SAVE OUR FUTURE

Averting an Education Catastrophe for the World's Children

Contents

SAVE OUR FUTURE

Save Our Future is a global coalition of diverse voices all uniting to deliver a simple, yet powerful message amidst the COVID-19 crisis: **Save Our Future.**

This campaign, supported by hundreds of organizations worldwide, is driving awareness and emphasizing the connection between education and advancing the other UN Sustainable Development Goals; showcasing education solutions and innovations backed by evidence-based research; bringing together youth, their communities, and a wide range of stakeholders to promote collaboration; and engaging people around the world on the scale of the education crisis and the urgent need to respond.

As part of the Save Our Future campaign, this white paper aims to develop a common narrative around the impact of COVID-19 on education and key actions needed to protect education.

For more information on Save Our Future, visit www.saveourfuture.world

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Photo by GPE/Tabassy Baro

Executive Summary

The coronavirus (COVID-19) has disrupted education systems across the world, forcing school closures that have affected 90 percent of the world's students. These closures have had devastating impacts on children and their ability to exercise their human right to education. Education systems were already in crisis even before the pandemic and are now facing the likelihood of drastic budget cuts. If governments and development partners do not act immediately, this crisis could turn into a catastrophe from which millions of children may never recover. The vital news is—there are solutions and a way forward that turns this crisis into an opportunity, but only if we act together with urgency now.

- **Millions of children are missing out on education, going hungry, and becoming increasingly vulnerable to early marriage, child labor, and violence**. At the height of the crisis, the vast majority of children globally had their education interrupted. At least a third of these—particularly the poorest children—did not have access to any remote learning. About 370 million children missed out on free or subsidized school meals and the number of families struggling to put food on the table has doubled during the pandemic; for the most vulnerable children, school meals may be their only regular source of nourishment. When not in school, girls face additional risks of child marriage and child pregnancy, and 7.6 million girls from pre-primary to secondary school are at risk of not returning to school as a result of COVID-19.

- **The pre-existing learning crisis is becoming a catastrophe.** A huge number of the world's children were learning very little even before the pandemic hit and have now been set back even further. Before COVID-19, more than 175 million children—nearly half of all pre-primary-age children globally—were not enrolled in pre-primary education and 258 million children were out of primary and secondary school. Perhaps even more shockingly, far greater numbers of children were in school but not learning. In low-income countries, a staggering 90 percent of children are in "learning poverty" meaning that they are not even learning to read a basic text

by the age of 10. Most of these children are in school but learning very little. Across all low- and middle-income countries, 53 percent of children are in learning poverty already and this could go up to 62 percent as a result of the pandemic (Figure 1).

- **Inequality is being exacerbated.** Globally the differences between the privileged and those most left behind are being amplified. Within countries there is huge inequality with children facing multiple forms of marginalization falling the furthest behind. For example, in at least 20 countries where data is available, almost no poor and rural female students complete upper secondary school. However, the differences between countries are even more stark: the best-performing students in low-income countries have learning outcomes far below the lowest-performing students in high-income countries. Online learning is providing a lifeline to education to those who can access it, but the evidence clearly shows that it is driving even greater inequality. Connection to the internet or even to lower-tech solutions such as television are not a realistic prospect for hundreds of millions of children in the short term and, even if they were, connectivity alone in the absence of good quality teaching is not effective in driving learning. As budgets fall and as attention is focused on online learning, there is an increased risk that poor and marginalized children will be left even further behind.

Countries facing this impending catastrophe have a seemingly impossible task. While there are many actions which could improve education, budget pressures will mean that governments will need to make difficult choices and ruthlessly prioritize the most cost-effective interventions for those children left furthest behind. Recent estimates suggest significant cuts in budgets in low- and middle-income countries, combined with increased financing needs due to remediation, re-enrollment, second-chance programs, and infrastructure costs. In the likeliest scenarios, this means that low- and lower-middle-income countries could face an *annual* financing gap of between USD $178 and $193 billion over the next 10 years. This is many multiples more than the current annual ODA allocated to education, which stood at just $16 billion in 2018.[1]

Education is clearly a victim of the pandemic, but it can also be a key driver of the recovery. Education creates the health workers, educators, entrepreneurs, engineers, activists, and politicians essential for creating more resilient systems for the future. Education is at the heart of the entire sustainable development agenda, benefiting global economies and individual incomes, and serving as a powerful driver for healthy populations and a peaceful planet. Protecting and upholding the human right to education is the key to addressing the economic, health, environmental, and social crises we face—and the opportunity to build back better.

