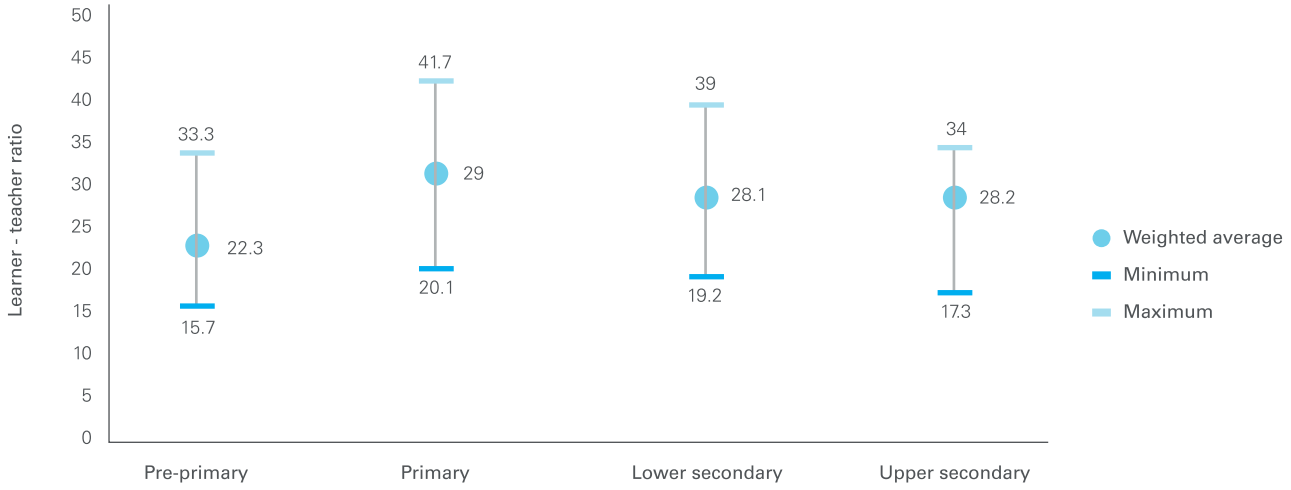
The learner-teacher ratio (LTR) has a significant bearing on the ability of countries to adhere to social distancing rules in classrooms, as well as the cost to achieve social distancing guidelines. Lower LTR mean that countries require relatively fewer, if any, additional teachers to achieve social distancing guidelines. There is thus a positive relationship between the LTR and the budget impact of COVID-19. In addition to the cost associated with the additional teachers, countries with high LTR may find it logistically difficult, at least over the short- to medium-term, to achieve the prescribed LTR. Figure 13 presents the sub-regional LTR outcomes in 2019. The best average LTR was 22.3:1 at the pre-primary level. The situation is worse for the remainder of the education levels. At the primary school level, the lowest LTR was 20.1:1 in Brunei Darussalam, with the highest LTR 41.7:1 in Cambodia. Although in normal times, a LTR of 30 or 40:1 is regarded as acceptable at upper-primary or secondary level, during the pandemic, having rates at these levels places additional pressure on the system to deliver alternative solutions to achieve social distancing, such as shifting, which reduces time on task and put additional stress on teachers.

FIGURE 12 | PRIVATE SECTOR SCHOOL ENROLMENT FOR SOUTHEAST ASIAN COUNTRIES, 2019



Source: UNESCO, 2021.

FIGURE 13 | LEARNER-TEACHER RATIOS FOR SOUTHEAST ASIAN COUNTRIES, 2019



Source: UNESCO, 2021.[121]

Estimated financial impact of COVID-19 on the education sector

To estimate the marginal impact of COVID-19 on education sector budgets through to 2030, when SDG 4 is hoped to be achieved, we developed an interactive Excel modelling tool called the 'COVID-19 Shock Model' that forms part of the project outputs. In contrast to the World Bank's (2021) micro-model, this is a macrosimulation model – similar to that applied in the Global Education Monitoring (GEM) Report – designed to estimate scenarios for education budgets.[122] The budget baselines for the model are set according to the pre-COVID-19 education budgets to achieve the SDG 4 targets by 2030, as generated by the UNESCO (2021b) Education Costing Model 2020 for Asia and the Pacific Region.[123]

There is still a high degree of uncertainty about the pandemic. First, the outbreaks and resultant disruptions caused by COVID-19 are unpredictable. Second, the effectiveness and rollout (specifically to developing countries) of vaccines is still to be determined. Third, there are ongoing data collection and validation exercises that continuously improve our understanding of the impacts of COVID-19 on the education sector. As such, the model is designed so that the financing scenarios are flexible. Users can interact with each variable, specifying the parameters based on: updated/verified data; an assumed baseline with stress tests; or a likely range. Given this functionality, although the parameters for the variables were fixed for this study, users can reapply the tool to effect any required changes. The financial scenarios presented below are therefore indicative of the potential magnitude of the impact of COVID-19 on education budgets.

The modelling exercise generates 3 potential scenarios to account for uncertainty: baseline; optimistic; and pessimistic. The baseline scenario should be viewed as the most likely and therefore the expected outcome, with the optimistic and pessimistic scenarios providing a range for the potential outcomes. The optimistic scenario assumes that COVID-19 has a less severe impact on the education sector. The pessimistic scenario assumes that COVID-19 has a severe impact on the education sector. While most countries in the region are preparing to include a blended approach to the delivery of education, making more effective use of technology going forward, technology costs have not been factored into the model due to uncertainty around how countries will take this forward and the range of inputs needed to achieve this.

The model obviously has its limitations. First, in order to remain both user-friendly and transparent the model relies on a limited number of variables. Although care was taken to select a comprehensive set of key variables, there may be some financial implications of COVID-19 that have been omitted. In this event, users should regard the results as a base for the financial impacts of COVID-19 from which to add the impact of missing variables. This point likely explains many of the estimation differences between this and other models. Second, the model is intended to approximately quantify the long-term budgets needs to maintain progress towards SDG 4 by 2030 and therein guide investment cases. Hence, the model does not lend itself to in-year budget/programme planning. Third, the model's focus is limited to pre-primary, primary, lower secondary, and upper secondary education. This resulted in omissions to the SDG 4 targets related to tertiary education, skills for work, adult literacy, education for sustainable development and global citizenship, and scholarships. The methodology is expanded on in Annex A.

Based on the model specifications detailed in Annex A.1, we estimate the marginal impacts that COVID-19 will have on countries' education budgets. It is important to highlight that the values presented in this section do not represent the total education budgets, but rather the additional budgets that countries are likely to require to respond to COVID-19 and still be in a position to achieve the noted SDG 4 targets by 2030. The results are unfortunately not reported for the Philippines due to missing data within the UNESCO database.[124]

Total budget impact

The estimated value of the additional budgets that countries require to respond to COVID-19 are shown in Table 4. This indicates the cumulative quantum of the COVID-19 shock, as it stood at the end of February 2021. The large variations across countries are representative of the relative size of the countries in the sub-region, as well as the particular impacts of COVID-19 on their education system. As noted in Section 2.6, the budget shocks are a function of the severity of the school closures and the status and capacity of education systems pre-COVID-19. Weaker education systems, for example those with higher learner-teacher ratios, require more resources to respond to COVID-19 in line with parameters set for the model. The value of the budget shocks, for the 10 years from 2020-2030, range from $145 million in Timor-Leste to $36.5 billion in Indonesia in the baseline scenario. The shocks are still large but less severe in the optimistic scenario, ranging from $116 million in Timor-Leste to $28.5 billion in Indonesia. The budget shocks severely increase in the pessimistic scenario relative to the baseline scenario, with a range of $268 million in Timor-Leste to $66.7 billion in Indonesia. These variations between the scenarios signal the downside risks associated with the pandemic.

Relative budget impact

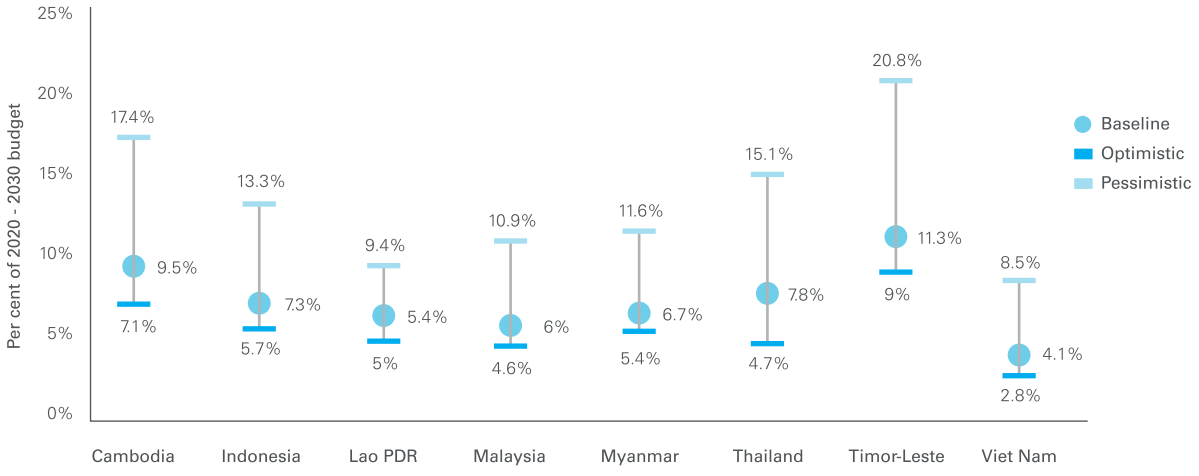
The budget shocks presented in Table 4 are contextualized in Figure 14 as a proportion of countries' cumulative education budgets from 2020-2030. This indicates the relative budget impact of COVID-19 under each scenario. Unfortunately, the results are not presented for Brunei Darussalam due to missing budget data in the UNESCO model.[125] For the baseline scenario, the impacts of COVID-19 have extended countries 2020-2030 education budgets by 4.1 per cent in Viet Nam to 11.3 per cent in Timor-Leste. The relatively good outcome in Viet Nam is largely due to the small amount of enforced school closures. The budget shocks are still proportionally large in the optimistic scenario, ranging from 2.8 per cent of the 2020-2030 budget in Viet Nam to 9 per cent of the 2020-2030 budget in Timor-Leste. The results from the optimistic scenario indicate that even under an optimistic scenario many countries will still face large proportional budget shocks over their previously planned budgets to achieve SDG 4 by 2030. The impacts increase dramatically if the pessimistic scenario is closest to the eventual outcome, with Cambodia (17.4 per cent), Indonesia (13.3 per cent), Thailand (15.1 per cent), and Timor-Leste (20.8 per cent) facing the largest potential impacts. Overall, the average budget impact for the sub-region is 7.3 per cent in the baseline scenario, 5.5 per cent in the optimistic scenario, and 13.4 per cent in the pessimistic scenario.

TABLE 4 | ESTIMATED MARGINAL BUDGET INCREASE TO RESPOND TO COVID-19

COUNTRY	US$ (MILLIONS)		
	BASELINE SCENARIO	OPTIMISTIC SCENARIO	PESSIMISTIC SCENARIO
Brunei Darussalam	252	191	524
Cambodia	1,240	928	2,265
Indonesia	36,534	28,459	66,685
Lao PDR	771	709	1,346
Malaysia	8,042	6,124	14,516
Myanmar	3,369	2,721	5,799
Thailand	14,745	9,016	28,668
Timor-Leste	145	116	268
Viet Nam	5,925	4,002	12,249

Source:COVID-19 Financial Shock Model, 2021.

FIGURE 14 | ESTIMATED IMPACT OF COVID-19 ON THE CUMULATIVE EDUCATION BUDGETS FROM 2020 TO 2030



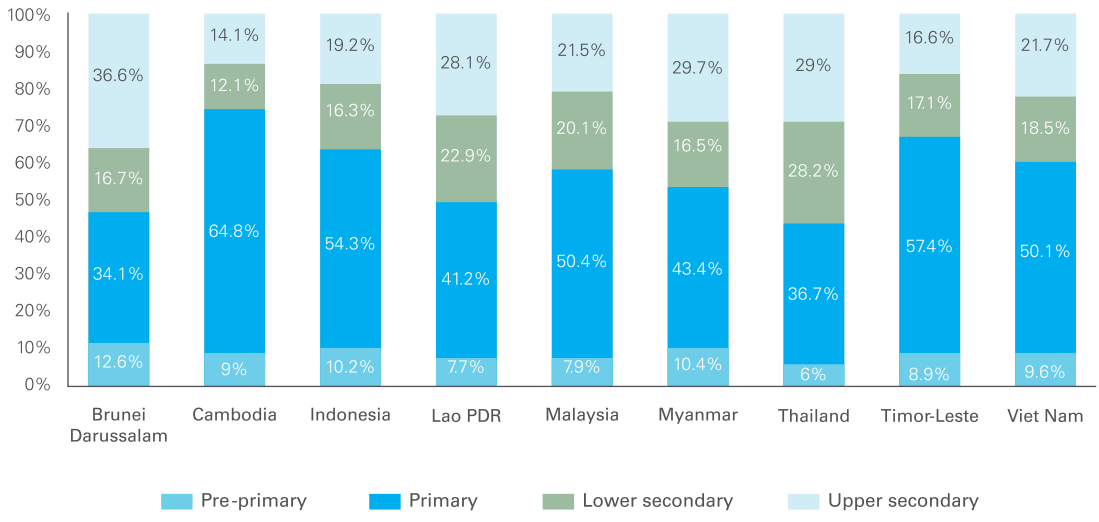
Source: COVID-19 Financial Shock Model, 2021.

Source of the budget shocks

The source of the budget shocks is explained in Figure 15 to 18 for the baseline scenario. Figure 15 disaggregates the total marginal budget impact of COVID-19 according to the level of education. Pre-primary school is consistently the smallest component of the budget shock, due in large to the fact that this level only comprises 1-year of teaching for this modelling. However, despite accounting for a small proportion of school years (typically 1 out of 12-13 years) the budget impacts at the pre-primary level are significant, especially in Brunei Darussalam (12.6 per cent), Indonesia (10.2 per cent), and Myanmar (10.4 per cent). Except for Brunei Darussalam, the largest component of the budget shock across the sub-region is primary school, reaching 64.8 per cent of the total budget shock in Cambodia. This is due to a combination of primary school forming most of the total school years for all countries and generally high learner-teacher ratios. The proportion of the budget shocks attributable to lower secondary school range from 12.1 per cent in Cambodia to 28.2 per cent in Thailand. The proportion of the budget shocks attributable to upper secondary school range from 14.1 per cent in Cambodia to 36.6 per cent in Brunei Darussalam. The explanation for the different distribution of the budget shocks in Brunei Darussalam, wherein the largest shock is for upper secondary school, is due to the relatively high degree of private provision which poses a contingent liability to the public school system as COVID-19 causes students to shift back to public schools.

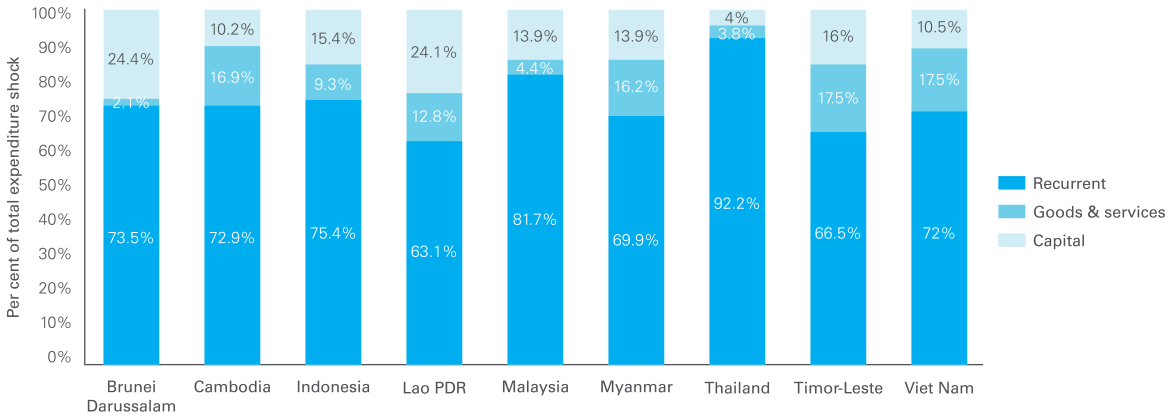
Figure 16 disaggregates the total budget impacts according to the economic classification of the expenditure items. The recurrent expenditures include remediation costs, the cost to incorporate students shifting from private to public schools, the cost to re-enrol students who have dropped out of school, and the cost of teachers for social distancing. The goods and services expenditure include teacher training costs, hygiene and cleaning products and services, teacher support systems, and nutrition programmes. The capital expenditures include WASH infrastructure. This information helps with budgeting and indicates potential financing sources for the budget impacts. For example, recurrent expenditures should ideally be funded through a sustainable, long-term mechanism such as tax revenues while capital expenditures are also appropriate for deficit financing. Recurrent expenditures comprise the bulk of the budget shocks, ranging from 63.1 per cent in Lao PDR to 92.2 per cent in Thailand. Capital expenditures are generally the next largest expenditure component, with goods and services comprising a minor share of the budget shock. This information signals that the COVID-19 impacts are human-resource intensive, with some countries also requiring significant investment in WASH infrastructure.

FIGURE 15 | ESTIMATED MARGINAL BUDGET IMPACT OF COVID-19 IN BASELINE SCENARIO, BY SCHOOL LEVEL



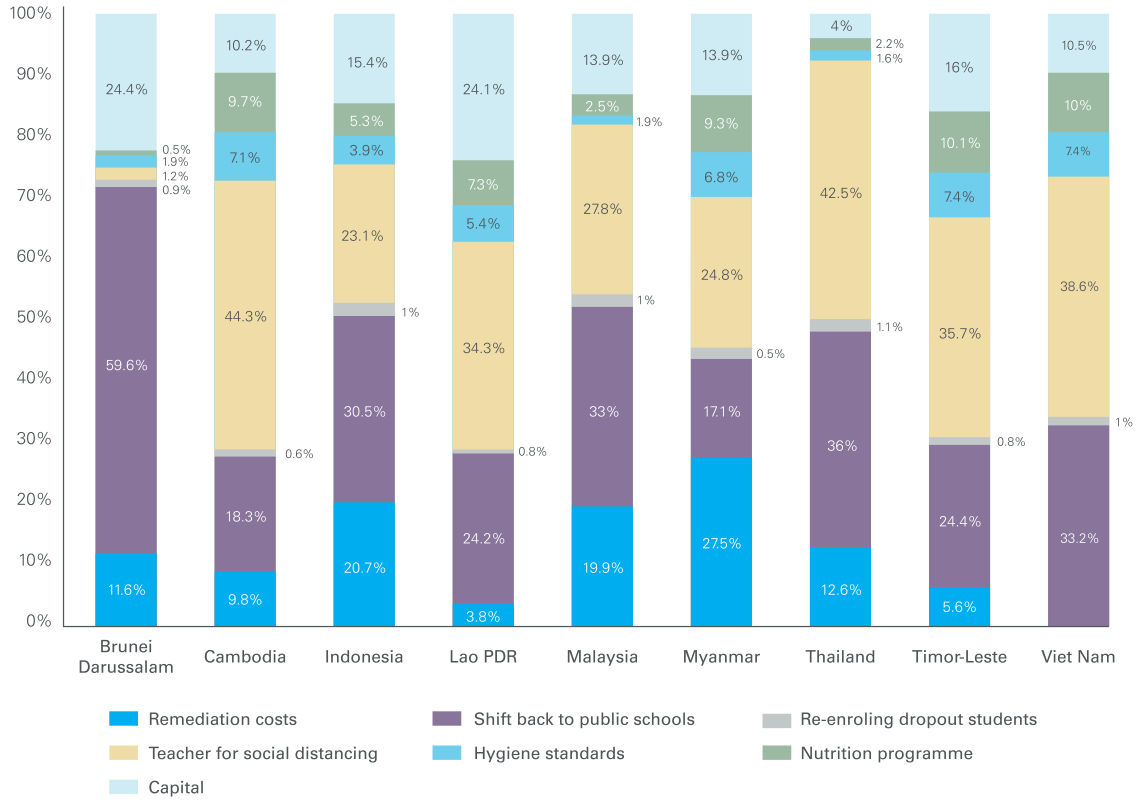
Source: COVID-19 Financial Shock Model, 2021.

FIGURE 16 | ECONOMIC CLASSIFICATION OF THE COVID-19 BUDGET IMPACTS IN THE BASELINE SCENARIO



Source: COVID-19 Financial Shock Model, 2021.

FIGURE 17 | COVID-19 BUDGET IMPACTS DISAGGREGATED BY ACTIVITY IN THE BASELINE SCENARIO



Source: COVID-19 Financial Shock Model, 2021.

Figure 17 disaggregates the total budget impacts according to activity. This information identifies the specific activities that drive the magnitude of the budget impacts in each country, and thereby also helps to explain differences in relative size of the budget shocks across countries in the sub-region. The most significant activities in descending order of impact are social distancing, accommodating students shifting back from private schools, remediation, and investment in WASH infrastructure. These four activities largely drive the budget impacts of COVID-19. For all countries the costs associated with re-enroling students who have dropped out and hygiene standards are minor components of the overall budget impact.

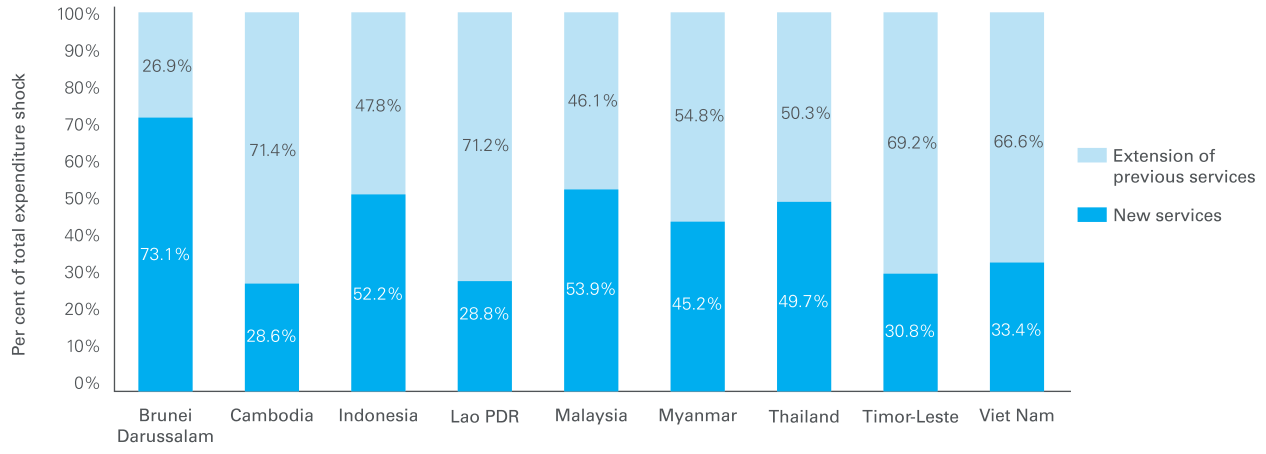
Figure 18 disaggregates the total budget impacts according to whether the expenditures are an extension of currently provided services or new services. The previously provided services cover remediation costs, the transferred costs for students shifting from private to public schools, and the cost to re-enrol students that dropped out as a result of COVID-19. The new services cover the social distancing measures, all goods and services related to COVID-19 protocols such as PPE and hygiene products, teacher support programmes, and the additional maintenance costs associated with the expedited WASH investments. This distinction between previous and new services is important as it identifies which costs are potentially discretionary, being the new services. Countries have potentially more agency over whether to approve the budget increases associated with new services, while the extension of previous services is in many ways a contingent liability. In general, the budget shocks are approximately evenly split between previous and new services. The proportion of the budget shocks attributable to previous services ranges from 28.6 per cent in Cambodia to 73.1 per cent in Brunei Darussalam. The high proportion of new services in Cambodia, Lao PDR, and Timor-Leste are largely due to the high number of teachers that are required to achieve social distancing guidelines, as per Figure 17. The high proportion of new services in Viet Nam is due to the fact that remediation is only a small proportion of the total cost due to the relatively short length of the school closures.

Affordability of COVID-19 related expenditure

In line with the modelling results presented in Annex A.1, UNICEF highlight that 95 per cent of the 149 surveyed countries reported that additional financial resources were required to ensure an adequate response to COVID-19 for education.[126] UNICEF notes that when these financing needs were fully or partially met, this was commonly funded in low- and lower-middle-income countries through a combination of additional domestic financing and external donors, and in high-income countries through budget reallocations.[127] Given the need to accommodate these financial pressures on the education sector within the context of severe resource constraints, as per the weak economic growth outcomes shown in Figure 9, it is important to review the fiscal space available to countries. To do so we apply the fiscal space framework developed by the IMF, which uses the following four pillars to explore the potential to finance the budget impacts of COVID-19 on the education sector: domestic revenues mobilization; deficit financing; official development assistance; and reprioritization and efficiency of expenditures.[128]

Fiscal space studies generally develop a macro-model for forecasting fiscal space in a country under different scenarios, developing scenarios for correcting the fiscal under-performance related to each of the above pillars. The reliability of such forecasting models depends heavily on

FIGURE 18 |DISAGGREGATION OF THE COVID-19 BUDGET IMPACT BY EXISTING AND NEW SERVICES IN THE BASELINE SCENARIO



Source: Costing Model (COVID-19 Shock Model).

© UNICEF/UN0379134/Bea

the rigour of the exercise, the quality of the macroeconomic and fiscal data, and the existence of predictable relationships between variables. Given the scope of this exercise, we limit our findings to a high-level assessment of key indicators associated with the pillars without proving a specific quantum for how much funding each pillar might generate.

Domestic revenues mobilization

Table 5 shows that all of the countries in the sub-region experienced a growth shock in 2020 due to the effects of the COVID-19 pandemic, ranging from-8.3 per cent in the Philippines to 2 per cent in Myanmar. Following this shock all of the economies in the sub-region are forecast to rebound with 5.5 per cent average annual real GDP growth from 2021 to 2025. However, the real GDP growth rates are forecast to remain relatively subdued for Brunei Darussalam, Indonesia, Lao PDR, Malaysia, Thailand, and Timor-Leste.

These subdued macroeconomic outlooks dampen the potential that tax windfalls could finance the budget impacts of COVID-19 on the education sector.