We need to get foundational learning right for all children and young people. Education is a source of hope and many have inspiring visions to use the pandemic to reset education systems so they can deliver better: harnessing connectivity and integrated technological solutions; delivering personalized learning to all; and building the skills required for innovation and lifelong learning. This paper is inspired by this hopeful vision. However, it also conveys a stark message—the future reality for vast swathes of the world's children will continue to be illiteracy and wasted potential unless we take urgent and radical action. The starting point for this action needs to be inclusive, engaging, and adaptive education that builds foundational skills including literacy, numeracy, and socio-emotional learning for all learners at all levels of education. Foundational skills can no longer be viewed as one priority amongst many. We need to make the case that developing these skills across the entire school system and at all ages must be the key priority in low- and middle-income

[1] All financing figures and estimates used in this paper are calculated and/or provided in US dollars.

countries. This does not mean other skills or higher levels of education should be ignored. It does mean, however, that we urgently need to raise awareness of the scale of the crisis in foundational learning and drive radical and sustained action to tackle it.

Education and health are society's most foundational investments and the two must be in balance and harmony. They make up two of our fundamental human rights: the right to a standard of living adequate for health and well-being (Article 25) and the right to education (Article 26). If we fail with these foundational investments, we fail the next generation and the future of our societies. Other Sustainable Development Goals (SDGs), like climate action, will never be achieved without education. Education is the only way to sustainably #SaveOurFuture.

We propose seven action areas to help guide the global community and local actors as they work to Save Our Future:

1

Action Area 1: Prioritize reopening schools, deliver vital services to children, and treat the workforce as frontline workers. School closures were necessary to curtail the COVID-19 pandemic, but there are great costs to children from being away from school. Governments will need to reopen schools as soon as it is safe to do so, make concerted efforts to get children back into school, and ensure that vital services including nutrition, physical and mental health services, WASH, and child protection services are put in place urgently to support children as well as the workforce in and outside of school.

2

Action Area 2: Make education inclusive, engaging, and adaptive. We propose adaptive education systems characterized by inclusive and engaging teaching which builds the skills children need to flourish. Many children are not learning because the teaching they receive is not engaging and is not aligned to their level. We propose urgent action to measure learning as children return to school and "meet them where they are" by providing engaging, differentiated instruction matched to their learning levels. This will be vital in the short term, but if aligning education systems with learning becomes the new normal, this could also have tremendous longer-term impacts.

3

Action Area 3: Strengthen the education workforce. The scale of the education crisis means that we need to harness the entire education workforce to support teaching and learning and ensure quality education for all children. By creating teacher-led learning teams with children at the center, children will benefit from education professionals, parents, the community, and health and welfare sectors, all working together to maximize children's learning, inclusion, and welfare. There is also an urgent need to provide leaders, teachers, and other members of the workforce with the data, support, and development they need to shift to more inclusive, engaging, and adaptive teaching approaches and to prioritize support to those who need it the most.

4

Action Area 4: Focus education technology (EdTech) where it is proven to be effective and most equitable. There is increasing interest and support for using EdTech to transform education, but also a real risk of exacerbating marginalization by increasing access for the most privileged and diverting resources from the fundamentals of an education system. Appropriate use of EdTech

should be integrated in efforts to strengthen education systems, particularly by expanding data systems, enhancing teacher and workforce development, and promoting inclusion and equity of access to education and learning outcomes.

5

Action Area 5: Protect education budgets and target public spending at those left furthest behind. Governments across the world are facing enormous financial pressures and these are particularly magnified for low- and middle-income countries. Reductions in public spending on education will be further exacerbated by declines in household spending, often an important component of education spending in low-income countries. We urge governments to grow public revenues where possible, protect education spending as a critical component in the COVID-19 recovery efforts, and target public resources to prioritize lower levels of education and support the most marginalized across the system. Developing strategies to fully finance education will require improving financial data and public financial management systems and more widely adopting equity financing formulas.

6

Action Area 6: Mobilize international resources to fully finance education. It is vital that governments in low- and middle-income countries do all they can to protect public spending for education, but even in the best case, there will still be a significant financing gap. We call on a diverse coalition of global actors—including donors, multilateral development banks, and philanthropists—to maximize aid for education, improve allocation, and harness innovative financing mechanisms to close the financing gap and support countries in fully financing education.

7

Action Area 7: Use resources better by improving evidence generation, coordination, alignment, and effectiveness. Mobilizing more funding for education is critical, but it is also more important than ever that every single dollar invested in education achieves its maximum impact. The international education architecture can play a vital role by improving its own coordination to deliver the best possible support to low- and middle-income countries and by promoting and supporting the most cost-effective approaches based on enhanced evidence generation and use.

The challenge for the education system globally is daunting. But while it may seem like an impossible task to respond to the magnitude of the challenge, we owe it to the next generation not to give up. We need to support effective and inclusive education systems so we can recover from the devastation of this crisis and make real progress towards a sustainable and equitable future. We need to unite within the education sector and across sectors to fill the financing gap and to ensure that every dollar invested in education leads to maximum benefits for children. Only by doing this can we ensure that all children can fulfill their potential to build a better and more resilient world.

Photo by Bart Verweij / World Bank

Introduction

This white paper is being issued as part of the Save Our Future campaign in response to the current global education crisis, which is now threatening to turn into a global catastrophe. The education sector is facing three overlapping challenges: the pre-existing learning crisis; the direct impacts of the health crisis on school closures, and the effects of the financial crisis on education in the short and medium term.

A diverse global coalition has come together, in the spirit of collaboration and unity that this moment demands, to highlight the devastating education crisis and to formulate a common set of priorities. Unless we act now, the world could face a learning catastrophe which will set us back by a decade. By creating a common vision for action and supporting each other's efforts, we can achieve the critical change we desperately need.

In light of the scale of the emergency, this paper focuses primarily on education from pre-primary to secondary and in particular on those children who are most left behind, including children who live in locations where the vast majority of children are not learning, as well as children from marginalized groups.[2] It includes children who are out of school and those who are in school but learning very little. The analysis in this paper is most relevant to the low- and middle-income countries where most of the children who are not learning live and may not apply to higher-income countries.

This paper is based on a thorough analysis of the evidence[3] and its recommendations were

[2] This paper refers broadly to marginalized children, which is inclusive of but not intended to be limited to children in poverty, children with disabilities, refugee, migrant, and displaced children, children associated with armed forces or groups, children from ethnic and linguistic minority groups, and girls; we acknowledge that these identifying factors often intersect to create compounding circumstances of marginalization.

[3] Eight working groups were constituted including research leads from the hub organizations, academia, and civil society organizations including a balance of individuals working in low-, middle-, and high-income countries. Working groups met over a period of six weeks to discuss the topic and draft a background paper. All background papers are available to view on the Save Our Future website.

developed by a diverse set of experts from a wide range of organizations, many of whom are on the frontline working with governments to address immediate challenges. The paper is informed by and builds on the four policy recommendations identified in the *Education during COVID-19 and beyond* policy brief published by the UN Secretary-General (UN, 2020). We propose a relatively small number of the highest priority recommendations to deliver changes in the coming 6 to 24 months. The paper is not a comprehensive overview of all interventions possible, nor does the absence of any intervention from this paper indicate that our organizations see it as unimportant. We are driven by the ambitious aim that education underpins the achievement of each one of the Sustainable Development Goals. However, we also seek to deliver a clear and strong message to the world that these ambitions can only be met if children first develop foundational skills and investments throughout the education system are focused on the most marginalized.

The paper highlights the urgent need to secure funding — both domestic financing and international aid – to deliver quality education for all children. However, it also recognizes that there is an urgent need to enhance evidence generation and utilization and to improve the effectiveness of education spending to maximize the impact of every dollar invested in education.

A broad coalition of actors will be needed to respond to the scale of the learning crisis; only by all pulling together will we succeed. This report contains recommendations for donors, multilateral organizations, civil society organizations, country governments, research organizations, philanthropists, teachers, teachers' unions, and the private sector and has been developed in consultation with representatives from all these groups. We urge all constituencies to consider the recommendations and to step up to this unprecedented challenge with ambitious plans for action including through the Global Education Meeting convened by UNESCO in October 2020 as well as other convenings in the context of the global response to the COVID-19 crisis.