In addition to potential tax windfalls associated with high rates of economic growth, countries may wish to investigate the option of financing the COVID-19 budget impacts through additional tax revenues. In this regard, Table 6 presents the relative size of tax revenue collections in each country. Brunei Darussalam, Myanmar, Timor-Leste and Viet Nam had either relatively stable or increasing tax collections prior to COVID-19. However, tax revenue as a per cent of GDP fell from 2016 to 2018/19 in Cambodia, Indonesia, Lao PDR, Malaysia, Philippines, and Thailand. These falling tax revenues in combination with the generally moderate tax rates signal that there may be room to raise additional domestic revenues.

TABLE 5 | REAL GDP GROWTH, 2019 – 2025

COUNTRY	2019	2020	2021	2022	2023	2024	2025
Average	4.7%	-3.3%	6.1%	5.5%	5.4%	5.3%	5.2%
Brunei Darussalam	3.9%	0.1%	3.2%	3.7%	2.3%	2%	1.8%
Cambodia	7%	-2.8%	6.8%	7.3%	7.4%	7.4%	6.9%
Indonesia	5%	-1.5%	6.1%	5.3%	5.2%	5.1%	5.1%
Lao PDR	5.2%	0.2%	4.8%	5.6%	5.8%	5.8%	6.1%
Malaysia	4.3%	-6%	7.8%	6%	5.7%	5.3%	5%
Myanmar	6.5%	2%	5.7%	6.2%	6.4%	6.5%	6.5%
Philippines	6%	-8.3%	7.4%	6.4%	6.5%	6.5%	6.5%
Thailand	2.4%	-7.1%	4%	4.4%	4.3%	4.3%	3.7%
Timor-Leste	3.1%	-6.8%	4%	4.8%	2.4%	2.6%	2.6%
Viet Nam	7%	1.6%	6.7%	7.4%	7.2%	6.9%	6.6%

Source: IMF, 2021.

TABLE 6 | TAX REVENUE AS A PER CENT OF GDP, 2016 – 2019

COUNTRY	2016	2017	2018	2019
Average	9.1%	11.1%	16.9%	10.3%
Brunei Darussalam	14.8%	15.8%	17.2%	-
Cambodia	11.6%	11.1%	11.5%	11%
Indonesia	12.5%	12%	11.2%	-
Lao PDR	13.6%	13%	12%	12%
Malaysia	7.1%	7.1%	7.1%	6.8%
Myanmar	14.6%	15.1%	15.7%	16.1%
Philippines	13.8%	13.1%	12.9%	13.3%
Thailand	8.9%	7.9%	8.1%	-
Timor-Leste	14.4%	14.5%	-	-
Viet Nam	9.1%	11.1%	16.9%	10.3%

Source: IMF, 2021.

TABLE 7 | GOVERNMENT GROSS DEBT AS A PER CENT OF GDP

COUNTRY	2019	2020	2021	2022	2023	2024	2025
Average	49%	55.8%	58.6%	59.2%	59.4%	59.3%	59.1%
Brunei Darussalam	2.6%	3.2%	2.9%	2.7%	2.6%	2.6%	2.5%
Cambodia	28.6%	31.5%	31.4%	32.1%	33.4%	35.1%	36.9%
Indonesia	30.5%	38.5%	41.8%	43.2%	43.3%	43.2%	43.1%
Lao PDR	62.6%	70.9%	70.7%	70.6%	70%	68.8%	67.4%
Malaysia	57.2%	67.6%	66%	65%	64.1%	63%	62%
Myanmar	38.8%	42.4%	45.2%	47%	48.4%	49.7%	50.5%
Philippines	37%	48.9%	52.5%	55%	57%	58.4%	59.3%
Thailand	41.1%	50.4%	56.4%	56.1%	56.9%	56.9%	56.9%
Timor-Leste	11.4%	11.7%	15.6%	17.7%	19.5%	21.6%	23.3%
Viet Nam	43.4%	46.6%	47.1%	47.2%	46.9%	46.4%	45.6%

Source: IMF, 2021.

Deficit financing

Deficit financing is another option to fund the COVID-19 budget impacts, especially the capital expenditure portions. The countries in the sub-region have moderate levels of gross government debt. Importantly, the debt levels are forecast to remain relatively stable over the medium-term – with debt levels in 2025 above 60 per cent of GDP in just Lao PDR (67.4 per cent of GDP) and Malaysia (62 per cent of GDP). As such, deficit financing is an option to help these countries absorb the budget shock caused by COVID-19.

Official development assistance

Countries could either utilize official development assistance to directly fund the budget impacts caused by COVID-19 on the education sector, or to fund expenditure in another sector and then redirect those funds towards the education sector. Given the relatively limited value of official development assistance, it is likely that this pillar could only partially fund the budget impacts. Official development assistance is also often limited to specific programmes such as feeding schemes for vulnerable children, and capital expenditures such as WASH infrastructure. As such, countries should not rely on this pillar to fund recurrent expenditures like compensation of employees or procurement of goods and services. Another consideration is the potential influence of lending institutions over countries' public policies and programmes, especially for countries with weak domestic revenue systems. This external influence might fragment policymaking and lead to inefficiencies.

Table 8 presents the official development assistance status for the countries in the sub-region. All countries within the sub-region are eligible for International Bank for Reconstruction and Development (IBRD) funding. However, most of the countries are ineligible for International Development Assistance (IDA) funding due to their relatively high gross national income levels and creditworthiness to borrow on markets. Only Cambodia, Myanmar, and Timor-Leste can access IDA funding.

Conclusions from the financial section

The importance of education within the sub-regional development policy is emphasized by the demographic situation. Countries can be classified into four categories based on demographic characteristics and future development potential: pre-dividend (high fertility rates); early-dividend (declining fertility rates); late-dividend (low fertility rates); post-dividend (below-replacement fertility rates). According to the United Nations Population Fund, the demographic dividend is the economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population.[129] In other words, countries in the early-dividend and late-dividend stages can experience a boost in economic productivity as there are increasing numbers of people in the workforce relative to the number of dependents. Alternatively, countries in the post-dividend stage have high dependency ratios, with a shrinking share of working-age people.

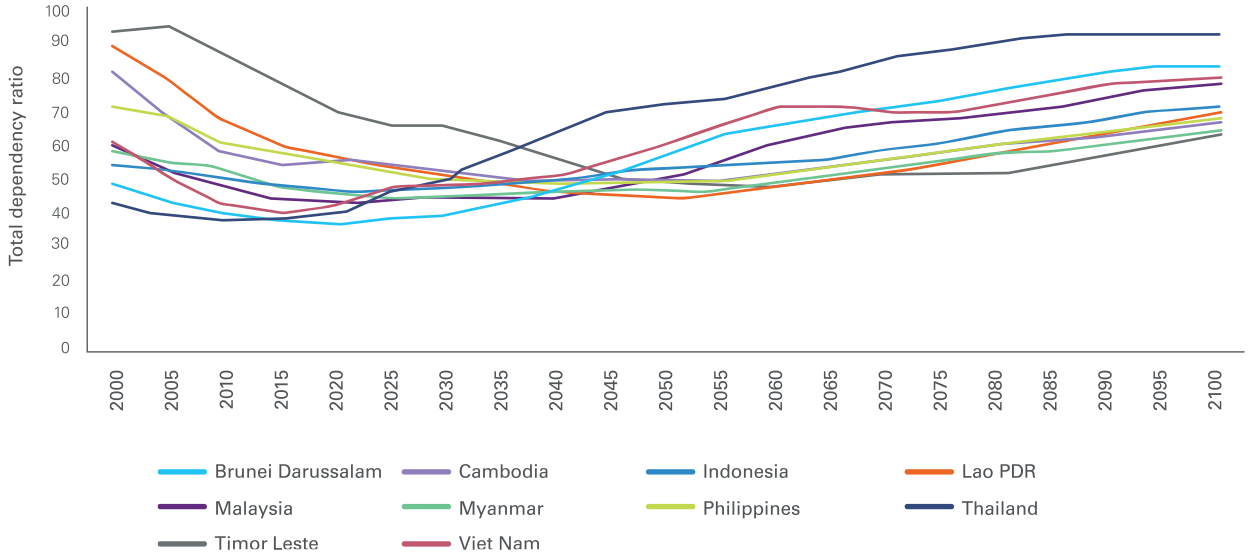
The opportunity to reap demographic dividends occurs during a limited window that closes as the working population ages. In addition to the timing of countries' transition to the late-dividend and post-dividend stages, the importance of education investment is further emphasized by the degree to which the dependency ratios (the ratio of those not in the labour force to those in the labour force – i.e., the pressure on the productive population) are set to increase. Figure 19 shows that the dependency ratios are set to rise significantly for most countries in the sub-region from around 2050. However, the dependency ratios have already started to rise – and will continue to do so at a relatively rapid rate – in Brunei Darussalam and Thailand. This places extreme importance on the human capital development of the current cohort of children, who will begin to enter the labour force and remain part of the working-age population until up to 2082.

TABLE 8 | OFFICIAL DEVELOPMENT ASSISTANCE STATUS, 2020

COUNTRY	ELIGIBILITY FOR IDA FUNDING	ELIGIBILITY FOR IBRD FUNDING
Brunei Darussalam	Ineligible	Eligible
Cambodia	Eligible	Eligible
Indonesia	Ineligible	Eligible
Lao PDR	Ineligible	Eligible
Malaysia	Ineligible	Eligible
Myanmar	Eligible	Eligible
Philippines	Ineligible	Eligible
Thailand	Ineligible	Eligible
Timor-Leste	Eligible	Eligible
Viet Nam	Ineligible	Eligible

Source: UNESCO, 2021.

FIGURE 19 | DEPENDENCY RATIOS, 2000 – 2100



Source: United Nations, 2021.

The early- and late-dividend stages for most countries in the sub-region potentially offer to boost economic productivity. However, decreased fertility rates do not automatically result in the economic benefits associated with a demographic dividend. To realize the benefits countries must invest in the appropriate policies and programmes. The World Bank explain that education attainment is critical as it has implications for the future labour supply, and hence potential output. Potential dividends will be constrained if countries fail to ensure that children can access quality education and nutrition that enables them to be employed in high-productivity jobs.[130] Moreover, if countries fail to adequately invest in education then the upcoming bulge in the labour force may pose an unemployment and fiscal problem, wherein the skills mismatch could force a high number of workers either into the informal sector or out of the labour force and thus out of the income tax net. Linked to this problem is also a social protection liability, which is amplified by the rising dependency ratios.

Although COVID-19 has resulted in significant expenditure pressures on the education sector, it is critical that countries prioritize these demands. The marginal shocks to the education budgets must be viewed in relation to the opportunity costs of neglecting these expenditures. In addition to strengthening the social contract between government and citizens by protecting access to education, which is a key social service, countries also risk foregoing potential demographic dividends if they fail to strengthen their education systems to catch up the lost learning and provide a safe environment for children to return to school. These dividends and a strong social contract will help to generate additional future tax revenues, which will offset (if not fully cover) the financing currently required to respond to COVID-19. Moreover, supporting quality education may generate potential expenditure savings by avoiding costly alternative welfare support programmes. Given these considerations, the countries should investigate all available revenue sources – even deficit financing – to ensure that the education sector has sufficient resources to respond to the shocks presented by COVID-19.

In terms of building education systems back better, the negative budget shocks imposed by COVID-19 may provide the required impetus and financing to raise the historically low education budgets in some countries towards the 6 per cent of GDP targeted by UNESCO. This would rapidly shift the sub-region towards the social states achieved in Europe, where it took 100-years to increase education budgets from 2 per cent of national income in 1910 to 6 per cent in 2010.[131]

03

Challenges, positive responses and lessons learned during the pandemic

The burden of the COVID-19 pandemic is bearing down more heavily on women, girls, marginalized populations, and those at the lower levels of the economic pyramid. The pandemic has made more evident economic and social inequities that have long existed and in recent times, become starker.[132] Five common challenges were identified during this situation analysis and are presented in this Chapter along with examples of positive responses and the lessons learned:

1. Reopening schools safely
2. Delivering equitable and quality distance learning during full or partial school closures
3. Existing low levels of learning and the learning divide
4. Health, well-being and protection
5. Low prioritization of pre-primary and early childhood education.

Countries have had to respond rapidly to this crisis and the situation analysis found good examples in all the case study countries of positive responses to tackle these inequities and try to ensure continuity of learning for all. Countries across the sub-region have learned valuable lessons about the levels of resilience of their education, health and social service systems and how these interact. The lessons learned are used in Chapter 5 to present recommendations for governments and partners to consider going forward.

3.1 Reopening schools safely

As Figure 3 shows, schools in more than half of the sub-region are still not fully open and governments continue to grapple with the challenges related to opening and reopening safely (Box 1).

First and foremost, school reopening is about ensuring every child's right to education, so they can learn and obtain the necessary skills for the future. In addition, it is particularly important as associated services may be lost (such as school feeding, health monitoring, vaccination, reproductive health information, counselling).

School reopening can help break cycles of oppression such as domestic violence, girl's domestic exploitation, early marriage, online cyberbullying and sexual predation. Breaking learner isolation can also mark improvements in mental health as well as provide support for children with disabilities who will need extra accommodation. These issues are covered in Section 3.4.

School reopenings must be safe and consistent with each country's overall COVID-19 health response, with all reasonable measures taken to protect students, staff, teachers and their families.

1. A primary concern in countries of Southeast Asia has been on the development of guidelines and procedures concerning the safe operations for reopening of schools to protect school communities from risk of infection and in the communication of health protection messages to communities.
2. Despite well-managed WASH facilities being a key requirement for safe reopening, this remains an ongoing challenge in many Southeast Asian countries.

What schools need to be able to do to open

1. Put in place and maintain standard operating procedures.
2. Mitigate for the absence of water, sanitation and hygiene facilities in many schools.
3. Ensure parents and children are able to play their part in keeping the school safe.
4. Provide data on implementation of procedures.
5. Have financial resources to implement the plans.

This was reinforced at the webinar held by UNICEF and UNESCO with stakeholders from across Southeast and East Asia to share the findings of this report. The key challenge identified in keeping schools safely open was ensuring adequate WASH facilities are in place as well as infection prevention and control measures. The second most common key challenge was addressing Mental Health and Psychosocial Support (MHPSS) issues. The second challenge is considered in section 3.4.

Challenges

System planning and monitoring

In general, governments acted quickly to put plans in place in relation to continuity of learning while keeping learners safe. National responses needed to be interpreted by local authorities and this was undertaken well where there is good decentralized decision making (Indonesia, Viet Nam) but this was often hampered by insufficient extra budgets, a lack of disaggregated data collection and analysis of data for planning and no time/budget for immediate monitoring, particularly for more rural and isolated locations. What was learned is that collaboration and wide participation is essential in policy drafting, budget allocation/re-distribution and in implementation on the ground.

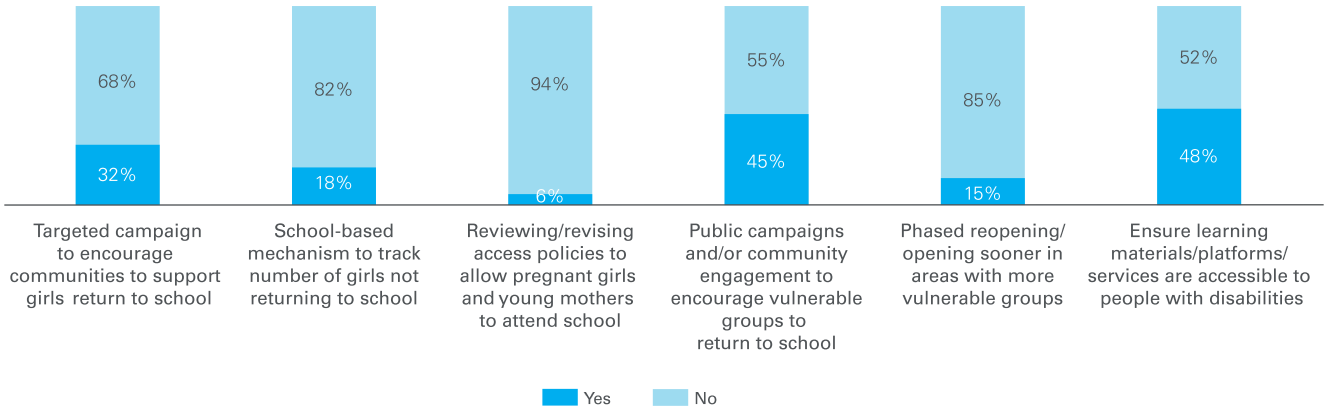
Much national guidance was available (adapted from the Framework for Reopening Schools),[133] but the uniqueness of each school and community and the differing and changing level of community transmission of the virus, left school managers with a number of challenges. Responses included phased reopening, perhaps for limited Grades (e.g., exam classes) and staggered classes for safe distancing. Some schools remained open only for children of key workers (e.g., in Viet Nam).

Communication

Despite a wide range of methods being used for providing health and safety messaging, evidence suggests that the most marginalized, who are also often the most vulnerable to COVID-19 (depleted immune system), are least likely to have good access to these messages. Experiences from past crises have shown that girls are at higher risk of not returning to school after periods of extended closure, while present monitoring of learners returning to school is at best inconsistent. Governments can implement a number of initiatives to influence parents to send their girls back to school. However, the data from a UNICEF survey shows how few countries are attending to this type of gender analysis and action (Figure 20).[134]

EFFECTIVE PANDEMIC PREPAREDNESS AND RESPONSE PLANNING REQUIRES:

FIGURE 20 | PERCENTAGE OF GOVERNMENTS IMPLEMENTING INITIATIVES TO ENCOURAGE RE-ENROLMENT OF VULNERABLE AND MARGINALIZED CHILDREN



Source: UNICEF Education Tracker Survey, 22 June 2020

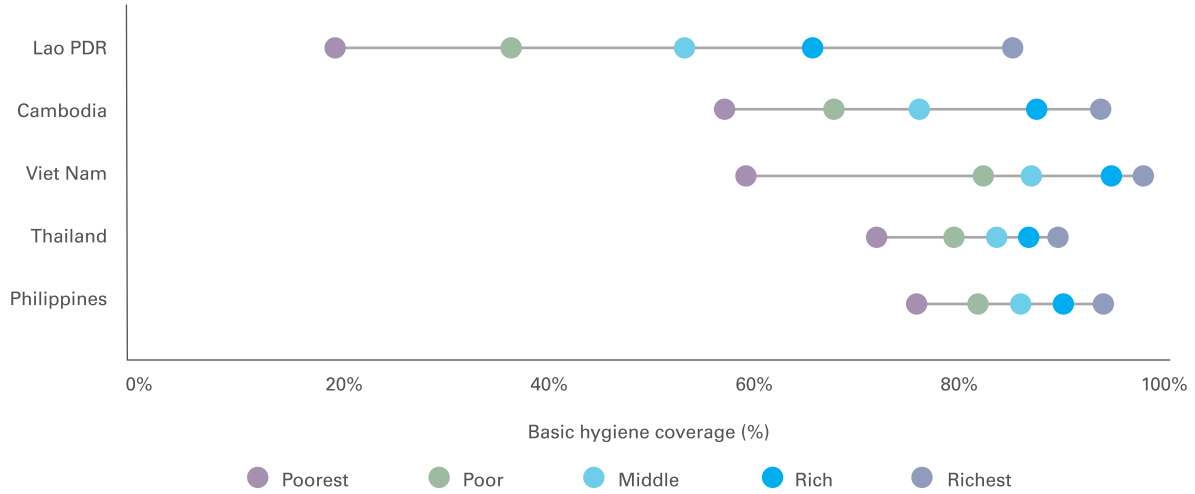
WASH facilities

School reopening criteria seeks to balance the immediate health and safety of children and teachers with the detrimental effects of school closures on learning, enrolment, children's well-being and protection. For a school to be safe on reopening, there must be adequate WASH facilities and sufficient space for social distancing. As discussed in Chapter 2, the pandemic has shown inequalities in access to drinking water, sanitation and hygiene facilities within countries and across the sub-region.[135]

Lack of access to basic water, sanitation and hygiene (WASH) facilities in the region is likely to be compounded by the Mekong drought, which has severely impacted Thailand and Viet Nam. High costs of water and physical and safety access issues are likely to affect urban slum-dwellers, particularly women, children, persons with disabilities and the elderly. Women and girls experience a disproportionate burden from inadequate water and sanitation facilities, due to both physiological differences such as menstruation, and gender norms that require them to clean, cook and collect the household water (placing them at greater risk of gender-based violence). Additionally, many WASH facilities also do not cater to the accessibility and needs of persons with disabilities.[136]

In terms of WASH facilities at home, disparities are particularly noticeable between the poorest and richest homes (Figure 21), especially in Lao PDR, Cambodia and Viet Nam.[137]

FIGURE 21 | AVAILABILITY OF HANDWASHING FACILITIES AT HOME BY WEALTH QUINTILE IN SOUTHEAST ASIAN AND THE PACIFIC REGION (2017)



In the Philippines, education unionists commented that, "Frequent handwashing will be especially challenging as most of us do not have or have limited access to clean running water at school; and infections will likely go unchecked due to the lack of nurses in schools."[138]

Case study findings: In Indonesia 41 per cent of schools have no or limited hygiene facilities, and 59 per cent lack adequate sanitation.[139] Only 6 per cent of schools were initially eligible to reopen due to a range of factors that included availability and quality of WASH facilities. While the Government continues efforts to ensure the availability of WASH facilities in schools, the current budget for WASH support stands at 10,000 schools per annum, while there are over 500,000 education units (schools and learning centres) in the country.[140]

Case study findings: In Viet Nam awareness among families of handwashing was good, yet there was a lack of access to safe water in some areas which posed a serious hygiene challenge for families and children to prevent the transmission of COVID-19. In the Central Highlands and Mekong Delta regions, 30 per cent of schools in these regions did not have running water and other safe hygiene and sanitation measures and the Southern provinces had reduced access to safe water due to drought and Central areas due to flooding.[141]

In Lao PDR only 66 per cent of primary schools had both water supply and latrine facilities in 2017[142] despite a decade-long collaboration between the MoE and MoH to ensure all schools have safe access to water and sanitation.[143]

Most countries adapted the global framework for reopening schools which includes increasing ventilation and screening students and staff for COVID-19 symptoms.[144] Other measures included regular temperature checks, often at the school entrances, being instituted to identify those with a fever, for example in Cambodia, Lao PDR and Viet Nam.

Positive responses

System planning and monitoring

There was evidence of Government response plans and cross-sectoral collaboration across the sub-region. A rapid review of the national pandemic response plans in Southeast Asia conducted as part of this situation analysis shows that these were largely developed by Ministries of Education in collaboration with UN agencies such as UNESCO and UNICEF or with task forces made up of stakeholders with varying degrees of collaboration with other ministries. There is some good demonstration of collaboration between the Ministry of Education (MoE) and Ministry of Health (MoH).

In Cambodia the MoE took its guidance from the MoH and WHO.[145] Under Government guidelines all public and private education institutions are required to cooperate with health officials to design regular monitoring and inspection system in education institutions and ensure implementation of school health and safety measures.[146] Collaboration with other NGOs and international organizations to strengthen child protection measures e.g., the Ministry of Social Affairs, Veterans and Youth Rehabilitation, and the National Child Protection in Emergency Coordination Group, including UNICEF and several NGOs, developed a new Child Protection in

Emergency Contingency Plan for 2020-2021, to include COVID-19 plans for education, including for school reopening. It provided clear standards and operating procedures on when, what, how, and who should be doing what before, during, and after a disaster.[147] In the Philippines the Department of Education coordinated with the Department of Health (DoH) for the implementation of DoH guidelines, particularly concerning decisions on school lockdowns.[148]

Case study findings: Viet Nam is noted for its speed of response to the pandemic based on the establishment of effective health structures and a well-developed public health system following the countries experience of SARS in 2003. The MoH instructed relevant government agencies prior to the first case. Local authorities were given the power to lock down villages where necessary. One challenge faced by the Ministry of Education and Training (MoET) was how to coordinate with the MoH and other ministries on a daily basis given changes in transmission rates.[149] The Government of Viet Nam and UNICEF developed a cross-sectoral preparedness and response plan which covers five priority areas: (i) risk communication and community engagement (RCCE); (ii) provision of critical medical and water, sanitation and hygiene (WASH) supplies and improving Infection Prevention and Control (IPC); (iii) provision of continued access to essential healthcare and nutrition services including case management; (iv) access to continuous education, social protection, child protection and gender-based violence services; and (v) data collection and social science research on the social impacts of COVID-19.[150]

Case study findings: In Indonesia, the cross-sector Government Task Force established a red-yellow-green classification system for each local area which was available as an online dashboard. This depended on a range of epidemiologic, public health and health system capacity criteria, informing decisions on intensifying and easing restrictions.[151] The Ministry of Education and Culture (MoEC) and Ministry of Religious Affairs (MoRA) used this rating system to assess areas that were safe to reopen schools, starting with schools in the green zones (6 per cent of schools), and then the yellow zones (43 per cent of the student population). It is important to note that even when schools were allowed to reopen, most schools in practice remained closed due to community concerns over safety. As the pandemic progressed, the decision-making shifted to local governments to decide on school reopening.[152] However, there is no systematic data captured to track or measure safe operations for children's return, nor to highlight what type of financial, infrastructure and in-kind support (if any) schools managed to obtain to assess and update their environments to make them COVID-19-avoidant.[153]

Communication

Myanmar UNICEF's advocacy for utilizing an inclusive approach in all COVID-19 response and recovery initiatives led the Ministry of Education to ensure consideration for children affected by conflict, children with disabilities, ethnic minority children and out-of-school children in risk communication products, distribution of school guidelines and other activities.

Viet Nam ran an effective communication campaign through the MoH and responded quickly in terms of messaging. Daily text messages were sent to every mobile phone in the country while the Local People's Committee has given daily announcements through community speaker systems.[154] Messages on keeping safe were reinforced through adaptation of a well-known pop song which went viral, commissioned by Viet Nam's National Institute of Occupational and Environmental Health.

Case study findings: In Indonesia child case fatality rates (CFR) as well as child deaths per total COVID-19 cases were far higher than in other parts of the world and the region[155] which has been partially ascribed to lack of awareness. A survey showed that among the young only 30 per cent were found to know about the importance of handwashing and fewer about the importance of soap.[156] COVID-19 health communication messages were translated into multiple local languages and 15,000 volunteers were mobilized under the MOEC in April to educate vulnerable groups on health protocol.[157]

Case study findings: In Lao PDR, the Ministry of Education and Sport and other relevant line ministries, most notably MOH, with support from UNICEF, implemented a stakeholder perception survey, following its two Back-to-School campaigns, to assess their success and the additional communications required around risk. In a time of emergency, a clear and coordinated response is necessary which was enabled by the use of WhatsApp groups within Government to coordinate between different Taskforces and different levels of the Government. The Government Task Force commented on the willingness of many Line Ministries to divert funding and priority to the education sector during the pandemic, and the international donors have responded with additional funding.[158] The Government of Lao PDR adopted online, radio, TV and campaign

approaches to reach out to parents and communities which integrated messages on parenting, mental health and psychosocial support to encourage children back to school.[159] To ensure communication reached village level, nearly 5,000 USB sticks were distributed containing public speaking announcements for use on community loudspeaker systems.

WASH facilities

In the Philippines, safe operations were also woven into non-formal education programmes, such as the Alternative Learning System (which focuses on out of school learners).[160]

Case study findings: In Viet Nam, a survey on water and sanitation infrastructure in schools led to the prioritization of water points in schools with the highest needs. With technical support from UNICEF Viet Nam, all 43,966 schools nationwide have implemented the safe school protocols to ensure a safe and healthy return of students and teachers to school. The Ministry of Education and Training issued 15 criteria for ensuring COVID-19 prevention and control and any school that was unable to meet more than seven criteria are assessed as unsafe and not allowed to open. Additionally, UNICEF advocated for government resources to be mobilized for safe school reopening, which led the Government to fully finance school disinfection.[161]

Case study findings: Lao PDR organized communities to bring water to schools that lack water points, to enable handwashing. In Indonesia, UNICEF launched a real-time behavioural monitoring platform which reports national rates of handwashing and mask use. Schools have considerable flexibility to reallocate their budgets tailored to their specific COVID-19 response plan, including to strengthen water points and sanitation facilities, procure cleaning or hygiene supplies.[162]

Lessons learned

The historical lack of investment into WASH facilities in many schools across the sub-region, especially those in remote areas, within a broader and integrated approach to school health, resulted in a crisis situation that less-resilient education systems found difficult to mitigate. While SOPs which integrated local solutions could in some way mitigate for these gaps in provision, countries with more developed infrastructure were able to reopen more quickly and stay open safely for longer. A crucial lesson is that when there is prioritization at all levels, all countries were able to reopen schools safely.

Countries have demonstrated impressive levels of speed and collaboration in developing response plans, particularly in terms of physical health, in schools. However, there is a lack of evidence as to the extent of monitoring and evaluation of the implementation of measures for safe operations and who is accountable, in order that gaps are effectively and rapidly addressed. This is particularly critical for more marginalized and vulnerable communities in order that additional resources are targeted to reduce inequities.

Monitoring re-enrolment increases understanding of which children are coming back to school and the characteristics of those who are not and why. Having access to this information helped schools and education actors to put measures in place to reduce drop out of girls and other marginalized groups, for example, with targeted communication to address common issues and challenges.

Experience from the region suggests that this increased collaboration between government ministries, particularly the MoE and MoH, is a positive feature of the response, and coupled with appropriate technical and other support from UN agencies and a wider group of stakeholders (including communities) has built a stronger system that will be more resilient to future pandemics.

3.2 Delivering equitable and quality distance learning during full or partial school closures

When the pandemic struck the sub-region, education systems were challenged with the problem of trying to provide continued learning for all. Without contingency plans in place, the immediate response was to try to reach learners through the internet. All sub-regional countries have experienced difficulties with both availability of, and access to online learning, with those living in rural and isolated areas or living with a disability, being disadvantaged the most. However, even in urban areas, those living in poverty may lack digital devices and digital literacy. Apart from access to a variety of media, children in remote areas may not have family members who can read or have the confidence to provide learning support, as well as being less likely to access phones and TV or print material in their own language. Even where devices are present, there is often competition with other

members of the household, including siblings, for access to any devices that do exist.[163]

This challenge looks at these issues in turn:

- Access to different learning modalities
- Reaching the most marginalized
- Parental support for distance learning

At the webinar held by UNICEF and UNESCO with stakeholders from across Southeast and East Asia to share the findings of this report, the key challenge identified in ensuring continuity of learning during school closures, especially for the most marginalized was the digital divide, followed by the capacity of teachers. The second challenge is considered in section 3.3.

Challenges

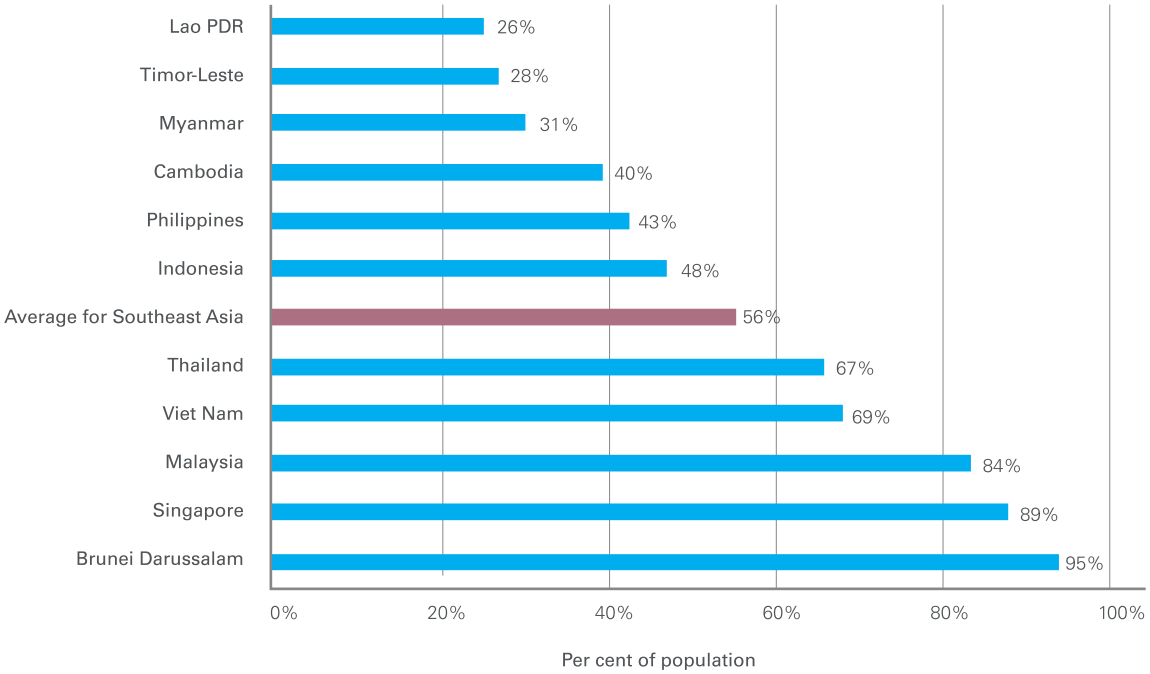
Access to different learning modalities

Figure 22 shows the level of internet use in each of the Southeast Asian countries, which ranges from only 26 per cent in Lao PDR to 95 per cent in Brunei Darussalam. This shows the wide disparity within the region, which was reflected to some extent in the responses to school closures, but generally, most countries attempted on-line remote learning during the pandemic, which clearly was not going to reach all children or even all households.

A UNICEF study on "How many children and young people have internet access at home?" gives a picture of the levels of access for young people to different learning modalities in the combined sub-regions of East Asia and Southeast Asia.[165] It must be acknowledged that East Asia contains more higher- and middle-income countries than Southeast Asia, therefore this data is not fully representative of Southeast Asia. The data for the combined East Asia and Pacific sub-region showed that:

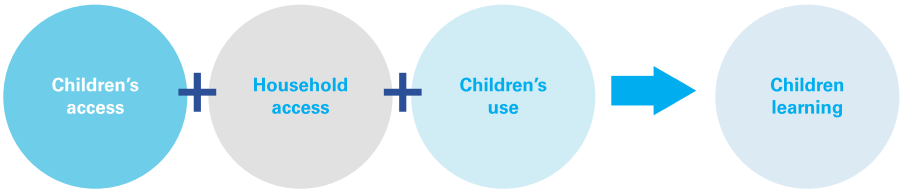
- Children and young people have high levels of internet access at home compared to other regions, and that this is highest for school-age children (59 per cent).
- Only 53 per cent of rural children and young people have access compared to 72 per cent of urban children. This is similar to the average levels of disparity across all the regions, showing that location is one of the main drivers of the digital divide.
- The levels of disparity in having access to internet at home by wealth quintile is the highest in all regions of the world, with 90 per cent of the richest and only 20 per cent of poorest children and young people having access.

FIGURE 22 | PERCENTAGE OF POPULATION USING THE INTERNET IN SOUTHEAST ASIAN COUNTRIES[164]



© UNICEF/UN0403492/Rab/

ENABLING CONDITIONS FOR CHILDREN'S LEARNING



The lack of access to devices, electricity and internet were well known and alternatives had to be developed, but providing access does not mean children can participate or learn. From household access to children's access to children's use and eventually children learning, children are lost on each step on the way.

For example, in Indonesia 66 per cent of the population in Jakarta have access to internet compared to 20 per cent in Papua. This data implies that while schools are closed, children in rural Indonesia, where there may be no electricity and no access to the internet, face a severe limitation in receiving education services, unless other modalities, are promoted.[166]

The underdevelopment of fixed broadband networks in some Southeast Asian countries is partially due to a lack of infrastructure, such as electricity. According to an International Energy Agency (IEA) report, despite significant progress showing 90 per cent of the population have access to electricity in Southeast Asia "an estimated 65 million people remain without electricity." [167]

Case study findings: In Viet Nam some families lacked IT devices and Wi-Fi connectivity and other families encountered technical problems during online classes, due to low bandwidth. In remote and mountainous areas, ethnic minority students faced difficulties with online classes because of the lack of digital equipment, slow internet connection, unstable mobile signals, and even lack of electricity.[168]

Case study findings: In 2018 the Lao PDR Statistics Bureau reported extreme disparity in media access, with 94 per cent of households in urban areas owning a TV as compared to only 49 per cent in rural areas. Access to internet has grown immensely in a short space of time, from only 1.7 per cent of households in 2017 reporting access to the internet via a device at home to 43 per cent of the population accessing the internet by 2020. By September 2020, the main media being used for distance learning were TV, radio and online content, meaning the majority of children, especially those in remote or poorer households had no access to learning prior to reopening.[169]

A recent Asian Development Bank report found that in Southeast Asia, during the crisis, remote learning was delivered:

- by all countries through online platforms and take-home packages;
- by all countries, except Singapore, through the use of television;
- in only four countries (Lao PDR, Myanmar, Philippines and Timor-Leste) through the use of radio.[170]

In many cases, due to the rush to put materials together quickly, an integrated approach to online, TV/radio and print modalities is yet to be established, resulting in piecemeal lessons and each child receiving different content depending on their levels of access to each modality. Also, during school closures, many NGOs and community organizations provided help to children in rural areas, for example in Indonesia through the provision of radios and targeted literacy and numeracy

programmes.[171] These small-scale pilots need to be captured and lessons learned shared to inform future possible solutions for remote learning.

Reaching the most marginalized

While COVID-19 has prompted unprecedented speed of response in some areas, the challenges of reaching the most vulnerable and most marginalized persist. The longer marginalized children are out of school, the less likely they are to return. Children from the poorest households are already almost five times more likely to be out of primary school than those from the richest.[172] Marginalized children include children of households living in extreme poverty, people on the move (migrants and refugees), children with physical disabilities and those with special learning needs. In the short-term an online-based, high-tech approach was not realistic for creating an inclusive learning environment.[173]

The closure of schools had significant effects on the most disadvantaged. Learning losses threaten to extend beyond this generation and erase decades of progress, not least in support of girls and young women's educational access and retention.[174]

- In the EAP region, 20 per cent of girls and boys – 80 million in total – were not reached by distance learning delivered online or through TV or radio, due to the lack of devices and/or policies geared towards their needs.[175] Girls and boys from rural and poor households in particular are facing barriers to accessing distance learning during school closures.
- Save the Children found that, globally, almost two thirds of girls (63 per cent) reported an increase in household chores and more than half (52 per cent) reported an increase in time spent caring for siblings and others since the pandemic began. Every fifth girl reported having too many chores to do, to be able to learn effectively.[176]
- Although pre-COVID-19 may have shown girls to outperform in literacy across the sub-region, there is evidence that the pandemic may have a greater negative impact on girls' participation and learning than boys'. In the case of limited resources, there is evidence globally that poor households may decide to send only boys back to school rather than girls due to higher perceived returns of education for boys, exacerbating existing vulnerabilities and inequalities facing girls.[177]
- The COVID-19 pandemic has exacerbated prejudices or tensions, for example discrimination against returnee migrant workers (e.g., in Lao PDR and Myanmar), and ethnic and religious minorities (e.g., in Cambodia) have been recorded. Other groups highlighted to be particularly at risk include Lesbian, Gay, Bisexual, Queer, Trans and Intersex plus individuals (LGBQTI+), women with disabilities and migrant women.[178]

There remains a stark gap in response to disadvantaged children with disabilities with 59 per cent of countries in the East Asia and Pacific region not adopting measures around the provision of instruction for children with disabilities (Figure 23). Children with disabilities and underlying health conditions not only face increased risk of serious complications from COVID-19,[179] but are likely to face obstacles in accessing the support and response measures they need (Figure 24) e.g., the case study from Viet Nam indicates these children are missing normal support including that of care assistants. Among the types of services to be disrupted were therapies for children with cerebral palsy while children with hearing impairments were among those not catered for. There is also a major risk that children with disabilities may not return to school or will return but with extended delay with their feeling of exclusion and isolation being magnified.[180]

All children are negatively affected by school closures as they may lose access to school meals and to playing with their friends, which are equally important for development and learning.[181] Students with disabilities are negatively affected by the school closures in additional ways as they lose access to assistive devices, specialist support and associated healthcare. In Timor-Leste, while 64 per cent of the non-disabled population aged 5 years old and above are literate, only 15 per cent of people with disabilities in the same age bracket can read and write in any of the four working languages in the country (Portuguese, Tetum, Bahasa Indonesia and English).[182] This will make accessing distance learning far more difficult for children with disabilities than non-disabled. While many countries rely on civil society organizations (CSOs) for provision of support to disabled children, less than 20 per cent of countries in East Asia and the Pacific region reported the engagement of CSOs representing persons with disabilities in some level of consultation, collaboration in design, implementation and / or monitoring or assessing of national COVID-19 response plans in education, limiting the participation and contextualization needed for an effective response.

FIGURE 23 | PERCENTAGE OF COUNTRIES REPORTING THAT THE GOVERNMENT ADOPTED MEASURES AROUND THE PROVISION OF INSTRUCTION AND DEVICES / MATERIALS ACCESSIBLE TO CHILDREN WITH DISABILITIES[183]

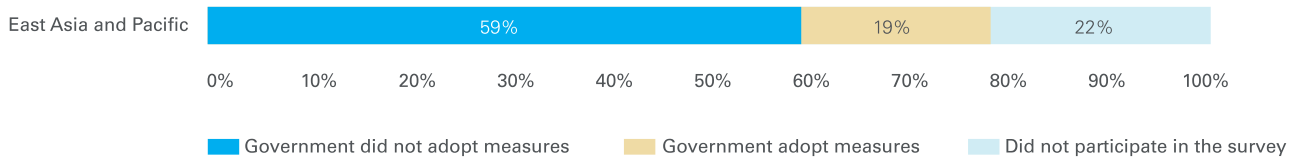
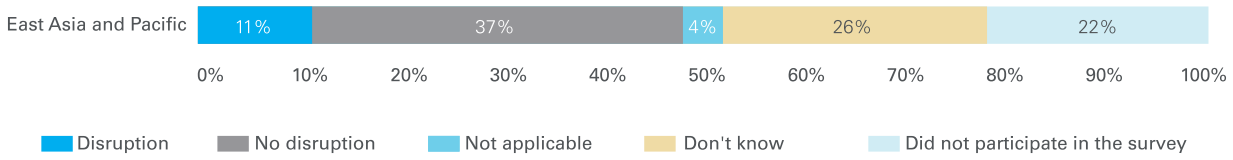


FIGURE 24 | PERCENTAGE OF COUNTRIES REPORTING DISRUPTIONS IN ACCESS TO DISABILITY-RELATED HEALTH SERVICES[184]



As seen elsewhere children and young persons with a disability face a serious disadvantage in school attendance compared to their non-disabled counterparts. Where learners were not in school pre-COVID-19 they are not likely to receive information, materials or services that could bring them back into the world of formal education. Currently, because of a lack of disaggregated data and information, it is unclear how many students with disabilities are receiving inadequate educational support, as a result of the COVID-19 pandemic. Vulnerable children tend to be the most 'invisible' in data; as data, if collected, may not be disaggregated by disability, for example, and therefore, targeting is not effective.

For marginalized and vulnerable learners including those with disabilities, access and participation difficulties are exacerbated when remote learning takes over from face-to-face school attendance. In Cambodia, Indonesia, Lao PDR and Viet Nam there was evidence of considerable learning challenges for learners with disabilities and for other marginalized learners such as those in households of poverty, migrant or ethnic minority families.

Case study findings: In Indonesia, there was limited guidance to teachers on how to deliver distance learning to children with disabilities, especially for those who are included in mainstream schools and classes. The MoEC/UNICEF rapid assessment of home-based learning among children with disabilities during the pandemic found most of the respondents (74 per cent) stated that it was difficult to follow the online learning.[185] The biggest challenge was difficulties in concentrating on learning due to the learning environment, for instance because of the interference from other family members as well as due to the limited facilities and accessibility to needed materials and equipment at home.[186]

Case study findings: In Viet Nam, children living with disabilities were particularly disadvantaged, as due to isolation, their specific social and learning needs were not being met. Appropriate learning materials with accommodations were not prepared and there may be a lack of support within the family, due to carers being busy and lacking knowledge and skills on what type of support to provide. Children with hearing impairments were particularly affected and in general were not catered for. Due to social distancing and restrictions on transport some students were not able to access services to support their disability. According to a teacher from Viet Nam, "Hearing impaired students are not yet able to be independent in learning online. They depend on their parents, but their parents are busy working or lack child supporting skills."[187] [188]

Parental support for distance learning

The findings of the SEA-PLM were that in all countries in Southeast Asia, higher levels of parental engagement were associated with higher reading, writing and mathematics scores in children (section 2.4). As well as the inequality of access to distance learning that relies on technology, there was also inequality in the level of support from home that learners received, limiting their

participation in learning and their future learning levels. Throughout the sub-region, it was noted that low literacy levels of parents, especially those from marginalized communities have an impact on the proficiency levels of children.

Some parents doubted their own capacity, "how come this teaching and learning is given back to us. What are we going to teach? We are farmers. Suddenly, we are expected to be teachers." (Parent of a student, female, Enrekang, 8 June 2020).[189]

26 per cent of adult respondents in a rapid assessment in Viet Nam[190] had difficulty supervising children using electronic/digital devices. "Not many primary students pay attention to online study if parents/adults are not with them. Some, who do, will get bored easily as they cannot interact with teachers or parents when they don't understand some points."[191] Parents were concerned about their children with disabilities not being able to easily access and understand the lessons being sent out online. Some children with hearing and sight difficulties could not hear the commentaries well and most videos did not have subtitles or signing.[192]

In all three of the case study countries, parents were fearful of their children catching the virus when schools reopened.

Positive responses

Access to different learning modalities

Once Governments understood some of the problems with reaching out to all learners via the internet, a number of initiatives were implemented for more learners to access the internet including providing devices, agreeing low/no cost access with service providers, some translation of materials into local languages.

Several countries entered into public/private partnerships with service providers to reduce data costs (e.g., Indonesia and Viet Nam). In Viet Nam, UNICEF supported the government to develop gender-responsive sector planning on digital learning, as part of the 10-year strategic plan.

Case study findings: In Indonesia the Learning from Home programme was developed as both an offline and online alternative to attending school. While online lessons and materials were made available to those with internet access, schools were given guidance on how to provide offline distance learning through the distribution of printed materials, or in some remote areas, home visits by teachers.[193]

Reaching the most marginalized

Some countries put a focus on the most marginalized in their education response planning. The Education Response plan of the MoE in Cambodia[194] has a heavy emphasis on equity throughout. Attention to equity issues is also noticeable in the response plan of Myanmar developed by the MoE in collaboration with UNESCO and partners for the Education and TVET sector Coordination Group.[195] In some cases, these Education Response Plans had specific strategies for children with disabilities (e.g., in Myanmar, Thailand, and Viet Nam), including being the focus of back-to-school campaigns and increased education grants (Thailand).

In Timor-Leste, education officials seized on digital learning as a way to overcome long-standing bottlenecks and gaps in educational rights, based on disability and language, and to modernize pedagogy and professional development. To do this, they began to upload eBooks in local languages via the Learning Passport platform, as well as other learning materials with an accessible format, featuring audio and interactive elements to engage children with disabilities as well as their peers. Inspired by the possibilities, the country is now working on making its textbooks available in digital, accessible formats. Longer-term investments are being planned to increase educational authorities' ability to develop new multimedia content and to broaden the country's digital architecture, connectivity, and access to affordable data and devices. Inspired by successes during COVID-19, the vision is to connect every child in Timor-Leste to world-class digital learning. With support from UNICEF, a mobile app is being developed to enable learners to download content and work offline.

In Indonesia and Myanmar home visits were organized by teachers to minimize the impact of COVID-19 on students in remote areas by checking on their progress in remote learning, and encouraging them to re-enrol once schools reopened.[196]

Case study findings: In Indonesia communities are using data from the Community Based Development Information System (CBDIS) 2017-2019, supported by UNICEF to help identify and reach the most marginalized children which saw early registration of 250,000 children who were given social support. An inter-discipline task force working to improve monitoring and linkages with the education EMIS data which can help indicate those at risk of school dropout.[197]

Parental support for distance learning

Case study findings: Indonesia is providing free access to online learning portals for parents and students including providing a dedicated website for continuous learning.[198] In Lao PDR, the Government adopted online, radio, TV and campaign approaches to reach out to parents and communities, which integrate messages on parenting, mental health and psychosocial support. These included Parenting for Lifelong Health Parenting Tips (WHO) which were translated into 14 languages and disseminated through social media.[199]

Lessons learned

Countries in the sub-region were not prepared to adopt widespread distance learning approaches, which has highlighted both the challenges of access as well those of quality. Technology use has greatly increased as a result of these strategies and this has created an opportunity for more rapid introduction of changes to education delivery in many countries.

Across the sub-region, responses were initially designed to reach the majority of children, with marginalized children often planned for as an afterthought. A lack of inclusive measures to reach the most marginalized such as girls, those already out of school and/or living in poverty, ethnic and language minority and migrant children and children with disabilities has led to a widening learning divide.

Disaggregated data on participation and learning during school closures was unavailable in most countries, at school, sub-national and national levels. This needs to be in place for proper monitoring and to target resources where they are needed most. Involving local actors and looking for alternative learning solutions, for example in rural areas where small clusters of learners were supported, has helped to address these inequalities, but a lot more needs to be done, especially with children with disabilities and in providing support to parents from vulnerable or marginalized communities who cannot support their children's learning sufficiently.

3.3 Existing low levels of learning and the learning divide

As discussed in Chapter 2, learning levels in some countries in the sub-region prior to COVID-19 were low. This was due to factors such as the level of marginalization of children (poor children, lack of pre-school participation and not speaking the language of instruction at home for example) as well as school-level factors around the availability of teaching and learning resources, and the availability, quality and management of teachers.[200] It was unrealistic to expect the same teachers who were unable to deliver face-to-face teaching, to be able to adapt to a distance learning modality, assess learning and learning loss, and to be able to deliver remedial learning on the reopening of schools, without considerable retraining, and access to materials and support.

Reopening schools demands an adapted timetable and curriculum as teachers will have to assess learning loss, provide remediation and adapt pedagogy. Learners will have had different learning experiences while schools have been closed and will also possibly need psychosocial support (i.e., teachers will need to consider mental health of learners, due to isolation from their friends as well as exploitation/violence at home). Due to home circumstances and lack of provision of learning modalities, some learners will have learned little in terms of their formal education, and thus will need considerable remediation.

The challenges discussed in this section include teacher readiness and compensating for learning loss through remediation.

At the webinar held by UNICEF and UNESCO with stakeholders from across Southeast and East Asia to share the findings of this report, the key plan or strategy identified to mitigate learning loss after schools reopen was curriculum simplification, followed by adaptation of the school calendar through shorter holidays.

Challenges

Teacher readiness for the facilitation of distance learning

When governments pushed the continuation of learning online, most teachers were unprepared to provide relevant learning materials and tasks remotely. Some teachers have been trained to use ICT within the classroom, for example, using PowerPoint for lesson presentation, but few were competent to prepare online lessons for effective learning at a distance. Many found it difficult to interact, monitor and assess learners remotely, although some did manage to visit students who lived with a disability and some used social media to interact with students and their parents.