Part 1: Education Today

The coronavirus (COVID-19) has disrupted education systems across the world, forcing school closures since early March 2020. These closures have magnified existing socio-economic vulnerabilities plaguing education systems worldwide, with deeply unequal impacts for marginalized groups. The consequences threaten to derail global progress towards achieving the UN Sustainable Development Goals (SDGs). Globally, education stakeholders have been channeling efforts towards adopting and adapting technology to continue learning and mitigating the negative impact on access to education. However, the urgency surrounding the pandemic has diverted attention away from the fact that, even before the COVID-19 pandemic, more than half of school-aged children in low- and middle-income countries were not learning. The pandemic has not only directly impacted education through school closures, but also threatens to have an even more devastating and long-term impact if it diverts attention away from the most marginalized children who were not in school or who were in school and not learning even before the pandemic.

The scale of the learning crisis

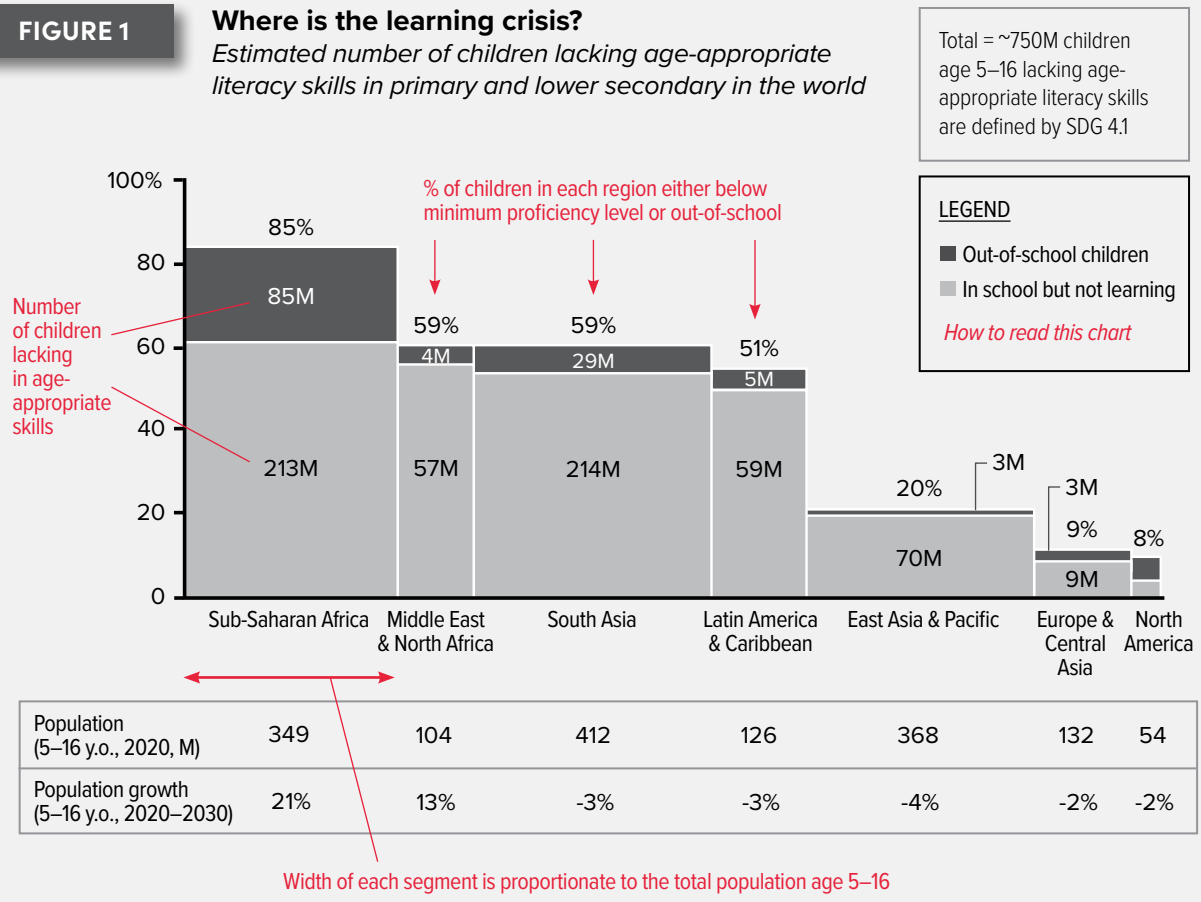
Even before the pandemic, 258 million children were out of school (UIS, 2019) and an additional 175 million pre-primary children were not enrolled in education (UNICEF, 2019a). Globally, 1 in 2 pre-primary school-age children, 1 in 12 primary school-age children, 1 in 6 secondary school-age children, and 1 in 3 upper-secondary school age youth were out of school (UNESCO, 2020f; UNICEF, 2019a).