Singapore conducted mental health training for teachers in a comprehensive way.[201]

In Cambodia there are many barriers to the implementation of online teaching such as limited teachers' pedagogical and ICT capacity and commitment, increased teachers' workload, and lack of resources (including government budget) to travel to communities to follow up and support students at their home.[202]

In Indonesia teachers were not so skilled in differentiated learning (i.e., teaching at the right level) to cater for such breadth during review and revision when schools reopened. 31 per cent of teachers in rural areas outside Java Island do not communicate regularly with parents or learners.[203]

In Malaysia the issues identified included the lack of preparation of teachers, who were trained to carry out lessons in traditional ways, as well as the lack of students' preparation for online learning. These situations amplified inequalities in education and implied a significant loss in human capital development.[204]

Case study findings: In Lao PDR, 10 per cent of teachers surveyed were only providing tasks or homework, without interacting with students or providing feedback and 20-30 per cent of teachers did not engage with the students at all.[205]

Case study findings: In Viet Nam, teachers, especially in disadvantaged areas (i.e., Central Highlands and Northern Mountainous areas) were not well prepared to facilitate online learning, with 93 per cent of teachers[206] in remote provinces reporting never having used modern technologies in class, prior to the COVID-19 crisis. This compromised the quality of online teaching. Teachers are unprepared to teach online and cannot ensure student engagement, specifically for students with disabilities.[207]

Teachers not only found they do not have the skills for online lesson preparation, but they find the workload onerous: A secondary school teacher in Viet Nam explained, "I feel under pressure. To prepare for one 45-minute teaching period, I have to have a 2-day preparation."[208]

Compensating for learning loss through remediation

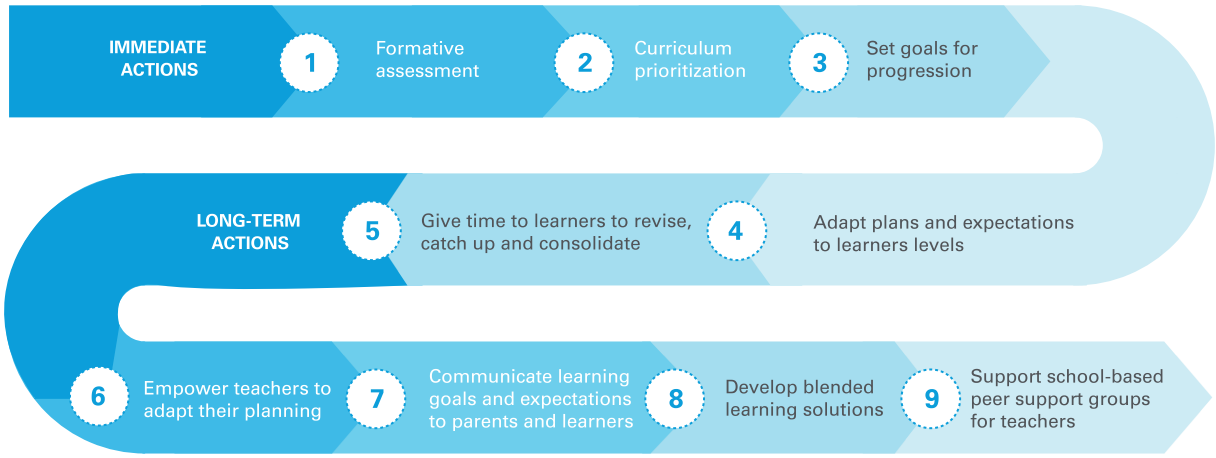
Formative assessment is critical so that teachers can understand what students are able to do on their return to schools and plan remediation programmes accordingly. Remediation is a strategy to improve learning with both immediate actions once schools reopen and longer-term actions to integrate assessment and needs-based planning into the curriculum (Figure 25).

As schools begin to reopen, countries are beginning to put plans in place to compensate for learning loss during school closures. By August 2020 as countries were beginning to partially or fully reopen, under half of Southeast Asian countries are using remedial education and 20 per cent reported using accelerated education.[209]

As learning was not systematically measured during school closures many teachers have little knowledge of the extent of learning loss or gain and traditional teaching styles will not be sufficient to meet the needs of all children. This presents two major challenges for teachers and curriculum planners:

1. How to assess to identify what learners now understand and are able to do, then provide remediation which will enable targeted teaching.
2. How to adapt the curriculum so that there is provision for learners which meets their current needs.

FIGURE 25 | A ROADMAP FOR REMEDIATION



Viet Nam is aiming to close learning gaps, using summer schools and catch-up education programmes. An accelerated programme is contemplated for hard-to-reach ethnic minority children. Philippines is planning to hold a revision period just before or upon reopening or revision through self-study and to adopt a prioritized curriculum once school reopens to address the potential existing and future learning loss, caused by their long school closures (of over one year).

Several countries have adopted or are planning to adopt a prioritized curriculum upon school reopening and make teaching and learning materials more inclusive and widely available.

Case study findings: UNICEF Viet Nam helped education authorities to adjust tests and the curriculum. Indonesia's Learning from Home programme was not designed to meet curriculum expectations, but was aimed at ensuring children enjoy learning activities within the home environment and continue to engage with learning during school closures. Unfortunately, many teachers, especially those who were unable to access online training content and materials, lacked the capacity to prioritize the curriculum, and defaulted to their normal lesson planning and content. In some areas, it has changed the way education is viewed in Indonesia and has opened up opportunities for innovation and transformation of how teachers teach and how children learn.[210]

Positive responses

Teacher readiness for the facilitation of distance learning

In Viet Nam, large-scale online teacher training was implemented to prepare for school reopening. Similarly, in Timor-Leste approximately 95 per cent of teachers (over 15,000 teachers) completed an online course to prepare them for reopening via the Learning Passport platform.[211] Online teacher training is something the Ministry plans to continue, given the cost savings and simplified logistics. Malaysia set up a digital community for teachers to prepare them for their new role as facilitators of blended learning and is conducting training via a Massive Open Online Course (MOOC) complete with a bank of 1,000 resources for teachers.

Lao PDR mobilized the Cluster networks to instruct teachers in such areas to conduct face-to-face, small-group sessions. This involved teachers in the most remote areas, gathering small groups of children for learning, in recognition of their lack of access. Cambodia also used small local clusters to engage learners in more rural locations.

Compensating for learning loss through remediation

Many countries in the region are yet to initiate remediation programmes. Indonesia set out in its Learning from Home Guidelines, which elements of the curriculum teachers were to prioritize during school closures, and also once schools reopened, but there was a general consensus during the case study consultations that teachers lacked the capacity to be able to do this, and therefore were continuing to try to cover the whole curriculum. There was no evidence during this situation analysis that countries had begun to systematically assess children's learning on school reopening or to develop targeted longer-term remediation programmes.

Lessons learned

Children were already not meeting Grade-specific standards before the crisis, with marginalized learners underperforming most. Students have lost learning during the crisis and the gap between the most advantaged and more marginalized children has grown. In general monitoring is not consistent or comprehensive enough to measure learning loss. Communication and feedback mechanisms are needed to ensure people are reassured and the response is meeting their needs and fears. There is a need to monitor learners returning to school on reopening both on achievement and attendance, so that those out of school can be reached and remediation measures can be adjusted. In countries where long-term remediation measures such as assessing learning, accelerated learning, and prioritized curricula are not in place, future learning loss will be greater.

There is an urgent need to invest in teachers' continuing professional development, prioritize and target marginalized children, rethink the focus of learning in the short to medium term and how EdTech can help realize this through a blended approach, if the learning crisis is to be addressed in the longer term and the education can be responsive to future shocks.

The COVID-19 pandemic has enabled many countries (e.g., Indonesia) to re-envisage learning beyond the formal classroom setting. Alternative learning solutions have become more acceptable, including learning at home and in the community. If this opportunity is grasped, it can be utilized to expand the reach of education to those who are unable to attend formal schooling, and it can be used to form linkages between what children learn and the needs of their communities.

A range of content is needed to cater for marginalized groups such as those with minority languages as well as for

children with disabilities. The content should be adaptable for different types of media and age groups and integrated and consistently based on a prioritized curriculum.

3.4 Supporting health, well-being and protection

Apart from loss of learning, being out of school also increases the risk of teenage pregnancy, sexual exploitation, child marriage, violence and other threats. Further, prolonged closures disrupt essential school-based services such as immunization, school feeding, and mental health and psychosocial support, and can cause stress and anxiety due to the loss of peer interaction and disrupted routines. These negative impacts will be significantly higher for marginalized children, such as those living in countries affected by protracted crises (e.g., natural disasters), migrants, refugees and the forcibly displaced, minorities, children living with disabilities, and children in institutions.

Challenges

Health

In Viet Nam the success of containing COVID-19 has been attributed to a well-developed public health system, a containment strategy based on comprehensive testing, tracing and quarantining and an effective communication campaign.[212] However, more than half of the subregion's countries are vulnerable because of weak health systems, including Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines and Timor-Leste.[213]

A strong health response is vital to education, not only to protect children and their families against risk of COVID-19 infection but to ensure that the myriad of other interlinked health, mental health, nutrition, social and WASH services required to support child and adolescent well-being remain accessible to those most in need. As mentioned in section 2.5, essential services have been severely reduced or have ceased as a result of the pandemic.

Common service disruptions reported from Southeast Asia affecting children and adolescents include: routine immunization, diagnosis and treatment of non-communicable disease (NCD); provision of family planning and contraception; treatment for mental health disorders and sick child services.[214] Community-based child protection programmes, and case management for children requiring supplementary personalized care, including those living with disabilities, and abuse victims – have also been partially or completely suspended.[215] Lost school services have included school meals, mental health services, speech therapy, peer support groups, immunization and sexual reproductive health, as well as crucial deworming programmes which prevent common parasitic worm infections.[216]

Case study findings: During school closures, access to public services was reduced, enhanced by common fears of COVID-19 transmission.[217] In Indonesia 80 per cent of vaccination was suspended and 86 per cent of health facilities ceased child growth and development monitoring.[218] In Viet Nam the delivery of essential and routine healthcare (including vaccination and nutrition services) was interrupted or halted entirely, which poses the risk of other communicable diseases spreading. Helplines have been established by government with support from NGOs such as World Vision, to address psychosocial needs, however services in rural and remote areas are very limited. While some school provided psychosocial support, mental health has not been a priority.[219]

Well-being and protection

Well-being

During school closures, children face social isolation and increased levels of stress. Those with working parents or caregivers may be forced to stay home alone, which puts them at risk of a wide range of protection issues.[220] For example, Child Helpline Cambodia (CHC) is a free counselling referral and telephone service- throughout the COVID-19 crisis and lockdown, the number of calls made to CHC rapidly increased.[221] Surveys conducted by UNICEF Thailand with almost 7,000 young people, found three out of four female respondents reporting mental health issues such as stress, boredom, lack of motivation and frustration caused by the lockdown.

Case study findings: Studies carried out by World Vision and Save the Children in Indonesia found that children also missed their friends (20 per cent), worried about their parents' income and lack of food (10 per cent), felt insecure (15 per cent) and were afraid of catching COVID-19 (34 per cent). When children are worried and stressed, they are less likely to learn. The Save the Children study[222] found that "the longer the school closure had been, the more children and parents experienced negative feelings." Save the Children research showed 82 per cent of parents said their children showed negative feelings and experienced psychosocial pressure, but that direct and / or virtual interaction reduced these negative feelings. More than half of all children who did not interact tended to be more unhappy (57 per cent), more worried (54 per cent) and

more unsafe (58 per cent), but when they interacted with peers or a teacher, these figures dropped to 15-17 per cent.[223]

As discussed in previous sections, the well-being of teachers and parents has been a great challenge during this crisis, but the responses show that this was less of a priority to most governments despite the resulting impact on children's well-being and learning.

Gender-based violence (GBV) and violence against children

An increased level of domestic violence against women and children, damages their physical, emotional and mental well-being while prolonged stress has been shown to impair students' learning and threaten their future development.[224] In Singapore, AWARE's Women's Helpline has seen a 33 per cent increase in February 2020 over family violence-related calls received in the same month in 2019.[225]

Case study findings: A Save the Children Global Report[226] found that 16 per cent of Indonesian children experienced more violence during the pandemic. This increased in families with children with disabilities (31 per cent), families who had lost income (40 per cent) or families who had been forced to move (60 per cent).

The socio-economic fallout of the pandemic increases the risk of exploitation in the form of child labour, trafficking for sexual exploitation. For learners, particularly girls, who are spending more time online, the risks of cyber-bullying and sexual exploitation have also risen.

Case study findings: "After finishing online classes, some children surfed the internet and visited age-inappropriate websites. Although sometimes children did not intend to, these black websites just popped up and children accidentally clicked them. Online quarrels and cyberbullying sometimes happened." (ID 424-G10, social worker on the frontline, Truc Bach, HN Viet Nam)[227]

The Philippines recorded almost 280,000 cases of online sexual abuse against children from March 1 to May 24 2020, four times more than for the whole of 2019.[228] The Philippines is considered by charities to be the epicentre of the global trade cybersex trafficking.[229] The government developed a prototype for a database to track violence against women and children in collaboration with the Department of Health to strengthen the documentation, tracking, analysis and reporting of the health sector response to GBV cases. Data from the Philippines Department of Justice revealed a four-fold increase in reports of online sexual exploitation and abuse during the country's enhanced community quarantine period compared to the previous year.

Child marriage

There is an increased likelihood of child marriage when children are out of school.[230] Tens of thousands of girls in Asia have been subjected to early and forced marriage since the beginning of the pandemic, according to UNICEF. In Indonesia alone, 33,000 child marriages were permitted in the first six months of 2020, double the 2019 rate.

Household poverty levels

Section 2.6 shows the implications of COVID-19 on Southeast Asian economies with an average real-time contraction in GDP of 3.1 per cent. This will have an impact on both the formal and informal sectors in the short- to medium-term. The extent of employment losses has varied across the sub-region. In Indonesia and Viet Nam these losses were found to be greater among urban populations than rural communities.

Reducing food consumption was found to be a common coping strategy (found in more than half of households in Cambodia, Indonesia and Myanmar).[231] Micronutrient deficiencies deplete children's vitality and undermine their health and well-being.[232] An increased reliance on cheap fatty and sugary foods among the poor in recent years conversely leads to overweight and obesity among children which increases the likelihood of developing health consequences such as diabetes, asthma and other NCDs in later childhood or as adults, as well as low self-esteem, poor mental health, lower cognitive development and poorer educational attainment.[233]

Malnutrition is not only the underlying cause of 45 per cent of preventable under-5 child deaths, but is associated with weakened immune systems and impacts future educational and economic attainment.[234] Research has demonstrated that those with disabilities and their families are more likely to be subjected to hunger and poverty.[235] Prior to the pandemic stunting levels were already high, close to three quarters, or 12 million, of the 17 million stunted children in ASEAN countries live in Indonesia and the Philippines.[236] During the pandemic household poverty and food insecurity rates have increased. Essential nutrition services and supply chains have been disrupted. Food prices have soared. As a result, the quality of children's diets has reduced in quality and quantity and malnutrition rates will go up.[237] For example, in Viet Nam the quality of nutrition was reduced with families reporting eating fewer meals and with less protein.[238] Stunting was already a concern with up to 23.8 per cent[239] of under-5 children being stunted prior to COVID-19. This situation is likely to have worsened with children in some ethnic minority communities faring the worst.

As informal working and migration impact on a large number of workers in Southeast Asia, families miss out on social protection and health services. "In South-East Asia, children accompanying migrant workers and, even more so, children who migrate independently are sometimes vulnerable to the worst forms of child labour, including trafficking, debt bondage, sexual exploitation, illicit activities (for example begging), and work in hazardous conditions that puts them at great risk of danger, violence and abuse. In Southeast Asia child migrants also suffer as their ability to access basic social services such as education, housing and healthcare is limited. They may be separated from their regular family and community structures of care and support and cannot be easily reached by existing protection and service mechanisms as they are often hidden from view, do not know their rights, and are afraid to reach out to authorities."[240]

Positive responses

Health

In Timor-Leste, UNICEF, WHO, and the Ministry of Health are continuing with the catch-up immunization campaign in schools to ensure children's vaccinations are up to date.

Uniquely in its 'Guidelines on The Requirements for School Health Promotion[241] the Cambodian government have detailed action on the broader health and nutritional needs of children as well as focussing on equity issues. The guidelines outline the need for school health committees (with representation including health facility heads) to 'facilitate provision of vaccination (vaccines) and medicine (deworming drugs) to students according to the policy of the MoH; promote health education in prevention of communicable and non-communicable diseases and implement and monitor 'green school promotion', especially vegetable gardens for extra nutrition while learning, to support health and physical growth of children. The health sector response to GBV remains an integral part in the provision of SRHR services, supported by UNFPA.[242]

In Malaysia, UNFPA together with the National Population and Family Development Board is providing Sexual Reproductive Health and Rights (SRHR) outreach for low-income groups at their households to overcome challenges in accessing services as a result of restricted movement. In Lao PDR, comprehensive sexuality education provided online through Yahoo Apps and videos to ensure information reaches young people despite disruptions to the school term.

Well-being and protection

Well-being

Case study findings: In Lao PDR, the Lao Women's Union and Lao Youth Union have hotlines aimed at young people, which provide professional counselling to help them cope with stress.

Gender-based violence (GBV) and violence against children

Case study findings: In Indonesia the Ministry of Education and Culture (MoEC) collaborated with other Ministries to ensure an appropriate response e.g., with the Ministry of Women and Child Protection (MoWCP) to conduct research into the extent of domestic violence against children so that they could develop mitigation strategies. Participatory and inclusive processes ensured wide acceptance and endorsement of the reopening guidelines.

Case study findings: Viet Nam ran a communication campaign through the MoH and responded quickly after first cases of violence at home were identified, in terms of messaging. Daily text messages were sent to every mobile phone while the local people's committee gave daily announcements through community speaker systems.[243] Messages on keeping safe were reinforced through adaptation of a well-known pop song, commissioned by Viet Nam's National Institute of Occupational and Environmental Health. Information to families about keeping safe at home included advice on avoiding online abuse. UNFPA is supporting ministries to implement a series of talk shows on domestic violence to raise awareness on the increased risk of violence against women at home during periods of lockdown.

In Myanmar, a social media campaign is ongoing to raise awareness on increased risks of GBV, especially domestic violence, during COVID-19 and to promote help-seeking behaviour- in collaboration with the United Nations Office on Drugs and Crime. MoE plans state that students in affected areas will benefit from counselling and psychosocial support, which will be provided in close collaboration with Education in Emergency (EiE) partners and NGOs/CSOs.[244]

Household poverty levels

With the economic impact of the pandemic leading to reduced family incomes, to which reduction of food consumption is a common coping strategy, governments across the region (many with support from WFP) responded with COVID-19 fiscal package, increasing and widened existing social assistance schemes to low-income households such as food assistance/vouchers

> The most vulnerable children – those who would most benefit from ECE – are the least likely to be enrolled.[245]

(Cambodia, Indonesia, Myanmar) and cash transfers (Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Thailand, Timor-Leste, Viet Nam).

Case study findings: In Indonesia, the food assistance programme, Sembako was expanded to 20 million low-income households, bringing the coverage of the programme to just short of 30 per cent of the population. Lesson plans on health education were developed and distributed for school reopening. Provision was made for 15.2 million of the poorest households, with non-cash food aid. It will be given for six months, starting in March 2020.[246]

Lessons learned

Lessons learned from the SARS epidemic were used to develop a swift health response to the COVID-19 pandemic (e.g., Viet Nam).

Resource constraints have led, in most instances, to a focus on a few key health issues in the education sector: communication for communities on protection measures, support to address the loss of income/school meals for the vulnerable. There are other significant health and welfare needs of children including mental health and child protection which tend to have been neglected. The extent or duration of nutritional support is also unclear. Each can have a long-term impact on children's development, far beyond school years and efforts need to be increased to address these gaps. The impact of the lack of focus on the mental health needs of teachers and support mechanisms available is not fully understood and needs to be addressed to ensure productive and happy teachers when schools resume.

There is a lack of evidence of monitoring of health and welfare issues or that systems such as EMIS are being used to track those at most risk of drop out and safeguarding issues.

Children's future capacity to learn will have been affected through the longer-term economic repercussions as more families fall into poverty as well as the longer-term physical and mental health implications including nutritional issues, and this will impact marginalized children more.

3.5 Low prioritization of pre-primary and Early Childhood Education (ECE)

As mentioned in section 2.4, SEA-PLM data found that in all countries, children who had attended at least one year of pre-school education consistently performed better at primary school than children who had not. Despite this, ECE still does not have the prioritized political and budgetary support in the sub-region and according to latest available data, access to pre-primary education in Southeast Asia remains far below the targets set for 2030, with only Malaysia and Viet Nam having net enrolment rates of at least 80 per cent.[247]

There are high levels of inequality in access to ECE in Southeast Asia.

Factors affecting attendance at pre-school in Timor-Leste include the education level of the head of household (children with a head of household with a university education are more than two times more likely to go to pre-primary school than children whose head never went to school) and the quality of their home (i.e., the quality of the dwelling may be an adequate proxy for the poverty status of the household). Children living in dwellings of the lowest quality have less than half the likelihood of being in pre-primary education than children living in dwellings of the highest quality.

A UNICEF Lao PDR study pre-COVID-19 highlighted that young children generally experience high levels of deprivations, ranging from 33 per cent of children deprived in the Water dimension, to 94 per cent of children deprived in the Early Childhood Development (ECD) dimension and 52 per cent of children being deprived in the Nutrition dimension. Furthermore, the geographical differences in how children experience such deprivation are stark, with almost 20 per cent difference in the nutrition dimension for example, where children in rural areas without roads are always worse off.[248]

Figure 26 shows the situation in Southeast Asia for the four Nurturing Care framework indicators for ECE: early

> In only two countries in the sub-region do more than half of pre-primary aged children attend ECE and books are available in less than 5 per cent of homes in many countries across the sub-region.

stimulation at home, playthings at home, attendance in ECE and children's books in the home. There is no data available for Brunei Darussalam or Singapore, both high-performing education systems. There is only data available on attendance in ECE in Indonesia (17 per cent) and the Philippines (29 per cent).

It is widely recognized that a literate home environment and stimulation through access to books are pre-determinants of future reading skills and learning outcomes. This data shows that during the school closures most children in the sub-region would have had no access to books for long periods. On a positive note, in most countries, children are provided with early stimulation at home and to some extent there are playthings in homes. This points to parents and caregivers understanding the importance of early stimulation and that non-formal, community-based ECE settings may be part of the solution.

Research has shown that every $1 spent on pre-primary education results in $9 of benefits to society through increases in lifetime earnings (as participation and completion rates increase) and savings to the education system as repetition rates decrease.[249] However, lower-income countries globally spend less than 2 per cent of their education budgets on pre-primary education and less than 1 per cent of total international aid to education between 2012 and 2016 was spent on ECE.[250] The effects of COVID-19 on pre-primary age children's long-term health (discussed above) and development will be significant, making additional investment and the implementation of specific ECE policies more important than ever.

Challenges

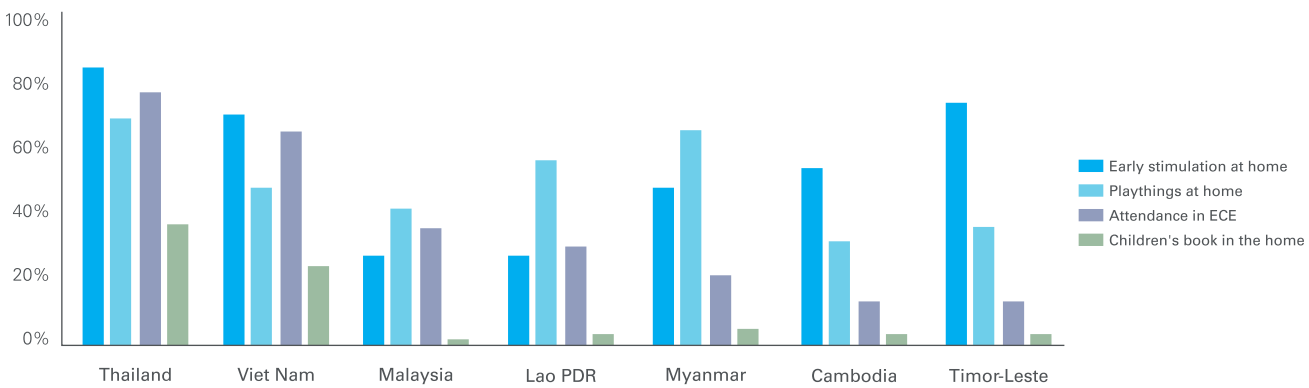
Capacity to provide and access remote learning for ECE

In most countries in the sub-region, ECE schools were closed when COVID-19 emerged along with primary and secondary schools, but due to the age of the children, distance learning was rarely provided. It has been seen across the sub-region that remote learning is not effective for pre-primary age children, as:

1. face-to-face stimulation and social interaction are essential, and
2. their learning and development require facilitation as they are less able to learn independently than older children.

In some countries, ECE teachers are less qualified or trained than those at the higher levels, particularly in rural areas. According to the Online Management Training

FIGURE 26 | EARLY LEARNING METRICS FROM THE NURTURING CARE FRAMEWORK[251]



Company (OMT), an assessment of 500 pre-schools in Viet Nam by KidsOnline showed a significant gap in readiness, digital skills, facilities, infrastructure and learning materials in ethnic minority languages, in pre-school education.[252]

Capacity of parents and caregivers to provide stimulation and learning opportunities at home

Despite these challenges of remote learning, many countries did not prioritize the reopening of ECE centres, and therefore younger children were left at home, requiring supervision and stimulation for long periods of time. This put the responsibility for childcare on parents and caregivers, *"with a disproportionate burden placed on women."*[253] Guidance for parents was provided within the sub-region,[254] [255] but it was only accessible to those who could read or access the internet and only implementable by those who had the financial security for a member of the family to spend time on childcare. Poor and marginalized families were able to provide the least levels of support as they had to provide income for the family and in many cases, do not have the literacy levels (especially in their own language) to support young children's learning at home.

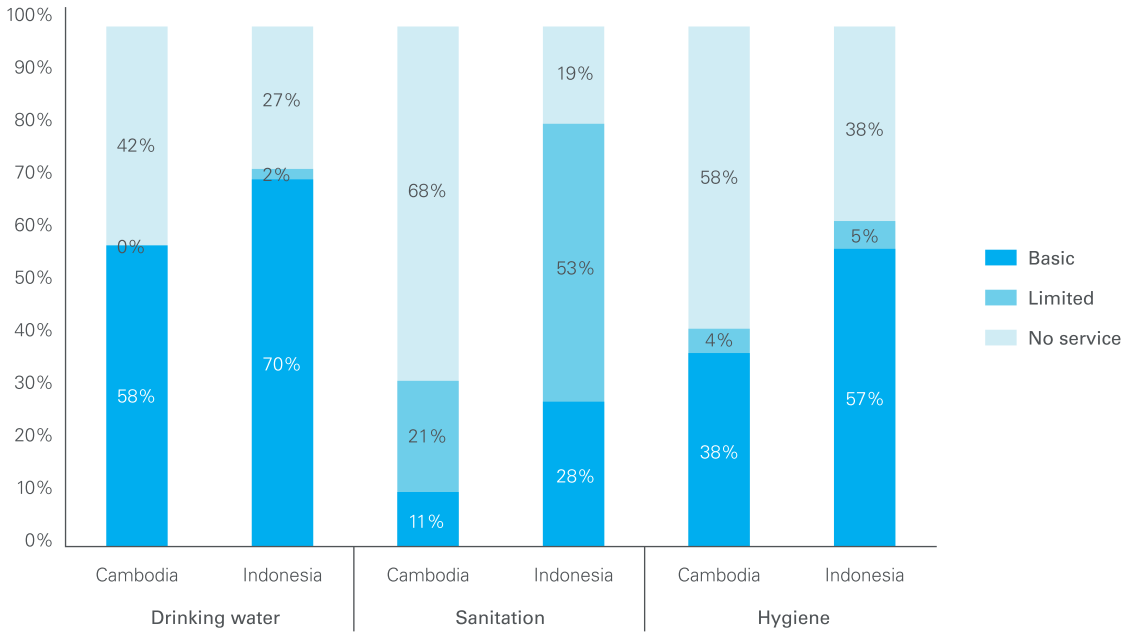
Case study findings: In Viet Nam priority for both online learning and early school reopening was given to Grades 9 and 12, with kindergartens reopening later, with little support for remote learning. School closures impacted about 26 per cent of households with young children, where at least one adult had to reduce working hours or leave their job to care for children due to school closures. As kindergartens were closed for longer than other schools, parents had more stress in managing childcare as well as supporting learning at home.[256]

Lack of WASH facilities in ECE settings

It was also a challenge in many countries to communicate effectively with parents, especially to reassure them that the likelihood of COVID-19 infection and the severity of the illness are much lower for pre-primary aged children. A community approach using local languages and networks was needed, for example on school hygiene, where WASH facilities were limited to convince parents to bring their children back to school.

Data is only available on WASH facilities in pre-primary schools in two countries in the Southeast Asia region – Cambodia and Indonesia (Figure 27). In these two countries, it is clear that sanitation and hygiene facilities in ECE settings are insufficient, especially during the COVID-19 pandemic, which prolonged school closures. Data by location (rural / urban) is unavailable for these two countries, but it is likely that rural schools are more underserved than urban ones if trends at other levels of education are replicated.

FIGURE 27 | PRE-PRIMARY WASH SERVICE LEVELS FOR SOUTHEAST ASIA (2019)[257]



Positive responses

The "My Hero is You" storybook promotes MHPSS for children, parents and caregivers. To promote disability inclusion, there is a child with disabilities among the main characters. Eight UNICEF country offices in the region were supported to translate the storybook into 18 languages, including ethnic minority languages in Indonesia, Myanmar, the Philippines and Viet Nam.

Case study findings: Lao PDR launched "My Village" - a first of its kind television show for young Lao children under six years old, which provided basic knowledge and skills to support the physical, cognitive, social, and emotional development of young children.

Lessons learned

A major lesson to be learned is that young children must be prioritized as they are likely to lose most during the most important phase of their development. Young learners are not able to learn independently and social interaction is a vital part of their development. Distance learning for young learners puts immense strain on parents and caregivers. Research shows that the effects of COVID-19 on the youngest age groups is very low, although malnourished children and those with low immune systems are at higher risk. Effective solutions to continuity of learning for ECE children are yet to be developed in the sub-region, resulting in the absence of provision and therefore countries need to consider how to open ECE centres as quickly as possible.

Data on ECE participation and provision is limited in many countries, and disaggregated data even more so. This limited the extent to which governments and communities could use evidence to make decisions about safe reopening of ECE centres or to monitor the extent of the closures and the challenges restricting reopening.

Policies need to be put in place to ensure adequate provision of and access to good quality childcare, especially for the poorest and most marginalized families, supported by adequate WASH facilities, subsidies and social protection provision. In times of crisis such as COVID-19, working parents need flexibility and support (such as state-subsidized paid leave for formal workers, or extended access to social protection for informal workers) to ensure young children are not left unsupervised. The well-being of parents and caregivers over extended periods of school closures was often overlooked despite the fact that high levels of stress can result in violent and harmful behaviour towards young children and neglect.

3.6 Summary

COVID-19 can be the catalyst to spur long-lasting plans to transform the education system, and with the right attention, disadvantaged learners can finally have their needs addressed, but they need to be prioritized.

The Southeast Asia region has been beset by challenges in undergoing an effective response to COVID-19 for safe operations of schools: widespread undernutrition of large numbers of the child population (increasing their susceptibility to COVID-19); high incidence of natural disasters (typhoons, floods, earthquakes, etc.); poor infrastructure, especially that related to WASH, and lack of resources. Significant resources are required to meet these basic needs before additional steps can be taken to build effective pandemic resilience.

04

Building back better and building resilience

> A new way of planning and working which will enable all children, including the most marginalized to access learning at the appropriate level and with appropriate help and support.

This chapter considers the lessons learned from the pandemic and outlines ways in which the system could build back better in the future to support the improvement of children's learning within and outside formal school settings. While the overall broad vision described lays out a common way forward for education, each country would follow a different pathway, taking into account their context and priorities, the capacity of the existing system to reform, and the resources available for education in the short, medium and long term.

4.1 A vision for change

Implementation of the new vision will assist all children to develop capacity for learning, acquire the necessary resilience and curiosity to pursue life-long learning, and prioritize foundational skills. This new way of working needs to recognize and address harmful social norms and provide alternative learning solutions to encompass the likelihood that significant numbers of children may not return to school and that the learning gap has increased as a result of inequalities. This will be a complex undertaking, so each country needs to plan for explicit short, medium, and long-term objectives, to show how they are building a new shock-resistant system.

Each government will need to significantly increase the level of funding for basic education and be more equitable and efficient in spending as COVID-19 has created a new kind of humanitarian emergency which unless addressed fully could undo decades of investment and especially impact further on the education of vulnerable and marginalized children.

4.2 What has COVID-19 done?

As discussed in Chapter 2, many education systems were failing even before the pandemic, leading to high levels of learning poverty, especially among the most marginalized learners. The COVID-19 pandemic has magnified the weaknesses of systems, highlighted strengths and ironically provided a pivotal moment in history to reimagine education. Changing the way education systems work can be seen as a matter of global urgency, particularly in the light of pre-COVID-19 literacy levels across the Southeast Asia region and also the expected learning loss for many children as a result of the pandemic. To bring about real change, countries need to start where they are and build from their existing strengths, considering policies and planning through a gender lens and putting provision for the most marginalized at the forefront.

Learning from the pandemic has shown that where there has been a degree of cross-sector collaboration, responses have been strongest and minimized the negative effects of the pandemic on education. Applying this learning to future education planning means that the vision for building back better needs to be shared and developed through cross-government co-operation, not be the sole responsibility of the Ministry of Education. Planning for the future, therefore, needs to involve a wider and deeper level of consultation than ever before, involving teachers, parents, community leaders, children themselves, as well as officials within the system. It needs to be a holistic planning process, as many of the issues which need reform involve ministries and agencies responsible for special education, health, sanitation, nutrition and women and children.

Across the sub-region there is such a significant range of different experiences, including the severity of the actual impact of the pandemic and length of school closures. Reduction in learning hours varied dramatically as did the availability of adult support and the reach of technology. Each country needs to review the resilience of their systems and use this review to identify their priorities, sequence these and revisit their Education Sector Plans to integrate sustaining school safety, better quality distance learning strategies and concrete plans to reach the most vulnerable and marginalized children. By undertaking

this process of review and prioritization, countries can develop mid to long-term plans based on budget availability. The following section sets out the issues that will need to be addressed if a new and more equitable hybrid education system is to emerge.

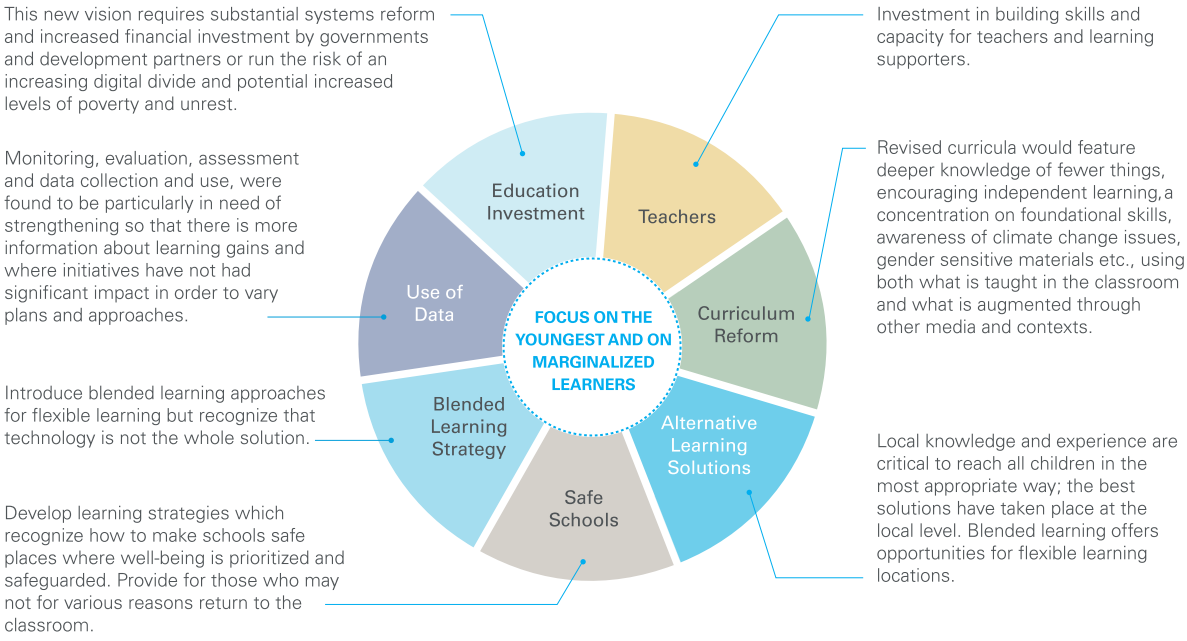
4.3 A unique opportunity for change

This time provides a unique opportunity for change. The focus needs to shift to marginalized children (including young children, girls and children with disabilities) and to differentiating their needs at different ages and in different contexts. This requires a better understanding of what goes on in the classroom (virtual and face-to-face) and how and when children learn. This includes measuring the extent to which lesson activities focus on learning activities by the children and are supported by:

- a supportive classroom culture and positive behavioural expectations
- the teacher facilitating the lesson, checking for understanding and giving feedback and stimulating critical thinking
- children being independent, autonomous, encouraged to persevere and socially engaging and collaborating.[258]

The overarching theme for this vision is that the most marginalized children should be at the forefront of all decision making (Figure 28). This will require extra investment, and innovative solutions, which, if developed through an inclusion lens, will enable countries to meet the needs of all groups of children.

FIGURE 28 | INCREASING RESILIENCE AND BUILDING BACK BETTER[259]



If systems are to become more resilient to potential new shocks, they need to begin their investment in human capital earlier. Strengthening data collection systems to make more disaggregated and gender-responsive information available about their marginalized child learners, will enable the development of appropriate teaching and learning materials and the strengthening of teacher and student support systems. For example, during COVID-19, Timor-Leste began to develop and share e-reading materials in local languages through the Learning Passport platform as described in section 3.3 of this report.

Each country will need to consider how to improve early childhood provision, considering how to ensure that all children can access opportunities which enhance their early development and growth. One idea is to establish early childhood centres where young children and their parents can gather for play experiences and also access basic services. As the evidence from the case studies showed, cross-sector collaboration results in more effective child support. This can be seen when locally-provided services are coordinated so that vaccines and feeding programmes are focussed, targeting the neediest and delivered at school. Countries will also need to establish or strengthen referral systems to different agencies dealing with health and well-being, disability and protection.

More detailed information is given below on how the model of building back better can be taken forward.

At the webinar held by UNICEF and UNESCO with stakeholders from across Southeast and East Asia to share the findings of this report, the issue identified as most important to build back better to improve learning and enhance system resilience, especially for the most marginalized was to develop new capacities and roles of teachers, followed by more flexible learning pathways.

> "Research shows that the quality of teachers is a major determinant of children's learning and wellbeing…throughout their lives, affecting…other long-term social… outcomes."[260]

Investment in teachers

Teachers are the bedrock of any education system.

As this report has shown, teachers in Southeast Asia found responding to COVID-19 difficult as they lacked the pedagogy and assessment skills to pivot to distance learning. As schools reopen, teachers will need new skills, better support and motivation to address the deepening challenges caused by the pandemic. A global framework for countries to take this forward is set out in the World Bank's Global Platform for Successful Teachers.[261]

A new vision will be needed to recruit teachers differently on the basis of a new set of competencies and not simply on the basis of traditional qualifications. Countries can learn from the new forms of pre-service training being developed in other parts of the world where all new teachers will be required to hold a new kind of practical-based degree course which involves learning in the classroom from the start of the course.[262] To prepare the teachers of the future to deliver the new hybrid model of education, teacher educators will need to upgrade their skills and the pre-service curriculum will need to adjust to align with the new expectations of teachers in the classroom. This will ensure increased quality of teaching and learning.

Findings from most countries indicate that teachers were not actively included in the early plans for developing remote learning.[263] Teachers had to learn fast and obviously some learned faster than others. Research shows that the continued involvement of teachers with their students, during times of school disruption or closure is vital. It instils confidence and trust, providing personal reassurance to individual children, especially the most vulnerable and particularly those with disabilities. There are many ways in which this has been achieved during the pandemic (as seen in Indonesia where teachers used boats to reach their remotest students every week to ensure they were on track)[264] and can be further enhanced. In all countries many dedicated teachers responded well and quickly to school closures and provided support. In countries where teachers are seen as important professionals and paid well, teachers felt a great sense of responsibility to support children and ensure they continued learning.

Teachers need to understand they have a new leadership role in building back better. They have responsibility for providing continuity and positivity to children who have been affected by the events of the past year in different and sometimes traumatic ways. Teachers should be tasked and supported to work in ways that build student resilience and curiosity. They should be prepared to provide safeguarding and support for children faced with increased hardship, violence and abuse, and assist them to find resources that will help overcome extreme psychosocial issues. Teachers learned a great deal during the pandemic, and those lessons should feed into planning for new teacher training and mentoring interventions to ensure they meet the needs of the teachers on the front line.

School principals and head teachers have critical roles to play in supporting teachers, and as leaders and managers of schools, to navigate the continuous and evolving processes of building back better. More decisions need to be delegated to the school level so that head teachers and teachers are able to respond flexibly in a way that is appropriate to the situation and the context. Development of head teachers will therefore also be vital so that they can confidently lead this process of reimagining in their schools.

What is needed now, is an alignment of pre-service and in-service continuing professional development programmes based on a modified teacher training curriculum. This needs to be reinforced through strengthened school-based mentoring.

> A new vision of what teachers need to be able to do, supported by continuing professional development to acquire the skills they need, is essential if future education systems are to be strengthened.

The new skills that teachers will need include how to:

- facilitate learning and provide a supportive classroom culture based on positive behavioural expectations that reinforce 21st century skills such as teamwork, collaboration, resilience, independence and critical thinking
- deal with student safeguarding and well-being, and provide support for their emotional issues
- assess learning (summative and formative) and check for understanding in the classroom and give feedback
- plan for remediation approaches based on the assessment results and deliver these using differentiated teaching pedagogies
- use technology to deliver lessons, both in the classroom and remotely.

This will take time to develop but will be well worth the investment.

Curriculum reform

Building back better must impact the traditional view of the curriculum. There will, as schools reopen, need to be a prioritization and simplification of the curriculum so that children (particularly young ones) are thoroughly learning the numeracy and literacy skills, that will build the foundation for all other learning.

The revised curriculum will need to focus not just on traditional knowledge-based learning outcomes, but additionally on making children resilient, independent learners and concentrate on what is essentially important for each age group, e.g., health and well-being, foundational skills, etc. This should also include the social and emotional skills that build well-being, and a greater awareness of 21st century issues such as climate change and disaster risk reduction.

It was clear from the case studies that migrant children and minority language groups were excluded from remote learning due to a lack of materials in their language, along with children with disabilities for whom few materials were adapted. The revised curriculum will need to be inclusive and not just promote national cultural relevance, but the diversity of the students within the country including those with special needs or those speaking minority languages (especially for early years when mother tongue is used). As part of the strategy to challenge harmful social norms, the revised curriculum should be gender transformative, foster respect for diversity and aim at global citizenship and social cohesion (peacebuilding).

There will need to be clearer communication of learning outcomes and competencies to be acquired so schools, teachers and governments can engage more easily with parents/carers about the objectives of learning for each subject and each Grade, with better progression ladders to map the journey of progress for learners. Alongside this, there will need to be regular assessments of learning that provide disaggregated results to track progress.

This is a significant challenge but should start with the early Grades and develop incrementally over time.

Alternative learning solutions

The case studies have highlighted that local knowledge and experience is critical to reach all children in the most appropriate way, and that while most programmes were designed at national level, the solutions which best reached the most marginalized have taken place at the local level (many of which were described in the case studies). This, along with the recognition that learning does not just take place in school, is fundamental to building a new system and has implications for ensuring that each country develops framework policies (e.g., blended learning), but delegates responsibility to districts and sub-districts to customize their learning

> "Governments should ensure that girls and women are consulted and can contribute to decisions about school reopening through regular feedback mechanisms, and their engagement in decision-making and planning process." [265]

plans to focus on the youngest and most marginalized children in their area.

Developing local learning plans will need to begin at the school level and involve community stakeholders and parents as well as teachers in setting and monitoring targets for their specific school. Schools and local officials will then report the results up the system, increasing results-based accountability. For this to happen successfully, skills will need to be built at community, school and local level to plan, set targets and monitor performance, particularly for the school principals / head teachers who will have important roles to play in this.

The effects of COVID-19 on the way people live, learn and work, has shown that learning can happen anytime, anywhere, and physical schools are not the only place where learning can take place. Schools will still be needed as the pandemic has also highlighted the importance of social contact and that many skills still require face-to-face interactions to be imparted (such as through co-curricular activities). Schools also have important roles to play in providing health and social services.

A phased approach to embedding technology use into education means that countries can plan over time for the changes to ensure that eventually all schools and learners are connected to the internet and all learners have access to devices, giving flexibility in learning locations. By using technology, all children can access high-quality content through efficient, engaging, and attractive online learning solutions, which can be used to align formal and non-formal education outcomes, as well as develop technical and vocational competencies. Certification becomes easier with online learning: online validation of learning or competencies can help students to become certified over time and at their own pace: this can really help with secondary education completion, post-secondary and tertiary education, and with technical and vocation training. When students can complete courses in a modular fashion and validate these in their own time, this gives them more flexibility in their learning journey, enabling them to work at the same time and apply new skills to their job.

COVID-19 has brought the timeline for this shift forward for many countries and made the need for the change more concrete, but it has also shown the opportunities that exist, and that change can happen.

Establishing a blended learning strategy

UNICEF's Remote Learning Advice COVID-19 examines a total of twelve different learning modalities across four learning classifications.[266] As each country develops their blended learning strategy it will be essential to examine these and to determine the nexus between self-learning, teacher-guided learning and home learning modalities. By harnessing the advantages of technology through a hybrid approach, education can become more accessible and equitable, more learner-centred, more flexible and better quality for all ages of children, regardless of where they live. This will include a mix of face-to-face and distance learning modalities, which are tailored to be appropriate for each learner's context, which could be online or accessed using low-tech options.

As already mentioned, teachers and their support systems will need to fully understand these modalities and where they will be most effective, and these factors should guide the development of a blended learning strategy. As more schools begin to reopen, countries will need to plan for the continuation of the blended approach they have been using, not just to manage ongoing COVID-19 cases and quarantining that still occur, but as part of the vision of a hybrid approach to education going forward, building on all the lessons they have learned along the way.

Each country needs to move towards a different vision which shows how remote learning of different kinds

> There is an opportunity to rethink school spaces so that they are safer and can better meet the needs of a more opening learning style.

can augment formal schooling and if conceptualized well, even replace it in extreme circumstances (e.g., pregnancy, domestic violence and abuse and extreme poverty). Without doubt, there will be times of disruption in the future for various reasons, natural disasters, conflict as well as potential new pandemics. Now is the time to consolidate how traditional classroom teaching can be reinforced and augmented by various types of age- and level-appropriate remote learning. Opportunities need to be provided to enable the blended learning strategy to be customized for specific local needs and contexts as COVID-19 has shown a range of solutions are needed.

Safe schools

As well as considering alternative learning solutions and centres, a longer-term vision should include the design of larger classroom spaces and more flexible furniture which will make the environment suitable for a more open learning style.

Schools, like teachers, are an essential part of an education system. They provide focal points in the community, should be places of stability and refuge and at best, give children a sense of routine and normality which promotes well-being. There is an opportunity as schools reopen after the pandemic, to ensure they are safer spaces and in some countries, there are now regulations which insist on improved safety and well-being before they reopen, so that schools themselves are built back better. Many countries are following the recommendations included in the WHO checklists such as improving WASH facilities, their use and accessibility and levels of cleanliness as well as ensuring other health protocols within the school are in place for regular handwashing and respiratory etiquette, safe distancing and the use of 'bubbles' to keep class groups separate. This also includes infection prevention control measures such as reporting and response procedures and the continuation of essential health services such as school feeding, immunizations, menstrual health management, etc. The importance of well-being and MHPSS for parents, teachers and children has been recognized during the pandemic. Socio-emotional development and building children's 21st century skills such as resilience will be vital to take this forward.

> "Since the onset of COVID-19 governments of 65% of poorer countries have reduced their education financing compared to only 33% of richer countries."[267]

Use of data – Building a new monitoring, evaluation and assessment framework for the new vision

The new vision for teaching and learning will require a new Monitoring, Evaluation and Assessment Framework. This framework will need to operate around a revised curriculum. In the classroom environment, teachers are normally expected to monitor children's learning progress through formative assessment, whether learning is on track and identify strengths and weaknesses. This allows the teacher to adapt and modify their teaching approaches. In an improved environment, where the focus is on learning, formative assessment will be integrated into teaching, and used to inform planning which is flexible to meet the needs of a diverse class of leaners.

Formative assessment will be critical in the aftermath of the pandemic, when learners return to school. This would form a major part of remediation strategies which are designed to help teachers plan their teaching according to the level of the child's skills and understanding.

Assessing progress on multiple, different learning modalities presents a huge challenge, and has to date yielded few good examples of best practice. However, UNICEF, in partnership with Cambridge Education, is producing guidance on how to assess learning against different modalities such as radio, TV, mobile phone, digital and paper. The World Bank is also producing guides on digital assessment. Once finalized, these packs will help countries build a new model for monitoring and evaluation and assessing learning impact.

Outside the classroom, collection of education data around use and participation will be critical so that there is evidence of what works and where. Monitoring and tracking individual student learning in register-based EMIS will help work towards personalized learning which takes individual characteristics into account, e.g., language, disability, etc.[268] All data should be disaggregated so that marginalized communities and children can be effectively targeted and evidence-based solutions can be found.

Education investment

It is going to be extremely hard for governments, faced with the economic downturn created by COVID-19, to increase investment to education. The cost of not of doing so needs to be carefully weighed, given the relationship between investment in human capital and economic growth.

As section 2.6 shows, the current commitments in the sub-region to education are below the minimum recommended by UNESCO, and this challenge will increase as funds are re-allocated to other sectors such as health. This is examined in more detail in the Finance Section (Chapter 2). The challenge most countries face, is decreased domestic revenues at a time when there are rising needs in health and education, in particular to fund the response and recovery activities.

For many countries, the issue is not just insufficient funding, but how the funding is allocated and spent. To reach the most marginalized children and address the learning divide, funding needs to be allocated equitably by deliberately targeting communities and groups that are falling behind. Governments need to look at how they spend their funds and identify how they can do this more efficiently. One of the most effective ways to do this is to ensure cross-sector and multi-level collaboration in planning, budgeting and implementation to prevent duplication of activities.

This section describes a vision for the future which would change the way education is managed and delivered so that it reaches more learners, especially the most vulnerable and marginalized, with targeted interventions and teaching approaches. The next chapter sets out recommendations for steps that can be taken to work towards this vision which are in line with the context of the region.

05
Recommendations

> The most important and urgent recommendation is to reopen schools safely and to enable all children to restart learning with their teachers.

This section presents recommendations for governments across the sub-region to consider. The recommendations are brought together under the headings from the earlier sections. Where possible short to medium and medium to long term recommendations are made, yet this distinction will differ depending on the country situation. As demonstrated through this report and the case studies, there have been some good responses to the pandemic in all countries and there are some examples of excellent initiatives that could be adapted and expanded to other contexts. It is recognized that budgets for investment are constrained, yet it is vital that children and young people, and especially the most marginalized, are prioritized and so some of the recommendations are ambitious.

5.1 Reopening schools and ensure all children can learn safely as soon as possible

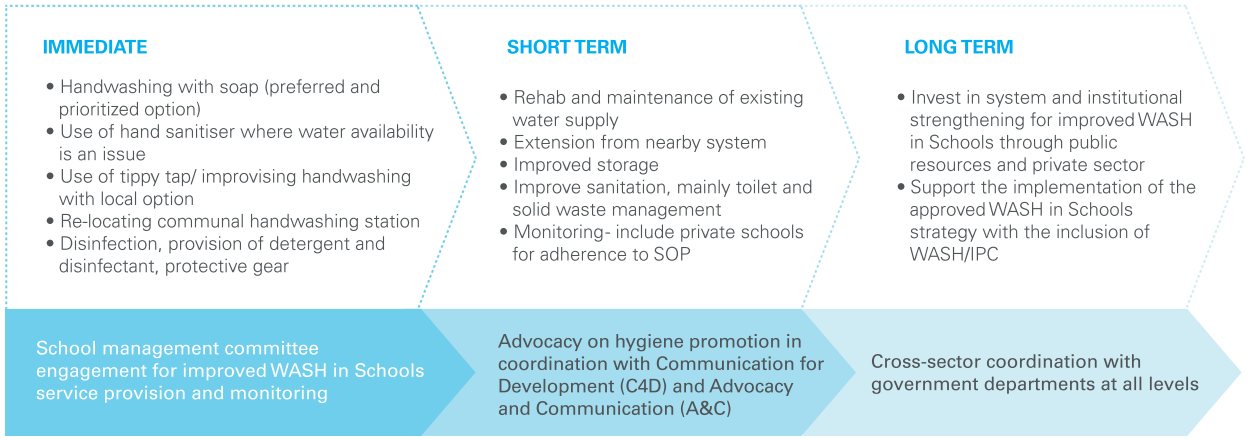
a. Strengthen evidence-based decision making on when to reopen schools. National governments need to consider latest research and analyses on the impact of school closures versus other social distancing measures in their decision making, balancing risk level and broader health and psychosocial costs for pupils, especially pre-primary age children.[269] Cross-sector collaboration at all levels of the system from communities and schools, through all the sub-national layers and to Ministries, will be required to cover health, education, social welfare, child protection and WASH aspects and provide any necessary support.

b. Decentralize decision making and provide support for safe reopening. Further support needs to be given to sub-national and school-level actors to develop and implement reopening plans that will keep their staff and learners safe while still enabling learning to continue. Communication of safety measures with teachers, parents and communities is essential to encourage hygiene behaviour change and to put local accountability measures in place for compliance. Schools should be supported to obtain necessary funds which could be utilized in a flexible manner according to their needs, particularly to address the challenges faced by the most marginalized children in their communities.

c. Monitoring and evaluation systems at all levels need strengthening to provide timely data on which schools are operating safely, which ones are not and why. Stakeholders such as teachers and parents should be involved in monitoring and evaluating the effects of the pandemic on families, schools and learners to improve local decision-making capacity. This will build resilience at the local level to handle future disruptions. Data should be disaggregated, and support should be targeted based on this data. Technology (such as SMS, phone surveys, etc.) should be harnessed to strengthen real-time national and local monitoring procedures.

d. Prioritize WASH infrastructure and facility needs for ECE centres and schools serving the most marginalized groups and identify short- and long-term financing solutions to address these. There will need to be the engagement of high-level cross-sector government officials to increase ringfencing of finance for the completion or improvement of school infrastructure and safe operations in all schools, particularly those that serve the most vulnerable populations. From a health perspective, governments should utilize the WHO checklist on reopening schools[270] to ensure that schools can put in place protective measures. They must ensure that where schools do not have adequate WASH infrastructure, suitable alternative facilities or modalities are available and that budgets are prioritized towards those schools with inadequate facilities. Figure 29 shows some of the actions that need to be taken for safe opening of schools.