But even more children are attending school but not even learning the basics. The I-CAN assessment of foundational numeracy found worryingly low levels of numeracy amongst primary school children across 13 sample sites located in low- and middle-income countries (PAL Network, 2020). The World Bank estimates that over half of 10-year-old children (at the end of primary school) in low- and middle-income countries are in learning poverty, unable to read or understand a basic story (World Bank, 2019a). Figure 1 extends the concept of learning poverty to a broader age group covering all primary and lower-secondary children (ages 5 to 16), showing the staggering numbers of children who are not learning across different regions. In many cases, this lack of foundational learning is never recovered. The Education Commission estimated that over 70 percent of all school-age children (ages 4 to 17) in low- and middle- income countries will reach adulthood without gaining basic secondary-level skills (Education Commission, 2016).

FIGURE 1

Where is the learning crisis?

Estimated number of children lacking age-appropriate literacy skills in primary and lower secondary in the world



Note: For data coverage reasons, this figure, produced by the Education Outcomes Fund, uses the World Bank and UIS National Learning Poverty measures and its subcomponents, namely the share of children out-of-school and the share of children below the minimum proficiency level as defined by the SDG 4.1.1b (UIS, 2020). The population of reference for this measure are the grades 4, 5, and 6 (as per the SDG 4.1.1b guidelines) and age ranges 10 to 14. We use this country level indicator as a proxy for the scale of the learning crisis for all other grades and age ranges 5 to 16. Additionally, this data also assumes that out-of-school children are below the minimum proficiency level.

There are significantly lower levels of school attendance and learning for marginalized groups. For example:

- **Learning poverty is widespread in low- and lower-middle-income countries.** Almost 90 percent of 10-year-olds are learning poor in low-income countries and 56 percent of 10-year-olds in lower-middle-income countries. The highest levels of learning poverty are in sub-Saharan Africa (87 percent), Middle East and North Africa (63 percent), and South Asia (58 percent) (Azevedo, 2020).

- **Poor and rural children in low- and middle-income countries are learning the least and the most likely to be out of school**. Amongst Global Partnership for Education (GPE) partner countries, 74 percent of children from the richest households achieved minimum reading proficiency compared with 48 percent for the poorest households. Poverty and rural location are highly correlated in low- and middle-income countries. The vast majority of underperforming schools are in rural areas. Rural children are about half as likely as urban children to complete lower secondary school, while children from the poorest households show rates of completion which are less than a third of those seen for children from the richest households (GPE, 2019b).

- **Overall, girls are outperforming boys on foundational learning.** For almost all countries with available data, there are fewer girls than boys in learning poverty (World Bank, 2019a). This reflects the fact that there are slightly more out-of-school girls than boys, but girls who attend school are learning at significantly higher levels.

- **But girls in low-income countries face additional barriers to access as they progress through the school system.** As they move up the school system, the proportion of girls attending compared to boys decreases in low-income countries (UNESCO, 2020b). While in primary school, girls' attendance in low-income countries is 94 percent of boys' attendance, it falls to 87 percent in lower secondary and 80 percent in upper secondary. Average attendance in lower-middle-income countries, on the other hand, is similar for girls and boys at all levels of schooling (UNESCO, 2020b).

- **Children living with disabilities** are more likely to be out of school and, if enrolled in school, less likely to complete school (World Bank, 2020d; World Bank, 2019b). Children with sensory, physical, and intellectual disabilities are 2.5 times more likely to have never been to school than their peers without disabilities (UNESCO, 2020f). In low- and middle-income countries, more than 30 million primary and lower secondary-school-aged children with disabilities are estimated to be out of school (Education Commission, 2016).