FIGURE 29 | WASH / INFECTION PREVENTION CONTROL (IPC) FACILITIES FOR REOPENING SCHOOLS[271]



5.2 Use data to identify and reach the most marginalized children

a. Establish or strengthen real-time data collection and use systems continuous comprehensive monitoring. As schools begin to reopen it is vital for communities, schools and health and social services to work together to identify children who are not re-enrolling as well as those who have never enrolled, to understand the challenges they face and to develop strategies to address these, so that as many children as possible have opportunities to learn going forward. This needs to continue once schools have reopened as some children will continue to be at risk of dropping out even after re-enrolling such as those from poorer families, or suffering abuse or those with disabilities. Indonesia's community-based EMIS system provides a good model for a localized solution to this. Local education, health and social welfare agencies should collaborate to develop individualized support plans for children in need, through current and extended services. The data should also be used at sub-national and national level to enhance understanding of the issues affecting children, support policy formulation to address different types of marginalization, and for targeting budgetary allocations. Data also needs to capture information on the accessibility of different learning modalities to learners in each community and the extent to which learners are accessing these.

b. Improve access to different learning modalities. The COVID-19 pandemic has shown the importance of alternative learning modalities to ensure that all children can continue to have access to learning and support systems during times of crisis. As countries begin to develop comprehensive strategies for taking forward a blended approach to learning, it is essential that the lessons learned from the pandemic are used to tackle access for the most marginalized children to narrow the learning divide. One way to do this is to normalize aspects of distance learning within everyday teaching and learning. This may be through using technology during face-to-face lessons, encouraging more independent learning or through the use of alternative learning solutions such as community learning hubs for remedial lessons, or for those who cannot return to normal school hours (such as child mothers). The countries that had the widest levels of access during the pandemic, were those who understood the challenges of marginalized children, and had access to the type of data described above. Another approach is to ensure that this information is available and that interventions are designed taking this into account.

In addition to the type of the learning modality, it is also critical that alternative learning modalities such as blended learning, distance learning, learning online, etc., are aligned to the revised curricula, pedagogy and assessment that will need to be introduced to provide remediation (described further in the next recommendation). This will need to be supported with continuing professional development of teachers and head teachers.

To increase internet and mobile phones accessibility through public/private partnerships with service providers, and cross-sector collaboration with other ministries and agencies will be needed. Many countries have Universal Service or Access Fund mechanisms in place "by which a national regulatory authority mandates, oversees and/or coordinates a set of subsidies and fees designed to promote access to telecommunication services for all of a country's population."[272] Education Ministries cannot fund internet access across a country, and are not responsible for doing

this, but they can work with other partners to collectively look for and accelerate solutions. This should also include subsidising the provision of learning devices for those who need them most and initiating and upgrading privacy and protection regulations to keep children and young people safe online. If countries can begin to resolve the issue of access to internet and devices, then partnerships with the education technology private sector should be developed to look at cost effective and competitive pricing models for learning platforms that are engaging, interactive and aligned to the revised curriculum (including online assessments and tracking of performance, individualized progression, and inclusive materials see below). In many places, children from richer households already have access to this technology, so the focus needs to be on making this accessible to all children, and especially the most marginalized. In this way, all students can learn at their own pace, anytime, anywhere and through any device and their progress can be tracked.

c. Strengthen provision for the most marginalized learners. If access to internet, devices and electricity becomes more widely accessible, technology can be used to widen access to inclusive materials such as minority language materials or materials developed for children with different types of disability. Offline and legacy technology solutions such as printed materials, radio provision or community-led learning clusters should also be considered and planned. These approaches can be used for when schools are closed as well as when schools reopen to reinforce learning in the classroom.

Schools should be supported to ensure that the most marginalized learners are prioritized in school reopening plans, both for re-enrolment and attendance (as discussed above), but also for the support services, such as school feeding and counselling, needed to support their continued participation and learning. Plans for those made more vulnerable through the pandemic (for example, through increased poverty or those unable to access learning during school closures), and those already out of school should be prioritized to reduce the learning divide.

During the pandemic, many countries appreciated the value that parental support and community mobilization added in the development of local solutions. This needs to be harnessed as part of the approach to education going forward, through effective support to parents and caregivers in times of future school closures and inclusion of communities in school governance. This should include building capacity and providing resources for communities and schools to partner to enhance the outreach potential of the education system, especially to the most marginalized and vulnerable, who can often be found in remote and disconnected locations. As part of this collaborative effort, social norms and power relationships should be identified and steps taken to give voice to those suffering as a result of harmful social norms and break down power dynamics that are preventing local accountability.

Children with disabilities face a range of problems in accessing learning during school closures as discussed in chapter 3. Plans need to be put in place to provide skills and support to teachers in integrated schools, and to parents and caregivers of children with disability to ensure that learning is inclusive and accessible, and support can be given in the home. For children with certain types of disability, where a home-based option is not feasible, all measures possible should be put in place to ensure residential or specialized schools can safely remain open for as long as possible. This should be considered in budgeting and planning for WASH facility provision as well as for vaccination plans. Once integrated schools reopen special attention needs to be given to ensuring that children are given individualized support, depending on the type of their disability, to help them follow hygiene and safe distancing guidelines.

5.3 Strengthen teaching and teacher support to address existing low levels of learning and help narrow the learning divide

a. Assess learning loss on reopening and conduct ongoing formative assessment of learning as face-to-face classes resume. Teachers and schools will need to know the learning levels of their students once schools resume and going forward as they begin to teach face-to-face again. The level of support required to do this will depend on the capacity of the teacher workforce, but there will need to be consistency in the diagnostic assessment on reopening so that results from schools can be aggregated and used to develop a revised curriculum (see below). Therefore, this will need to be a centralized process and will need to be timely. Based on the results of the diagnostic test, teachers can begin to provide remediation and then their role will be to conduct ongoing formative assessment of learning so that no child is left behind and the pace and content of the remediation can be adjusted according to need.

b. Provide guidelines for schools and teachers on delivering long-term remediation based on a revised curriculum. Schools will need to focus on foundational skills (literacy and numeracy in primary schools) on reopening, especially in countries which had low levels of learning prior to the pandemic. There will need to be a thorough review of the curriculum by experts to provide guidance on what should and should not be included in the remediation support. The case studies showed that many teachers were unable to prioritize foundational skills themselves during the remote learning, resulting in more inequalities as many teachers defaulted to trying to cover the normal curriculum, which put some students further behind.

Clear guidelines should be developed and provided to schools and teachers on how to take forward remediation at each level including how to conduct short-term accelerated learning as well as longer-term reorientation of pedagogy. This will include how to assess learning levels, group students, and how to decide which remediation approaches to use (one-to-one support, teaching at the right level, additional volunteer teachers, extended term time, revised timetabling, etc.). Some children may need catch-up programmes, accelerated learning (for over-age children), remedial support in foundation skills or bridging programmes for those whose circumstances have significantly changed during the pandemic. These guidelines should be produced where capacity is highest, but should be flexible to each context. It is strongly advised that government stakeholders continue to partner with development partners and implementers and CSOs to ensure best practice and lessons from the field are incorporated into the revised curricula as well as the guidelines.

c. Review teacher development and support systems. The demands placed on teachers over the last year have highlighted both their capacity gaps and the need for their roles to change. Teachers have had to ensure continuity of learning during school closures and to manage periods of reopening, partial closures and having some children in school and some studying remotely due to illness and quarantine rules. This will have an impact on teacher education from pre-service initial teacher training to in-service continuing professional development training and support. There is a need to review pre-service training to identify and address curricula content and implementation gaps that have resulted in the training of teachers who lack the skills to assess learning and to adapt to distance learning and the use of technology. This is best done by aligning pre- and in-service teacher development content and approaches and by ensuring that recruitment practices provide a robust assessment of skills and knowledge.

All countries need to ensure that the structures for continuing professional development are in place and properly funded and supported. This includes provision for training (both online and face-to-face) but also provision for school-based support to teachers and the strengthening of head teacher capacity to lead teaching and learning in the school. The content of teacher development will need to be expanded to include assessment, blended learning pedagogy and methods to build strategies which combines short-term remediation with long-term reorientation of instruction to children's learning levels. In addition, teachers will need to expand their knowledge of mental health issues and develop skills in identification and assessment (more detail is included in Chapter 4).

d. Increase student agency and make learning more relevant. Students need to be supported to take more responsibility for their learning, as well as learn how to collaborate with their peers (as done in Viet Nam). The strategy for a blended approach (discussed above) should consider student well-being and their need for interaction, especially for younger children. To prepare for emergencies where remote learning has to be implemented in the future, small student group learning 'bubbles' could be created, to reduce learning isolation and increase student interaction (for example, Lao PDR and Cambodia learning clusters). If class sizes need to be reduced, these bubbles could attend school in rotation, to ensure that all children have access to some socialization with their peers. While studying from home, children can work independently, while this face-to-face contact time can be used to clarify concepts and provide time for collaborative problem solving and peer support (as set out in Indonesia's vision for education going forward). To further enhance the development of 21st century skills, teachers should be supported to use project-based learning methods to broaden the perspective of the curriculum and make education more interesting, engaging, and relevant to today's learners. Examples exist of school gardens becoming the starting points for exploring climate change and mitigation using STEM tools (UNICEF Viet Nam's approach to ethnic minority students and using virtual reality tools). Project-based learning activities with a focus on solving community problems can be supported by community volunteers, to provide closer links between communities and schools (see above). Parents and caregivers should be able to see a stronger connection between home and school. This can be done by building on the understanding gained during lockdown of learning at home using available activities and materials. Communities can be encouraged to see learning expand beyond formal school setting, which could open access to those who are

unable to attend regular classes. This will entail parental education as well as school leaders reaching out to families and the community.

5.4 Provide a package of support to ensure children's health, nutrition and well-being

a. Strengthen pandemic response planning and cross-sector collaboration. Use cross-sector collaboration to ensure the continuation of essential health, nutrition, well-being and protection services during school closures. Strengthen pandemic response plans through joint ministerial work to address the pathways for the delivery of these essential services to pre-school, primary and secondary school children and adolescents, ensuring these are secured, including school feeding, routine immunizations, support for children with disabilities, and meeting mental health needs.

b. Promote and fund outreach services for teachers' and young people's MHPSS. COVID-19 has caused increased levels of anxiety and stress, which manifest in teachers and children and young people in different ways. School and community health and social services-based systems for assessing, identifying and referring mental health and psychosocial support service (MHPSS) cases need to be established so that issues can be addressed and coordinated support provided. Teachers and community health workers need to be trained to observe, record and take action to support young people, particularly in the more remote locations, where services and awareness may be limited. Young people must have safe spaces and opportunities to positively interact and learn while supporting each other. Helplines and other forms of access to MHPSS support should also be funded so that information and advice is accessible.

c. Identify, record and address protection issues especially for girls. Reports of gender-based violence, child marriage, physical and mental abuse and child labour have increased during the pandemic, especially for girls and for more marginalized children such as those with disabilities. Teachers should be trained to assess children who show signs of abuse and schools need to work with communities and health / social services to support appropriate responses to help these children. This may be through challenging social norms and engaging with parents/caregivers, or through more formal support systems, where children are removed from risk. Some examples of interventions include widespread awareness around policies for educating child brides and working with internet providers on regulations for online safety. Comprehensive and disaggregated data collection will improve child and adolescent safeguarding, if it is used to target resources to appropriate protection measures.

d. Address issues of household poverty and child labour through social welfare and child benefit. Many countries in the region already provided social welfare to poor families. This needs to be continued and expanded for as long as poverty impacts on children's health and education. Promote a cross-sector response in terms of social protection measures for all families who live below the poverty line. Children living in poverty are likely to live with a multiple number of disadvantages such as malnutrition, stunting, poor health and perhaps often missing school because of a disability. Without a focus on reducing disadvantage many children will lose years of learning and may drop out of school completely.

5.5 Provide holistic support for children in early childhood development and pre-primary

a. Prioritize funding, policy development, data collection and use of cross-sector pre-primary child development. Developmental support for pre-primary children needs to include cross-sector alignment of nutritional and health services such as immunizations and development checks, as well as family welfare policies and education provision to ensure each child has the best possible start in life. This can only be done if there is concrete political will and increased investment and monitoring of ECE provision. The high rate of stunting (as much as 25 per cent in Southeast Asia) and lack of participation in at least one year of quality ECE needs to be tackled for longer-term benefits in terms of increased future earnings will be seen. This message needs to be communicated to parents/caregivers so that demand increases as long as it is matched by an associated increase in supply. Disaggregated and comparable data on ECE access and participation needs to be collected and used to inform policy and resourcing of both childcare and ECE, set targets and measure progress.

b. Increase provision and enrolment in quality pre-primary childcare and ECE, especially for the

most marginalized children and communities. Each country needs to plan to offer every child access to quality and relevant non-family-based childcare and ECE. Considerations such as language, timing and location of lessons, and provision of facilitators/teachers need to be taken into account especially in most marginalized communities. Community-based provision that responds to the income-generating activities of communities such as market- or plantation-based provision can improve participation and provide a cost-effective model to enhance supply of provision quickly. Decisions around the ECE workforce will need to be made in the short- to medium-term and longer-term, to be able to meet the needs of large numbers of uncatered for young children, and still provide high-quality stimulation and care. Although the longer-term aim may be to ensure equivalence of working conditions and minimum requirements for ECE teachers with other professionals working with children, in the short-term volunteer or mother-led facilitation can also be effective.

c. Prioritize WASH facilities for ECE centres to enable continuity of safe learning within school, especially in the most marginalized communities. COVID-19 has shown that remote learning does not work for ECE children, therefore ECE centres should be opened safely as quickly as possible when similar situations occur in the future.

5.6 Prioritize education funding

Chapter 2 highlights the importance of increasing education funding to get back on track to meet SDG 4 targets. The solution will depend on the context of each country and options are provided in more detail in Chapter 2.

a. Consider the impact of COVID-19 on progress towards education targets and its implication on funding needs. A country-specific review and utilization of the Shock Model presented in Chapter 2 would help governments to estimate their specific financial needs to ensure better quality education and learning of all children and adolescents particularly the most marginalized during and beyond the pandemic, based on their own priorities and needs. This will then provide an evidence base against which to advocate for additional funding and to allocate available resources.

b. Prioritize and increase funding to the education sector. Despite weak economic growth predictions, it is essential that countries look for additional education funding both internally (through increasing domestic revenues and reallocation of budgets) and externally through deficit financing and international donor funding.

c. Target funding so that it reaches the most marginalized children. Funding should be spent on addressing the needs of specific categories of children who are being left behind in learning poverty. For example, children with disabilities need to be supported with assistive devices, specialized training for their teachers and accessible materials. Children who speak minority languages need to be able to access materials in their language and teachers need to know how to teach using these languages.

d. Review education expenditure and make it more efficient. A review of education spending to identify inefficiencies such as duplicated activities or weak procurement systems that result in higher unit costs could help to save much-needed resources.

06

Conclusion

The purpose of this report was to assess the impact of COVID-19 on the education sector in Southeast Asia, to examine policy and financial implications on progress towards achieving SDG 4 in 2030 and to identify examples of promising responses to the pandemic which can be shared with other countries.

The impact of COVID-19 on the education sector in Southeast Asia has been severe and will have long-lasting consequences on the region's economic and social development. Prior to the pandemic, many countries in the sub-region were off-track to achieve SDG 4, were facing varying degrees of Learning Poverty, and had a consistent number of primary-aged children out of school, who are also the most marginalized in society. Due to school closures and the rapid move to online learning, the digital divide has resulted in increased marginalization of the sub-region's most vulnerable children.

COVID-19 has pushed many families into poverty or deepened poverty, and it is likely that many children will not re-enrol when schools reopen. Harmful social norms such as child labour, sexual exploitation and child marriage have increased during the pandemic, as have mental health issue for parents, teachers and students. The long-term health of children has been put at risk as routine immunizations and school feeding programmes, as well as routine health provision for ill children and for children with disabilities have been put on hold. In a sub-region with high levels of malnutrition, the reduction in the quality and quantity of children's diets will have a long-lasting impact on children's capacity to grow, develop and learn.

These factors, added to the learning loss due to school closures, will result in reductions in future earnings of many of the sub-region's children, particularly the most marginalized.

On the positive side, as a result of the pandemic, countries have begun to re-envisage education, to reflect on these levels of marginalization and how to address them, to work across sectors and with strengthened partnerships at all levels and to see the opportunities that technology can create, if planned for in an inclusive way.

The financial implications of the pandemic on countries' GDP will be significant, which will have a resultant impact on education budgets. While some higher-income countries will be able to generate or re-allocate funds to education from domestic revenues, lower-income countries in the region will need to look externally to source for deficit financing or aid. One of the first steps countries will need to take, is to consider the long-term financial implication of the reforms that will need to be brought in to get them on track to meet SDG 4 in 2030. Underpinning these reforms will be the need to focus on the most marginalized, to develop teachers to implement long-term remediation plans for their students and to integrate social protection and health programmes into education provision.

Across the Southeast Asia sub-region, there has been immense effort to address the challenges raised by COVID-19 and many examples of good practice have emerged that can help to guide other countries as they begin to build the resilience of their education and emergency response systems. Examples of keeping children safe range from the coordinated health and education response in Viet Nam to safely open schools, to Timor-Leste working hard to ensure all children catch up with their immunization schedules, and Viet Nam and Myanmar providing social protection responses to reports of violence at home. To improve support to children during school closures, parents in Lao PDR were given advice during the pandemic, teachers in Myanmar and Cambodia directly supported remote/rural students at home and in clusters, Indonesian teachers delivered lessons both off- and online, and Lao PDR created television programmes for the youngest learners. Finally, across all the countries in the sub-region social protection welfare packages were provided to the poorest in society.

If these levels of energy, commitment, effort and partnership are put into driving long-term reforms in the sub-region, then countries will be better positioned to face, address and solve their existing challenges as well as the new challenges created by the COVID-19 pandemic, and be in a stronger position to face disruptions in the future. This is the only way to achieve the SDG 4 targets and to give opportunities to the millions of marginalized children to fulfil their potential in life.

Annex. Financial modelling methodology

A.1 Methodology to estimate the financial impacts of COVID-19 on education sectors

To estimate the marginal impact of COVID-19 on education sector budgets through to 2030, when SDG 4 is hoped to be achieved, we developed an interactive Excel modelling tool called the 'COVID-19 Shock Model' that forms part of the project outputs. In contrast to the World Bank's (2021) micro-model, this is a macrosimulation model – similar to that applied in the Global Education Monitoring (GEM) Report – designed to estimate scenarios for education budgets.[273] The budget baselines for the model are set according to the pre-COVID-19 education budgets to achieve the SDG 4 targets by 2030, as generated by the UNESCO *Education Costing Model 2020 for Asia and the Pacific Region*.[274]

The main purpose of the UNESCO Model is to estimate the costs to achieve SDG 4 targets in the Asia-Pacific region, specifically SDG 4 targets 4.1 (universal primary and secondary education), 4.2 (universal pre-primary education) and 4.5 (gender equality and inclusion). Like our model, it also aims to be an interactive advocacy and capacity development tool to support countries to understand and meet the financial commitment to achieve SDG 4. The UNESCO model forms an ideal basis for this exercise given that their model includes all of the necessary education-related and macroeconomic variables, such as GDP levels and long-term growth rates. The UNESCO model works from the pre-existing standards within the education sector to estimate the budget needs to achieve SDG 4, applying demographic changes and user-defined changes in school enrolment, completion rates, learner-teacher ratios, costs to reach marginalized children, and public versus private provision. We apply the "Base Test" scenario within the UNESCO model for this exercise, which references countries actual outcomes in 2019 and then estimates budget needs according to the standard SDG 4 targets and variable levels. Users can adjust the 2030 targets within the UNESCO model as per the instructions that accompany the model and the results, which may be less or perhaps more ambitious targets for 2030, will automatically pull through into the COVID-19 Shock Model.

Given that the UNESCO model was developed pre-COVID-19, it lacks the following variables that specifically account for the financial impacts of COVID-19: rolling school closures; shifts in teaching modalities; social distancing protocols; procurement of hygiene products and personal protective equipment; teacher training and support programmes; and expedited infrastructure (WASH) programmes. The modelling results therefore indicate just the increased financing gap due to COVID-19 to achieve SDG 4 by 2030. The model attributes this financing shock to specific services, which are disaggregated according to existing and new services (for example, remediation is an extension of existing services but the procurement of personal protective equipment for teachers is a new service). To help inform financing decisions, the results are also presented according to functional and economic classifications.

There is still a high degree of uncertainty about the pandemic. First, the outbreaks and resultant disruptions caused by COVID-19 are unpredictable. Second, the effectiveness and rollout (specifically to developing countries) of vaccines is still to be determined. Third, there are ongoing data collection and validation exercises that continuously improve our understanding of the

impacts of COVID-19 on the education sector. As such, the model is designed so that the financing scenarios are flexible. Users can interact with each variable, either specifying the parameters based on: updated/verified data; an assumed baseline with stress tests; or a likely range. Given this functionality, although the parameters for the variables were fixed for this study, users can reapply the tool to effect any required changes. The financial scenarios presented below are therefore indicative of the potential magnitude of the impact of COVID-19 on education budgets.

The model obviously has its limitations. First, in order to remain both user-friendly and transparent the model relies on a limited number of variables. Although care was taken to select a comprehensive set of key variables, there may be some financial implications of COVID-19 that have been omitted. In this event, users should regard the results as a base for the financial impacts of COVID-19 from which to add the impact of missing variables. This point likely explains many of the estimation differences between this and other models. Second, the model is intended to approximately quantify the long-term budget needs to maintain progress towards SDG 4 by 2030 and therein guide investment cases. Hence, the model does not lend itself to in-year budget/programme planning. Third, the model's focus is limited to pre-primary, primary, lower secondary, and upper secondary education. This resulted in omissions to the SDG 4 targets related to tertiary education, skills for work, adult literacy, education for sustainable development and global citizenship, and scholarships.

A.2 Financial impact estimation procedure

The diagram shown in Figure 30 provides a schematic for the model. The white boxes list all of the variables, which users are able to set, and the blue boxes explain the calculation method. Users can reset and adjust all of the variables in the Excel model, simply by inputting the desired values. The calculations to estimate the financial impacts of the specified scenarios are all automated in the model. The following four cost categories are considered in the model:

Remediation costs:

The remediation costs account for the days of lost learning, through both full and partial school closures, that must be caught up. The lost teaching days are adjusted to account for the percentage of learners who were effectively reached during school closures by alternative teaching modalities, such as online classes. The net number of lost teaching days is then multiplied by a setback factor, which accounts for skills depreciation among students due to disruptions in teaching continuity (for example, students may forget some acquired knowledge and thus 1.25 school days are required to catchup every lost school day). The final step is to deduct the proportion of lost teaching days that can be caught up within the existing resource allocations, via increased class time though shorter school holidays or extensions to the duration of school days. The cost to remediate the resultant total number of lost teaching days is calculated by multiplying the number of lost teaching days as a proportion of total teaching days within that calendar year by the respective annual education budget.

Example: Suppose Country X had 25 days of full school closures, that affected all students. If 50 per cent of students were effectively reached by alternative teaching methods during the closures then 25 days of lost school must still be caught up for 50 per cent of the students. Because these students were out of school for an extended period, they might have also lost/forgotten some of the learning they acquired before the school closure. Assuming a setback factor of 1.25, then 31.25 (25 x 1.25) school days must be caught up for these 50 per cent of students. However, some of these 31.25 school days could be caught up through extending the length of the school days or shorter school holidays. The remaining number of school days is what must be added to the existing programme to remediate lost learning.

Student enrolment and placement costs:

The student enrolment and placement costs account for two important trends related to COVID-19 that exert financial pressure on public education systems:

- The first trend is for additional students to drop out of school, notably vulnerable children from poor households and marginalized groups.[275] These additional dropouts are due to the income shock channel, wherein households have less disposable income for out-of-pocket education expenses (like transport) and other household consumption. This places pressure on households to seek additional income, which can lead households to take children out of school to perform income generating activities or household duties to free up the time of other household members to earn

an income. Given the vulnerable status of many of these children, there is a cost premium to re-enrol them in terms of reaching them, communicating with their guardians to allow them to attend school, and then keeping them in school.

- The second trend is for students to shift between private and public schools. This is especially noticeable in countries with a high proportion of low-fee private schools. Income shocks are the main reason for students to shift from private to public schools. The supply of private schools is also falling in many countries due to the reduced number of households that can afford private schooling in combination with higher operating costs associated with COVID-19. While it is most likely that children will be shifting from private back to public schools as a result of COVID-19, the model allows users to also account for the opposite trend. The main reason for students to shift from public to private schools is to try and avoid more rigid public school closure policies. The net change in students attending public schools is multiplied by the unit cost per student.

School and teacher management costs:

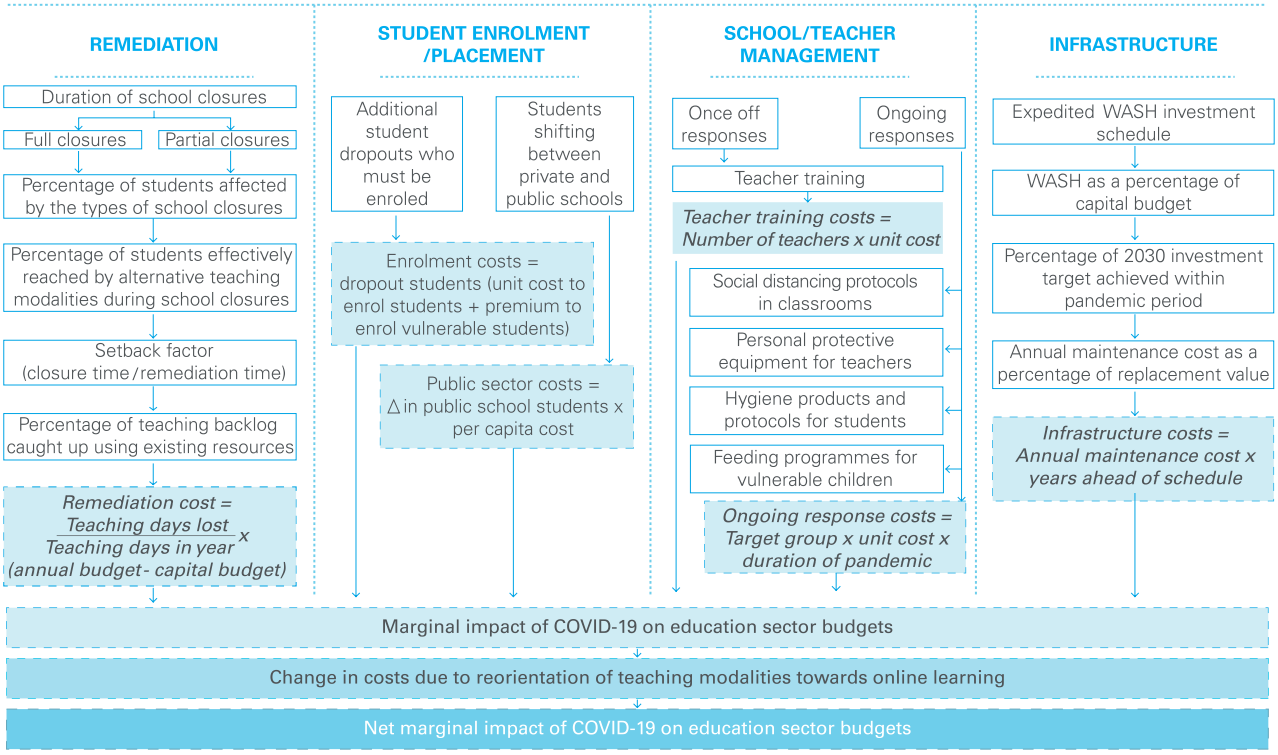
The school and teacher management costs are disaggregated according to whether the responses are once-off or recur until the end of the pandemic. The health and hygiene responses are critical to ensure the safe reopening of schools.

- The once-off responses cover training teachers about how to deliver lessons through distance learning and also COVID-19 awareness, practices, and procedures. The cost is calculated by multiplying the number of teachers by the unit cost for the training.
- The recurring costs are repeated for the forecast duration of the pandemic, and include: social distancing protocols in classrooms; the procurement of personal protective equipment for the teachers; the procurement of hygiene products for students/teachers and monitoring hygiene protocols; teacher support programmes; and school feeding programmes for vulnerable children. The cost of the responses is calculated by multiplying the relevant target group by the respective unit cost and the expected duration of the pandemic.

Infrastructure costs:

The infrastructure costs also address the safe reopening of schools through provision of WASH facilities. WASH facilities are already included in countries' 2020-2030 budget plans. However, COVID-19 has raised the need to expedite certain of these investments. The UNESCO model captures an aggregated capital budget, so users must set the proportion of the capital budget comprised by WASH. Users must also set the proportion of the 2020-2030 WASH investment programme that will be completed during the pandemic period. These expedited WASH investments are then subject to the additional years of maintenance, costed as a percentage of the replacement value of the infrastructure.

FIGURE 30 | SCHEMATIC FOR THE COVID-19 FINANCIAL SHOCK MODEL



Source: COVID-19 Financial Shock Model, 2021.

The model includes the functionality to account for shifts in the composition of learning modalities, which forms a critical part of efforts to build back better. As online learning technologies and systems are strengthened, it is expected that an increasing number of students will shift to online learning or at least a hybrid model of classroom and online learning. However, the likely trajectory of this trend is not yet certain for many countries. Moreover, the cost implications of a shift from classroom to online learning are also uncertain given the supplementary investments that are required, for instance in electricity and information and communication technologies. This element of the financial simulations is therefore not considered as part of this report. But once more data are available, users can factor in the potential financial implications of shifts towards online learning systems.

A.3 Financial model specification

The variables and the parameters specified for this study are detailed in Table 9 to 12 according to the remediation, student enrolment and placement, school and teacher management, and infrastructure variables. Where possible, the parameters for the variables are specified using either real data or relevant studies. In the absence of these data, we have applied best estimates and undertake sensitivity analysis. As such, the estimated financial impacts of COVID-19 should be interpreted as likely outcomes rather than precise forecasts.

The modelling exercise generates three potential scenarios to account for uncertainty: baseline; optimistic; and pessimistic. The baseline scenario applies the most likely value for each variable. The baseline scenario should therefore be viewed as the expected outcome, with the optimistic and pessimistic scenarios providing a range for the potential outcomes. The optimistic scenario parametrizes the variables based on favourable outcomes, wherein COVID-19 has a less severe impact on the education sector. The pessimistic scenario parametrizes the variables based on poor outcomes, wherein COVID-19 has a severe impact on the education sector.

Table 9 presents the modelled parameters for the remediation variables, with each explained as follows:

- The durations of full and partial school closures are based on the February 2021 data from UNESCO. Although some of the school closures fall in 2021, the school closures are assigned to the 2020 academic year. The model will be updated in subsequent versions to account for the annual disaggregation of school closures.

- All students are assumed to be affected by full school closures, given that these are national policies.
- The Center for Global Development have compiled a description of the school closures enacted by countries.[277] The typical arrangement for partial school closures has been to keep public schools open for the Grade levels sitting important exams, which are usually the highest Grades of primary, lower secondary, and upper secondary school. UNICEF confirmed that 44 per cent of countries based partial school closures on priority Grades, with 42 per cent of countries also applying student rotation (which similarly limits the number of Grades returning to school).[278] As such, it is assumed that the partial school closures affect all students except those in the highest Grades of primary, lower-secondary, and upper-secondary school (or an equivalent number of students through Grade rotations). The optimistic scenario extends the number of Grades that returned to school under partial school closures to five, whereas the number of returning Grades is reduced to just one (the highest Grade of upper-secondary school) in the pessimistic scenario. Follow-up country-level applications of the model can be used to account for the geographic prioritization of school reopening, which has been applied in 13 per cent of countries, by re-estimating the proportion of the student body that returned to school and when based on the specific reopening schedules.[279]
- The effectiveness of remote learning modalities has varied widely across countries and income groups. Research by UNICEF highlights two general facts related to the reach and effectiveness of alternative teaching modalities.[280] First, almost all countries implemented digital and/or broadcast remote learning policies. However, many of the ideal pre-conditions for the rapid roll-out of these policies were not in place. Second, at the global and regional levels approximately 70 per cent of students have assets at home (e.g., internet, television, tablet, smartphone, etc.) that allow them to learn remotely through digital or broadcast classes. Of these 70 per cent of students who can access remote learning, the World Bank estimates that the effectiveness of these alternative modalities is only around 40 per cent as many children lack regular access to these assets and have not been prepared/enabled to learn remotely.[281] Applying this supply rate of 70 per cent and effectiveness rate of 40 per cent, only 28 per cent of students are effectively reached by alternative teaching modalities. World Bank simulation models also specify 'mitigation effectiveness' (the effectiveness of measures to address lost learning days from school closures) in lower-middle-income countries at 28 per cent.[282] This figure is increased to 40 per cent in the optimistic scenario as per outcomes in middle-income countries, and proportionally reduced to 16 per cent in the pessimistic scenario.[283]
- Countries have applied a variety of mechanisms to catch up the lost teaching days. The main mechanisms include increased class time, accelerated programmes, and remedial programmes.[284] In terms of the amount of lost learning days caught up using existing resources, the model focusses on increased class time as this extends existing resources within the education system rather than adding new resources to the education system. 26 per cent of low-income countries, 18 per cent of lower-middle-income countries, 10 per cent of upper-middle-income countries, and 6 per cent of high-income countries have attempted to mitigate learning losses through increased class time.[285] Extending school hours by one-hour per day would enable countries to catch up approximately 35 days of lost schooling per annum, depending on the number of school days per annum. Moreover, school holidays could be shortened to catch up further lost school days. We assume zero days are caught up through these mechanisms in the pessimistic scenario, 35 days are caught up through longer school days in the baseline scenario, and that 50 days are caught up through longer school days and shorter school holidays in the optimistic scenario.
- There are two components to the expected learning loss among students. First, learning will not occur during lost school days (i.e., days that schools are closed and students are not effectively reached via an alternative modality). Second, some already acquired learning is lost or forgotten when students lose their engagement with the education system.[286] This second component means that proportionally more teaching days are required to catch up lost teaching time. Research shows that lengthy interruptions to schooling can lead to a 25 per cent to 30 per cent loss of learning.[287] This estimate was applied in the World Bank simulation model to simulate the potential impacts of COVID-19 school closures on schooling and learning outcomes. The setback factor, which presents the ratio of lost teaching days to the number of required catchup teaching days, is therefore set at 1:1.25 in the baseline scenario. The setback factor is set at a lower rate of 1:1.1 in the optimistic scenario based on research[288] for OECD countries, and proportionally scaled up to 1:1.4 for the pessimistic scenario.

TABLE 9 | REMEDIATION VARIABLES AND PARAMETERS APPLIED IN THE MODEL

VARIABLE	PARAMETERS					
	BASELINE		OPTIMISTIC		PESSIMISTIC	
Duration of school closures up to February 2021 (days)	Full	Partial	Full	Partial	Full	Partial
Brunei Darussalam	44	39	44	39	44	39
Cambodia	76	61	76	61	76	61
Indonesia	101	138	101	138	101	138
Lao PDR	43	54	43	54	43	54
Malaysia	98	62	98	62	98	62
Myanmar	216	26	216	26	216	26
Philippines	179	4	179	4	179	4
Thailand	63	62	63	62	63	62
% students affected by full school closures	100%		100%		100%	
Number of Grades not affected by partial school closures	3		5		1	
% students effectively reached by alternative teaching modes	28%		40%		16%	
School days caught up through longer hours/shorter holidays	0		0		0	
Setback factor (school closure time/learning remediation time)	1.25		1.1		1.4	

Source: COVID-19 Financial Shock Model, 2021.

Table 10 presents the modelled parameters for the student enrolment and placement variables, with each explained as follows:

- The Global Schools Forum conducted a review of the impact of COVID-19 on the non-state education sector in low- and middle-income countries.[289] The findings indicate that many low fee private schools, which are common in many countries in the sub-region, are being forced to close due to the negative financial impact of COVID-19. Initial data from India and Mexico reveal a 20 per cent to 30 per cent reduction in private school enrolment. It is therefore assumed that 20 per cent of students in private schools will shift back to the public schooling system in the baseline scenario. This is reduced to 10 per cent in the optimistic scenario and increased to 30 per cent in the pessimistic scenario. The impact of this variable depends on the prevalence of private school enrolment in each country.
- Experience from previous crises and economic shocks suggest that not all students will be able to return to school due to financial constraints, pressures to take up employment or household responsibilities, early or forced marriage, fear of resurgence of the virus, and discouragement due to learning loss and learning gaps incurred during the school closures.[290] UNESCO estimate that 2 per cent of children globally and 0.9 per cent of children in Southeast Asia are at risk of dropping out of school due to the shocks caused by COVID-19.[291] The additional student dropouts is therefore set at 0.9 per cent in the baseline scenario, 2 per cent in the pessimistic scenario, and lowered to 0.5 per cent in the optimistic scenario.
- The model also accounts for the fact that it is more expensive to re-enrol these vulnerable children who have dropped out of school. In line with the GEM report, the baseline scenario applies a 40 per cent marginal cost premium to attract and retain vulnerable children in the education system.[292] This cost premium is decreased to 30 per cent in the optimistic scenario and increased to 50 per cent in the pessimistic scenario. This premium accounts for interventions to reduce the barriers to school access (nutrition programmes, free uniforms, tuition support, etc.); mother-tongue instruction in regions where children do not speak the majority or school language; remote or mobile schools for hard-to-reach children; health interventions against illness; interventions for children with disabilities; and programmes for children in emergencies.[293]

TABLE 10 | STUDENT ENROLMENT AND PLACEMENT VARIABLES AND PARAMETERS APPLIED IN THE MODEL

VARIABLE	PARAMETER		
	BASELINE	OPTIMISTIC	PESSIMISTIC
Students shifting from private to public schools	20%	10%	30%
Additional student dropouts	0.9%	0.5%	2%
Unit cost premium to re-enrol students who have dropped out	40%	30%	50%

Source: COVID-19 Financial Shock Model, 2021.

Table 11 presents the variables and parameters related to school management, with each explained as follows:

- According to UNICEF, 66 per cent of countries provided instruction on how to deliver lessons via distance learning and training on COVID-19 classroom protocols.[294] The model therefore accounts for once-off teaching training. For the baseline scenario we apply a unit cost of $6 based on a study done for Pakistan.[295] This unit cost is proportionally scaled down to $4 in the optimistic scenario and up to $8 in the pessimistic scenario.
- Given that (seemingly) effective vaccines have been produced but are not yet readily available at a global scale, it is assumed that the major COVID-19 related disruptions will ease by the end of 2021. Herd immunity may be reached in specific countries before the end of 2021, but it may also turn out that the virus mutates to evade vaccines and COVID-19 becomes a recurring threat. As such, the pandemic length is set at two years in the baseline scenario, 1.5 years in the optimistic scenario, and three years in the pessimistic scenario. The estimated pandemic length affects the implementation period of the school management variables listed below.
    - Almost all countries have prepared health and hygiene guidelines to support safe school reopening, which include social distancing in classrooms. According to UNICEF, 96 per cent of countries reported that policies for the safe reopening of schools included physical distancing.[296] To affect these policies, 33 per cent of countries have already recruited new teachers in order to safely reopen schools. Many countries that did not employ new teachers did so only due to insufficient resources. The social distancing variable is based on the learner-teacher ratios in classrooms, which are set at 20:1 according to UNICEF targets.[297] Because of the inconsistent adherence to social distancing guidelines by countries, either because of policy issues or resource constraints, this variable is included in the financial simulations but presented in the results as part of a set of discretionary 'new services'.
    - According to UNICEF, 86 per cent of countries have improved handwashing facilities at schools, 74 per cent have increased cleaning and disinfection of schools, and 48 per cent have improved management of infectious wastes at schools.[298] Based on a costing for the safe reopening of schools in Pakistan, the annual cost for face masks, soap, and sanitizer is approximately $10.6 per student/teacher (UNICEF, 2020c). An extra annual cost of $1.1 per student/teacher applies for school cleaning and disinfection services. The unit cost is thus set at $11.7 in the baseline scenario, decreased to $8.4 in the optimistic scenario, and increased to $15 in the pessimistic scenario. This variable is also presented in the results as part of the set of discretionary 'new services'.
    - According to UNICEF, 43 per cent of countries provided teachers professional, psychological, and emotional support.[299] While this is a common response by governments to stresses placed on teachers by COVID-19, there are various delivery options ranging from peer support groups on social media platforms to more sophisticated programmes that offer professional psychological support to teachers. Given that many countries have established very low-cost structured peer-support groups for teachers using free social

media platforms, the baseline and optimistic scenarios assume zero cost for this service.[300] The pessimistic scenario assumes that teachers require professional psychological support, with one psychologist counselling 40 teachers (one one-hour session per teacher per week) at the same average salary as teachers. The average unit cost therefore varies per country depending on average teacher salaries.

- As part of the multidimensional impacts of COVID-19 the model includes school feeding programmes for vulnerable children. Although food prices differ across countries, the World Food Programme report that the median annual cost of a school feeding programme per child in 2020 was $55 in low-income countries and $41 in lower middle-income countries.[301] The baseline scenario applies the higher unit cost of $55 to all children living in households that fall below the poverty line in 2020 (or if no data are available for 2020 then 2015), which is captured in the UNESCO database.[302] The optimistic scenario applies the lower unit cost of $41. The unit cost is proportionally increased to $69 in the pessimistic scenario.

Table 12 presents the variables and parameters related to school water, sanitation, and hygiene (WASH) infrastructure, with each explained as follows:

- UNICEF note that almost all countries have identified the importance of hygiene and handwashing in their COVID-19 responses.[303] As such, the model accounts for the costs to complete a portion of the planned 2020-2030 WASH investments within the pandemic period as part of plans to support the safe reopening of schools.
  - Limited data was available on the proportion of WASH within countries' capital budgets. The baseline scenario sets WASH as 7.6 per cent of the capital budget based on country data from Nepal. This proportion is decreased to 5 per cent in the optimistic scenario (assuming that more essential WASH infrastructure is already in place) and increased to 10 per cent in the pessimistic scenario (assuming that less essential WASH infrastructure is already in place).

TABLE 11 | SCHOOL MANAGEMENT RELATED COVID-19 SHOCK MODEL VARIABLES AND PARAMETERS

VARIABLE	PARAMETERS		
	BASELINE	OPTIMISTIC	PESSIMISTIC
Once-off responses			
Teachers retrained on distance learning and COVID-19 protocols	Yes	Yes	Yes
Unit cost of teacher training	$6	$4	$8
Annual responses			
Estimated pandemic length (years)	2	1.5	3
Social distancing preventative measures	Yes	Yes	Yes
Ideal learner-teacher ratio	20:1	20:1	20:1
Hygiene preventative measures	Yes	Yes	Yes
Annual PPE unit cost per teacher	$11.7	$8.4	$15
Annual hygiene product cost per student	$11.7	$8.4	$15
Support systems for teachers	Yes	Yes	Yes
Annual unit cost of teacher support systems	$0	$0	Variable
Feeding programmes for vulnerable children	Yes	Yes	Yes
Per cent poor	2015/2020 outcome	2015/2020 outcome	2015/2020 outcome
Annual feeding scheme unit cost	$55	$41	$69

Source: COVID-19 Financial Shock Model, 2021.

- There was also limited information regarding the speed at which countries are expediting their 2020-2030 WASH investment programmes. As such, it was assumed in the baseline scenario that 40 per cent of the 2020-2030 WASH investment programme is achieved within the pandemic period. This assumption is increased to 60 per cent in the optimistic scenario and decreased to 20 per cent in the pessimistic scenario. As with all the variables, users can simply update these parameters within the Excel model once actual data are available to reference.
- An additional annual maintenance cost is levied to the expedited WASH infrastructure investments. This annual cost is set at 5 per cent of the replacement cost of the infrastructure for all scenarios.

TABLE 12 | SCHOOL INFRASTRUCTURE RELATED COVID-19 SHOCK MODEL VARIABLES AND PARAMETERS

VARIABLE	PARAMETER		
	BASELINE	OPTIMISTIC	PESSIMISTIC
Expedited WASH investment	Yes	Yes	Yes
WASH as a per cent of capital budget	7.6%	5%	10%
Percentage of 2030 target achieved within pandemic period	40%	60%	20%
Annual maintenance cost (per cent of replacement value)	5%	5%	5%

Source: COVID-19 Financial Shock Model, 2021.

Endnotes

1 Recent events in Myanmar have resulted in the military taking over governance of the country.

2 https://www.unescap.org/sites/default/d8files/event-documents/APFSD7_INF_1E.pdf

3 ESCAP, "Inequality of Opportunity in Asia and the Pacific: Education", Social Development Policy Papers, #2018-01, 2018.

4 Learning Against the Odds | UNICEF East Asia and Pacific

5 Learning Poverty means being unable to read and understand a short, age-appropriate text by age 10 and it is calculated by looking at the share of children who haven't achieved minimum reading proficiency and adjusts it by the proportion of children who are out of school.

6 http://pubdocs.worldbank.org/en/800771571223443681/EAPEACMM-KHM-LPBRIEF.pdf

7 World Bank, June 2020. Simulating the Potential Impacts of the CIVID-19 School Closures on Schooling and Learning Outcomes: A set of global estimates

8 Ibid

9 https://unsdg.un.org/sites/default/files/2020-07/SG-Policy-brief-COVID-on-South-East-Asia.pdf

10 https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/publication/wcms_753550.pdf

11 Alkire, S., Kanagaratnam, U. and Suppa, N. (2019). 'The global Multidimensional Poverty Index (MPI) 2019', OPHI MPI

12 Wahana Visi (World Vision), 2020 "COVID-19 Pandemic and its Impacts on the Children of Indonesia: A Rapid Assessment for Early Recovery Initiation"

13 UNICEF (March 2020): COVID-19 response: Considerations for Children and Adults with Disabilities.

14 United Nations (2018). Disability and Development Report-Realizing the Sustainable Development Goals by, for and with persons with disabilities. United Nations Department of Economic and Social Affairs.

15 EDUCATION FOR EVERY ABILITY A Review and Roadmap of Disability-Inclusive Education in East Asia and Pacific Region. UNICEF, 'UNICEF East Asia and Pacific: Education, Early Childhood Development, Adolescents and Children with Disabilities' (2015)

16 https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf

17 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Lao PDR Case Study 2021

18 UNICEF (2020): COVID-19: Are children able to continue learning during school closures?

19 EDUCATION FOR EVERY ABILITY A Review and Roadmap of Disability-Inclusive Education in East Asia and Pacific Region. UNICEF, 'UNICEF East Asia and Pacific: Education, Early Childhood Development, Adolescents and Children with Disabilities' (2015)

20 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

21 UNICEF, UNESCO, the World Bank, WFP and UNHCR: Supplement to Framework for reopening schools: Emerging lessons from country experiences in managing the process of reopening schools

22 SEA-PLM 2019 Main Regional Report Summary.pdf (seaplm.org) accessed 5 May 2021

23 UNICEF Aug 2020. Rapid assessment on the social and economic impacts of COVID-19 on children and families in Viet Nam.

24 By August 2020 as countries were beginning to partially or fully reopen, under half of Southeast Asian countries are using remedial education and 20 per cent reported using accelerated education https://apa.sdg4education2030.org/covid19/national-education-responses-covid-19-global-tracker-survey-results

25 World Vision 2020. [internet]COVID-19 Aftershocks: Secondary impacts threaten more children's lives than disease itself. Monday, April 6, 2020. Online series, accessed December 2020: https://www.wvi.org/publications/covid-19-aftershocks-secondary-impactsthreaten-more-childrens-lives-disease-itself

26 United Nations (2018). Disability and Development Report-Realizing the Sustainable Development Goals by, for and with persons with disabilities. United Nations Department of Economic and Social Affairs

27 Shonkof et al in: World Bank. 2020. The COVID-19 Pandemic: Shocks to Education and Policy Responses. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/33696

28 EAPRO Draft (April 2020). PARENTS AND CAREGIVERS AS PARTNERS IN LEARNING: Home learning activities to help parents support children's learning during the Covid-19 crisis and beyond.

29 https://unesdoc.unesco.org/ark:/48223/pf0000265271

30 COVID-19: A Reason to Double Down on Investments in Pre-primary Education.

31 Ibid

32 Childcare in a Global Crisis: The Impact of COVID-19 on work and family life

33 https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/healthy-parenting

34 https://www.unicef.org/eap/stories/coronavirus-disease-covid-19-what-parents-should-know

35 One for South Asia (9 March 2021) and one for South East and East Asia (11 March 2021)

36 Timor-Leste has applied to join.

37 Recent events in Myanmar have resulted in the military taking over governance of the country.

38 https://www.unescap.org/sites/default/d8files/event-documents/APFSD7_INF_1E.pdf

39 ESCAP, "Inequality of Opportunity in Asia and the Pacific: Education",Social Development Policy Papers, #2018-01, 2018

40 Ibid

41 https://www.worldbank.org/en/news/feature/2019/09/28/howcountries-in-southeast-asia-are-working-together-to-acceleratehuman-capital-development

42 WHO Coronavirus (COVID-19) Dashboard | WHO Coronavirus Disease (COVID-19) Dashboard (accessed 4 May 2021)

43 Learning Against the Odds | UNICEF East Asia and Pacific (accessed 4 May 2021)

44 Learning Against the Odds | UNICEF East Asia and Pacific (accessed 4 May 2021)

45 The Lancet www.thelancet.com Vol 395 April 4 2020

46 Poverty & Equity Data Portal (worldbank.org) accessed on 17 March 2021

47 Global_POVEQ_EAP.pdf (worldbank.org) accessed on 17 March 2021

48 Measuring Poverty Overview (worldbank.org) accessed on 17 March 2021

49 WHO Coronavirus (COVID-19) Dashboard | WHO Coronavirus Disease (COVID-19) Dashboard (accessed 4 May 2021)

50 Data source: UNICEF, UNESCO | Creation date: 9 March 2021

51 Lancet Child Adolesc Health 2020; 4: 397–404. School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review (thelancet.com)

52 Source UNESCO. Numbers represent enrolment figures, source UNESCO UIS

53 Coronavirus update 39. What we know about COVID-19 transmission in schools . The Latest on the COVID-19 Global Situation & spread of COVID-19 in schools WHO, EPI.WiN.

54 A large COVID-19 outbreak in a high school 10 days after schools' reopening, Israel, May 2020 [internet]. Accessed at: https://www.eurosurveillance.org/content/10.2807/1560-7917.ES.2020.25.29.200135

55 Ibid

56 Learning Against the Odds | UNICEF East Asia and Pacific

57 https://www.unicef.org/eap/media/3601/file/EAP per cent20gender per cent20count.pdf

58 Source: UNESCO Institute for Statistics (UIS) Database, quoted in https://www.brookings.edu/wp-content/uploads/2020/12/Development-Southeast-Asia-Ch4-Education.pdf

59 Source: UNESCO Institute for Statistics (UIS) Database, quoted in https://www.brookings.edu/wp-content/uploads/2020/12/Development-Southeast-Asia-Ch4-Education.pdf

60 https://headfoundation.org/wp-content/uploads/2020/11/thf-papers_Equity-access-and-educational-quality-in-three-South-East-Asian-countries-The-case-of-Indonesia-Malaysia-and-Viet-Nam.pdf

61 https://www.unicef.org/eap/media/3836/file/Executive per cent20Summary per cent20- per cent20Learning per cent20Against per cent20the per cent20Odds.pdf

62 https://www.unicef.org/eap/media/3836/file/Executive per cent20Summary per cent20- per cent20Learning per cent20Against per cent20the per cent20Odds.pdf

63 ASEAN Declaration on Strengthening Education for out-of-school Children and Youth (OOSCY) - ASEAN | ONE VISION ONE IDENTITY ONE COMMUNITY (accessed 4 May 2021)

64 https://headfoundation.org/wp-content/uploads/2020/11/thf-papers_Equity-access-and-educational-quality-in-three-South-East-Asian-countries-The-case-of-Indonesia-Malaysia-and-Viet-Nam.pdf

65 https://www.seaplm.org/index.php?option=com_content&view=article&id=44&Itemid=332

66 A synthetic indicator refers to a numerical measure reflecting the situation of an objective state of affairs made up by many components meant to be integrated into a single comprehensive value

67 http://pubdocs.worldbank.org/en/800771571223443681/EAP-EACMM-KHM-LPBRIEF.pdf

68 Harmonized learning outcomes: transforming learning assessment data into national education policy reforms (worldbank.org)

69 https://www.oecd.org/southeast-asia/data/education-skills.htm

70 Learning Against the Odds | UNICEF East Asia and Pacific

71 https://www.seaplm.org/index.php?option=com_content&view=article&id=44&Itemid=332

72 UNICEF (2019): Learning against the odds: Evidence and Policies to Support All Out-of-School Children and Adolescents in East Asia and Pacific

73 Country Learning Poverty Briefs (worldbank.org)

74 PISA scores for Reading and Maths were from 2018 (average per cent of students who attained at least Level 2 proficiency (aligned to SDG 4.1.1.c) by the end of lower secondary: 77 per cent reading, 76 per cent maths) apart from Viet Nam (2015) (average scores: 80 per cent reading, 77 per cent maths). Cambodia participated in the PISA for development (PISA-D) test in 2016

75 Percentage of children meeting Grade 5 proficiency levels (average scores: 42 per cent reading, 35 per cent maths) Country and Regional Results (seaplm.org)

76 PISA-D national report for Cambodia.pdf (oecd.org)

77 Myanmar, Lao PDR and Timor-Leste reading scores are the World Bank harmonized test scores (300 minimal attainment, 625 advanced) Harmonized learning outcomes: transforming learning assessment data into national education policy reforms (worldbank.org)

78 Noah Yarrow, Eema Masood and Rythia Afkar, World Bank August 2020, "Estimated Impacts of COVID-19 on Learning and Earning in Indonesia"

79 http://sipbm.kemendesa.go.id/portal/frontend/web/site/content-detail/satu-persen-anak-putus-sekolah-temuan-awal-pendataan-berbasis-sipbm

80 UNICEF Rapid Situation Analysis of Responses to and Effects of COVID 19 on the education System Maldives Case Study 2021

81 Human Capital Accumulation and Disasters: Evidence from the Pakistan Earthquake of 2005 | RISE Programme

82 Modelling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss | RISE Programme

83 Simulating the potential impacts of covid-19 school closures on schooling and learning outcomes: A set of global estimates (worldbank.org)

84 UNESCO, UNICEF, World Bank, "What have we learned? Overview of findings from a survey of ministries of education on National responses to COVID 19" 2020

85 World Vision, with Government of Lao PDR – Impact of COVID-19 to Children and Their Families: An Early Recovery Rapid Assessment in the Lao PDR, Briefing Paper July 2020

86 UN Lao PDR Socio-Economic Response Framework to COVID-19, 2020

87 UNICEF Guidance on distance learning modalities 2020

88 UNICEF Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

89 https://reliefweb.int/sites/reliefweb.int/files/resources/UNICEF per cent20Viet per cent20Nam per cent20COVID-19 per cent20Situation per cent20Report per cent20No. per cent204 per cent20- per cent2014 per cent20May-4 per cent20June per cent202020.pdf

90 UNICEF Aug 2020. Rapid assessment on the social and economic impacts of COVID-19 on children and families in Viet Nam.

91 UNICEF Aug 2020. Rapid assessment on the social and economic impacts of COVID-19 on children and families in Viet Nam.

92 Asia Pacific data covers: SE Asian countries Cambodia, Indonesia,

Lao PDR, Malaysia, Myanmar, Pacific Islands, PNG, Philippines, Singapore, Thailand, Timor- Leste and Vietnam (E. Asian countries include China, Korea and Mongolia).

93 UNICEF. Children in ASEAN. Association of Southeast Asian Nations and UNICEF. https://www.unicef.org/eap/reports/children-asean

94 Ibid

95 https://www.worldbank.org/en/news/feature/2019/09/28/how-countries-in-southeast-asia-are-working-together-to-accelerate-human-capital-development

96 Ibid

97 https://www.worldbank.org/en/news/press-release/2019/12/10/VietNam-ethnic-minority-children-are-disproportionately-undernourished (from case study in Vietnam)

98 Guy Hutton and Mili Varughese. (Jan 2020) The Costs of Meeting the 2030 Sustainable Development Goal Targets on Drinking Water, Sanitation, and Hygiene

99 Guy Hutton and Mili Varughese. (Jan 2020) The Costs of Meeting the 2030 Sustainable Development Goal Targets on Drinking Water, Sanitation, and Hygiene

100 Drinking Water, Sanitation and Hygiene in Schools: Global baseline report 2018 - UNICEF DATA

101 JMP (washdata.org) no data is available for Cambodia and Thailand

102 JMP (washdata.org)

103 公立学校施設実態調査 令和2年度 | ファイル | 統計データを探す | 政府統計の総合窓口 (e-stat.go.jp)

104 Wahana Visi (World Vision), 2020 "COVID-19 Pandemic and its Impacts on the Children of Indonesia: A Rapid Assessment for Early Recovery Initiation"

105 Wahana Visi (World Vision), 2020 "COVID-19 Pandemic and its Impacts on the Children of Indonesia: A Rapid Assessment for Early Recovery Initiation"

106 Save the Children (2020) "The Hidden Impact of COVID-19"

107 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021.

108 UNICEF Aug 2020. Rapid assessment on the social and economic impacts of COVID-19 on children and families in Viet Nam. This was not representative of the whole country, but looked at 148 parents and caregivers in Ha Noi, Ho Chi Minh City and Vinh Phuc Province.

109 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

110 Indonesia MoH-UNICEF assessment of 4,744 primary health facilities- May and 2,740 health facilities across all 34 provinces- July

111 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

112 ESCAP, based on DESA's World Economic Forecasting Model

113 Save the Children (2020) "The Hidden Impact of COVID-19"

114 Quoted in More Indonesian Child Brides Amid Pandemic? | The ASEAN Post accessed 25 January 2021

115 https://unsdg.un.org/sites/default/files/2020-07/SG-Policy-brief-COVID-on-South-East-Asia.pdf

116 https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/publication/wcms_753550.pdf

117 IMF. 2020. World Economic Outlook: October 2020. International Monetary Fund: Washington, D.C.

118 UNICEF. 2020. What Have We Learned? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

119 UNESCO. 2021. UNESCO Institute for Statistics. [Online] Available at: http://data.uis.unesco.org/

120 UNESCO. 2021. UNESCO Education Costing Model 2020 for Asia and the Pacific Region.

121 Ibid

122 UNESCO. 2020. Act now: Reduce the impact of COVID-19 on the cost of achieving SDG4. Policy Paper 42.

123 UNESCO. 2021. UNESCO Education Costing Model 2020 for Asia and the Pacific Region.

124 Ibid (The missing data for Philippines includes gross enrolment rate, number of teachers and expenditure data at upper-secondary level as well as education expenditure disaggregated by public and private sectors for all levels of schooling.)

125 Ibid

126 UNICEF. 2020. What Have We Learned? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

127 UNESCO. 2020a. Act now: Reduce the impact of COVID-19 on the cost of achieving SDG4. Policy Paper 42.

128 Understanding Fiscal Space -- Peter S. Heller -- IMF Discussion Paper 05/4 -- March 1, 2005

129 United Nations Population Fund. 2016. Demographic dividend. [Online] Available at: https://www.unfpa.org/demographic-dividend

130 World Bank. 2016. Demographic Change and Development: A Global Typology. Policy Research Working Paper 7893.

131 Piketty, T. 2020. Capital and Ideology. Harvard University Press.

132 https://www.brookings.edu/wp-content/uploads/2020/12/Development-Southeast-Asia-Ch4-Education.pdf

133 https://www.unicef.org/documents/framework-reopening-schools

134 https://www.unicef-irc.org/publications/pdf/COVID-19-How-are-Countries-Preparing-to-Mitigate-the-Learning-Loss-as-Schools-Reopen.pdf

135 https://washdata.org/regional-analysis-2019

136 https://www.unicef.org/eap/media/6871/file/Rapid per cent20Gender per cent20Analysis per cent20during per cent20COVID-19 per cent20Pandemic.pdf

137 Source: WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP)

138 https://www.ei-ie.org/en/detail/16766/philippines-beginning-of-new-school-year-should-be-tied-to-appropriate-health-measures

139 https://washdata.org/data/school#!/idn

140 Ibid

141 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

142 https://www.unicef.org/laos/wash

143 http://washinschoolsmapping.com/projects/laos.html

144 https://www.sdg4education2030.org/framework-reopening-schools-unesco-unicef-wb-wfp-april-2020

145 Ministry of Education, Youth and Sport Cambodia Education Response Plan to COVID 19 Pandemic. July 2020

146 Minister of Education, Youth and Sport, 20 July 2020. Guidelines on The Requirements for School Health Promotion In the Context of COVID-19

147 http://www.equityinitiative.org/news/vignettes-of-equity-a-glimpse-into-covid-19-in-southeast-asia/

148 Dept of Education. Philippines, Feb 4th 2020 FIRST SET OF POLICY DIRECTIVES for Creation of a Task Force for the Management of Department of Education Response to Novel Coronavirus Acute Respiratory Disease

149 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

150 UNICEF Sitrep 3

151 Indonesia COVID-19 Response SituationReport, UNICEF, 19 June – 14 July, 2020

152 Ibid

153 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

154 https://www.britishcouncil.org/research-policy-insight/insight-articles/lessons-vietnam-covid-19

155 CFR 0.9 per cent in Indonesia, USA (0.02 per cent) and Europe (0.3 per cent) and were the highest in the Asia-Pacific Region. Child deaths per total COVID cases was also far higher in Indonesia (1.9 per cent) compared to the USA (0.06 per cent). (from case study on Indonesia)

156 U-Report Survey, February 2020 https://indonesia.ureport.in/opinion/4030/ (from case study Indonesia)

157 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

158 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Lao PDR Case Study 2021

159 UNICEF, UNESCO, the World Bank, WFP and UNHCR: Supplement to Framework for reopening schools: Emerging lessons from country experiences in managing the process of reopening schools

160 https://apa.sdg4education2030.org/covid19/national-education-responses-covid-19-global-tracker-survey-results

161 https://apa.sdg4education2030.org/covid19/national-education-responses-covid-19-global-tracker-survey-results

162 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

163 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Lao PDR Case Study 2021

164 Source: Authors' calculations based on Multiple Indicator Cluster Surveys, Demographic and Health Surveys and other national household surveys (2010-2020) How many children and young people have internet access at home? | UNICEF

165 Source: International Telecommunication Union (ITU) World Telecommunication/ICT Indicators Database Individuals using the Internet (per cent of population) - Asia | Data (worldbank.org)

166 Senze Arsendy, et al, ISEAS Yusof Ishak Institute "Teaching and Learning During School Closure: Lessons from Indonesia - ISEAS_Perspective_2020_89.docx" (August 2020)

167 The Role of Renewables in Achieving Universal Access to Electricity in Southeast Asia | Center for Strategic and International Studies (csis.org)

168 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

169 https://datareportal.com/reports/digital-2020-laos

170 Learning and Earning Losses from COVID-19 School Closures in Developing Asia (adb.org) accessed on 5 May 2021

171 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

172 UNICEF, WHO, IFRC. March 2020. Interim Guidance for COVID-19: PREVENTION AND CONTROL IN SCHOOLS. https://www.unicef.org/media/66216/file/Key%20Messages%20and%20Actions%20for%20COVID-19%20Prevention%20and%20Control%20in%20Schools_March%202020.pdf

173 https://bangkok.unesco.org/index.php/content/empowering-students-disabilities-during-covid-19-crisis

174 https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf

175 UNICEF (2020): COVID-19: Are children able to continue learning during school closures?

176 Save the Children (2020): Protect a Generation- The impact of COVID-19 on children's lives

177 World Bank (2020): Ending learning poverty: What will it take?

178 https://www.unicef.org/eap/media/6871/file/Rapid per cent20Gender per cent20Analysis per cent20during per cent20COVID-19 per cent20Pandemic.pdf

179 UNICEF (March 2020): COVID-19 response: Considerations for Children and Adults with Disabilities

180 EDUCATION FOR EVERY ABILITY A Review and Roadmap of Disability-Inclusive Education in East Asia and Pacific Region. UNICEF, 'UNICEF East Asia and Pacific: Education, Early Childhood Development, Adolescents and Children with Disabilities' (2015)

181 https://bangkok.unesco.org/content/empowering-students-disabilities-during-covid-19-crisis

182 https://reliefweb.int/sites/reliefweb.int/files/resources/Education%20Monograph%20250418_0.pdf

183 Children with disabilities: Ensuring their inclusion in COVID-19 response strategies and evidence generation - UNICEF DATA

184 Children with disabilities: Ensuring their inclusion in COVID-19 response strategies and evidence generation - UNICEF DATA

185 Learning from Home Survey (UNICEF May 2020) Student respondents (1032)

186 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

187 MSD 2020 "The Effects of COVID-19 Pandemic on Civil Society Organizations (CSOs) in Viet Nam"

188 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

189 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

190 CRWG 2020- Rapid assessment report on covid-19 impacts on children

191 UNICEF March 2020 Rapid assessment online/distance learning education in the context of covid-19 pandemic.

192 Interview with VAAFA Oct.2020

193 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

194 ibid

195 Myanmar COVID-19 National Response and Recovery Plan for the Education Sector. Ministry of Education May 2020 – Oct 2021

196 https://en.unesco.org/covid19/educationresponse/solutions and UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

197 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

198 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

199 UNICEF, UNESCO, the World Bank, WFP and UNHCR: Supplement to Framework for reopening schools: Emerging lessons from country experiences in managing the process of reopening schools

200 SEA-PLM 2019 Main Regional Report Summary.pdf (seaplm.org) accessed 5 May 2021

201 https://onlinelibrary.wiley.com/doi/abs/10.1111/ped.14137

202 CARE Cambodia

203 https://www.smeru.or.id/sites/default/files/publication/cp01_covidpjj_eng.pdf

204 https://blogs.lse.ac.uk/seac/2020/11/04/covid-19-and-southeast-asia-covid-19-and-malaysias-lessons-in-digital-applications/

205 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Lao PDR Case Study 2021

206 UNICEF Aug 2020. Rapid assessment on the social and economic impacts of covid-19 on children and families in Viet Nam.

207 https://bangkok.unesco.org/content/empowering-students-disabilities-during-covid-19-crisis

208 Nguyen Van Luc, a teacher of history at Dien Khanh Secondary School in Khanh Hoa province. https://vietnamnet.vn/en/feature/ministry-vows-to-expand-online-teaching-672895.html#inner-article

209 https://apa.sdg4education2030.org/covid19/national-education-responsescovid-19-global-tracker-survey-results

210 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Vietnam and Indonesia Case Studies 2021

211 https://www.learningpassport.org/

212 https://ourworldindata.org/covid-exemplar-VietNam#:~:text=This per cent20early per cent20success per cent20has per cent20been,testing per cent2C per cent20tracing per cent2C per cent20and per cent20quarantining

213 https://unsdg.un.org/sites/default/files/2020-07/SG-Policy-brief-COVID-on-South-East-Asia.pdf

214 WHO (Sept 2020). WHO SEARO and India Institute of Public health [webinar]. Impact of Pandemic and lockdown on adolescent health and well-being.

215 UN (April 2020) : UN Policy Brief (April 2020) The Impact of COVID-19 on children Available at: https://unsdg.un.org/sites/default/files/2020-04/160420_Covid_Children_Policy_Brief.pdf

216 World Bank. 2020. The COVID-19 Pandemic [internet} : Shocks to Education and Policy Responses. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/33696 License: CC BY 3.0 IGO.

217 Wahana Visi (World Vision), 2020 "COVID-19 Pandemic and its Impacts on the Children of Indonesia: A Rapid Assessment for Early Recovery Initiation"

218 MoH-UNICEFassessment of 2,740 health facilities across all 34 provinces- July

219 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia and Vietnam Case Studies 2021

220 EAPRO Draft (April 2020). PARENTS AND CAREGIVERS AS PARTNERS IN LEARNING: Home learning activities to help parents support children's learning during the Covid-19 crisis and beyond.

221 http://www.equityinitiative.org/news/vignettes-of-equity-a-glimpse-into-covid-19-in-southeast-asia/

222 Ibid

223 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

224 Shonkof et al in: World Bank. 2020. The COVID-19 Pandemic: Shocks to Education and Policy Responses. World Bank, Washington, DC. © World Bank.https://openknowledge.worldbank.org/handle/10986/33696 License: CC BY 3.0 IGO

225 https://www.channelnewsasia.com/news/commentary/coronavirus-covid-19-family-violence-abuse-women-self-isolation-12575026

226 Save the Children (2020) "The Hidden Impact of COVID-19"

227 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

228 https://www.rappler.com/nation/doj-blames-telecoms-reports-sexual-abuse-children-triple-coronavirus-lockdown

229 https://www.reuters.com/article/philippines-sexcrimes-internet-idUSL8N2D94I3

230 WHO (Sept 2020). WHO SEARO and India Institute of Public health [webinar]. Impact of Pandemic and lockdown on adolescent health and well-being

231 The World Bank In East Asia Pacific. [internet] accessed 10 December 20 : https://www.worldbank.org/en/region/eap/overview (last update 7 October 2020)

232 State of the Worlds Children. UNICEF (2019) Children, Food and Nutrition.

233 Children in ASEAN. Association of Southeast Asian Nations and UNICEF https://www.unicef.org/eap/media/4281/file/Children per cent20in per cent20ASEAN.pdf

234 World Vision 2020. [internet] COVID-19 Aftershocks: Secondary impacts threaten more children's lives than disease itself. Monday, April 6, 2020. Online series, accessed 12.2020: https://www.wvi.org/publications/covid-19-aftershocks-secondary-impacts-threaten-more-childrens-lives-disease-itself

235 United Nations (2018). Disability and Development Report -Realizing the Sustainable Development Goals by, for and with persons with disabilities. United Nations Department of Economic and Social Affairs

236 https://www.unicef.org/png/press-releases/children-south-east-asia-face-double-burden-obesity-and-undernutrition-new-report

237 https://theaseanpost.com/article/child-wasting-rise-amid-pandemic

238 CRWG 2020 Rapid assessment report on COVID-19 impacts on children

239 https://data.worldbank.org/indicator/SH.STA.STNT.ZS?locations=VN

240 https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/genericdocument/wcms_322637.pdf

241 Ministry of Education, Youth and Sports. Guidelines on The Requirements for School Health Promotion In the Context of COVID-19. July 2020.

242 Ministry of Education, Youth and Sports. Guidelines on The Requirements for School Health Promotion In the Context of COVID-19. July 2020.

243 https://www.unfpa.org/sites/default/files/resource-pdf/_APRO_COVID-19_Regional_Sitrep_8_September.pdf

244 https://www.britishcouncil.org/research-policy-insight/insight-articles/lessons-Vietnam-covid-19 (from Vietnam case study)

245 COVID-19_A_reason_to_double_down_on_investments_in_pre-primary_education.pdf (unicef-irc.org)

246 https://docs.wfp.org/api/documents/WFP-0000114175/download/?_ga=2.265818639.1812854462.1614235409-1940818084.1614235409

247 https://unesdoc.unesco.org/ark:/48223/pf0000265271

248 https://www.unicef.org/laos/reports/modastunting2019English

249 Ibid

250 Ibid

251 https://www.unicef.org/vietnam/press-releases/reimagine-talk-digital-transformation-viet-nam

252 COUNTRY PROFILES – Nurturing Care (nurturing-care.org)

253 IRB-2020-18-childcare-in-a-global-crisis-the-impact-of-covid-19-on-work-and-family-life.pdf (unicef-irc.org)

254 https://www.who.int/emergencies/diseases/novel-coronavirus-2019/advice-for-public/healthy-parenting

255 https://www.unicef.org/eap/stories/coronavirus-disease-covid-19-what-parents-should-know

256 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Viet Nam Case Study 2021

257 JMP (washdata.org)

258 Teach: Helping Countries Track and Improve Teaching Quality (worldbank.org)

259 Cambridge Education model, 2021

260 Realizing the promise of effective teachers for every child – a global platform for successful teachers (worldbank.org)

261 Successful Teachers, Successful Students: Launch of the Global Platform for Successful Teachers | Banque mondiale Live

262 Home - T-TEL (t-tel.org)

263 Jaime Saavedra blog Realizing the Promise of Effective teachers for every Child 2 February 2021

264 UNICEF/UNESCO Situation Analysis of Responses to and Effects of COVID-19 on the Education System Indonesia Case Study 2021

265 UNICEF, PLAN, UNESCO, Malala Fund, UNGEI, Building Back Equal-Girls Back to School Guide, 2020

266 Guidance Continuity of Learning during COVID-19 - Reaching All Children, UNICEF ROSA.pdf accessed 6 May 2021

267 Education Finance Watch 2021 (worldbank.org)

268 Review of Education Management Information Systems | UNICEF East Asia and Pacific

269 For instance, by utilising the UNESCO Framework for Reopening Schools webinar series and report.

270 Checklist to support schools reopening and preparation for COVID-19 resurgences or similar public health crises (who.int)

271 Author's adaptation of UNICEF WASH sector guidance. SOP – standard operating procedures. C4D – communication for development. A&C – advocacy and communication.

272 Universal Service Funds & connecting schools to the Internet around the world (worldbank.org)

273 UNESCO. 2020. Act now: Reduce the impact of COVID-19 on the cost of achieving SDG4. Policy Paper 42.

274 UNESCO. 2021. UNESCO Education Costing Model 2020 for Asia and the Pacific Region.

275 Azevedo, J., Hasan, A., Goldemberg, D., Iqbal, S., and Geven, K. 2020. Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes. World Bank Group: Washington, D.C.

276 UNESCO. 2021. UNESCO Institute for Statistics. [Online] Available at: http://data.uis.unesco.org/

277 Centre for Global Development. 2021. School reopening tracker.

278 UNICEF. 2020. What Have We Learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

279 Ibid

280 UNICEF. 2020. COVID-19: Are children able to continue learning during school closures? A global analysis of the potential reach of remote learning policies using data from 100 countries.

281 World Bank. 2020a. Estimates of COVID-19 impacts on learning and earning in Indonesia: How to turn the tide. The World Bank: Jakarta.

282 Azevedo, J., Hasan, A., Goldemberg, D., Iqbal, S., and Geven, K. 2020. Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes. World Bank Group: Washington, D.C.

283 Ibid

284 UNICEF. 2020. What Have We Learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

285 UNESCO. 2020. How many students are at risk of not returning to school?

286 Azevedo, J., Hasan, A., Goldemberg, D., Iqbal, S., and Geven, K. 2020. Simulating the Potential Impacts of COVID-19 School Closures on Schooling and Learning Outcomes. World Bank Group: Washington, D.C.

287 Alexander, Karl, Sarah Pitcock, and Matthew C. Boulay. 2016. The Summer Slide: What We Know and Can Do About Summer Learning Loss. Teachers College Press.

288 Hanushek, E., and Woessmann, L. 2020. The Economic Impacts of Learning Losses. OECD.

289 Global Schools Forum. 2020. Estimating the Impact of COVID-19 on the Non-State Education Sector in Low- and Middle-Income Countries. [Online] Available at: https://cdn.ymaws.com/www.globalschoolsforum.org/resource/resmgr/resources/v2report_estimating_the_impa.pdf

290 UNICEF. 2020. COVID-19: Are children able to continue learning during school closures? A global analysis of the potential reach of remote learning policies using data from 100 countries.

291 UNESCO. 2020. How many students are at risk of not returning to school?

292 UNESCO. 2020. Act now: Reduce the impact of COVID-19 on the cost of achieving SDG4. Policy Paper 42.

293 Ibid

294 UNICEF. 2020. What Have We Learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

295 UNICEF. 2020. Building Back Better: Simulation & Costing for Safe School Reopening in Pakistan.

296 UNICEF. 2020. What Have We Learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

297 UNICEF. 2019. A World Ready to Learn: Prioritising quality early childhood education. UNICEF: New York.

298 UNICEF. 2020. What Have We Learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

299 Ibid

300 World Bank. 2020. Three Principles to Support Teacher Effectiveness During COVID-19. [Online] Available at: https://documents1.worldbank.org/curated/en/331951589903056125/pdf/Three-Principles-to-Support-Teacher-Effectiveness-During-COVID-19.pdf

301 World Food Programme. 2020. State of School Feeding Worldwide 2020. Rome: World Food Programme.

302 UNESCO. 2021. UNESCO Education Costing Model 2020 for Asia and the Pacific Region.

303 UNICEF. 2020. What Have We Learnt? Overview of findings from a survey of ministries of education on national responses to COVID-19. UNICEF: New York.

unesco

unicef
for every child

Situation Analysis on the Effects of and Responses to COVID-19 on the Education Sector in Southeast Asia

Sub-regional Report

Stay in Touch

UNESCO Bangkok Office
Asia and Pacific Regional Bureau for Education

920 Sukhumvit Road, Prakanong, Klongtoei,
Bangkok 10110, Thailand

iqe.bgk@unesco.org
+66 2 391 0577
+66 2 391 0866
https://bangkok.unesco.org
@unescobangkok
@unescobangkok
@unescobangkok

UNICEF East Asia and Pacific Regional Office (EAPRO)

19 Phra Athit Road Pranakorn,
Bangkok 10200, Thailand

eapro@unicef.org
+66 2 356 0400
+66 2 280 3563
www.unicef.org/eap
@unicefeap
@UNICEF_EAPRO
@unicef.eap

UNICEF Regional Office for South Asia (ROSA)

P.O. Box 5815, Lekhnath Marg,
Kathmandu, Nepal

rosa@unicef.org
+977 1 441 708
+977 1 441 9479
www.unicef.org/rosa
@UNICEFSouthAsia
@UNICEFROSA
@unicefsouthasia

M CAMBRIDGE EDUCATION

GPE

This report was supported with funding from the Global Partnership for Education.