- **Crisis and displacement add huge barriers to children and young people.** More than 75 million children and youth in crisis-affected communities face significant challenges accessing quality education as a result of unsafe environments, trauma, risk of recruitment to armed conflict, health emergencies, and risk of famine (ECW, 2020; Overseas Development Institute, 2016). While schools can be a place of refuge, they have also been targeted for attack; between 2015-2019, it is estimated that there were more than 11,000 attacks on education and 22,000 students, teachers and academics killed, injured, arrested, or harmed (GCPEA, 2020). Globally, 48 percent of refugee children of school age are out of school. Enrollment of refugee children in primary education is 77 percent but rates drastically decrease as refugee students get older, with only 31 percent accessing secondary school, and just 3 percent accessing universities (UNHCR, 2020a).

- **Enrollment remains uneven for pre-primary education, which supports children, especially the most marginalized, to establish a foundation for later learning.** Despite evidence on the

promise of quality pre-primary education, only 22 percent of children in low-income countries and 36 percent of children in lower-middle-income countries are enrolled, meaning millions of children are not on track to acquire foundational learning (UNICEF, 2019a).

- **In many countries, almost all children are marginalized in global terms.** While there are large discrepancies in learning within countries, there are even larger gaps between high-income countries and low- and middle-income countries; the highest performing children in many low- and middle-income countries are performing at levels below even the lowest performing children in high-income countries (Pritchett, 2019).

In many contexts, disadvantages compound, resulting in even deeper marginalization for children and youth. For example in at least 20 countries where data was available, nearly zero poor and rural female students complete upper secondary school (UNESCO, 2020c) and only 25 percent of the poorest girls in low-income countries complete primary school (World Bank, 2018a). Girls with disabilities are even less likely to enroll in and complete school than boys with disabilities (World Bank, 2019b). Girls living in crisis- and conflict-affected environments are almost 2.5 times more likely to be out of school, and young women are nearly 90 percent more likely to be out of secondary school than their counterparts in countries not affected by conflict (UNESCO, 2015). Additionally, there are only about 7 refugee girls for every 10 refugee boys enrolled in secondary education worldwide (UNHCR, 2019b).

From crisis to catastrophe

We have experienced a period of unprecedented school closures. At the height of the first wave of COVID-19 cases, UNESCO estimated that approximately 1.6 billion students across the world were affected by school closures (UNESCO, 2020f). Countries are following different paths to reopen with some countries stating that schools will be closed for some time to come.

Girls face particular risks from being out of school. School reduces the incidence of child marriage. Girls who attend secondary school are three times less likely to marry underage than their out-of-school counterparts. The current school closures are expected to increase child pregnancy and marriage, as was seen in Sierra Leone during the Ebola crisis (Bandiera et al., 2019). The results of child marriage have long-term secondary effects on girls including poor health and even death as a result of early pregnancy (UNICEF, 2020c). Evidence from Sierra Leone also shows that the closure of schools during the Ebola crisis exposed children—especially girls—to a range of risks including domestic and sexual violence (Plan International, 2015; UNDP, 2015; Odhiambo, 2020). UNESCO estimates that 7.6 million girls from pre-primary to secondary school are at risk of not returning (UNESCO, 2020d) with the highest risk for secondary school girls, and UNHCR predicts that 50 percent of refugee girls in secondary school may not return when schools reopen (UNHCR, 2020a).

Exclusion of children from school during the COVID-19 pandemic and the potential impacts on returning to school could lead to devastating impacts. In addition to the 258 million children already out of school, nearly 16 million students from pre-primary to secondary are at risk of not returning to education in 2020 (UNESCO, 2020d). There is a real risk of children going hungry as 370 million children, 47 percent of whom are girls, miss out on free or subsidized daily meals through school (WFP, 2020b). The number of children living in households that are struggling to put food on the table has doubled during the pandemic. In fact, about 38 million children were acutely hungry in 2019. COVID-19 could push a further 36 million into severe hunger, taking the total to 74 million

in 2020 (WFP, 2020a).[4] For these vulnerable children, school meals are often the only nourishment they receive during the day. Hunger can result in an impaired immune system, increased morbidity, impaired cognition, and malnutrition, which affect education by increasing absenteeism, grade repetition, or drop-outs, ultimately affecting human capital development (Bundy et al., 2018).

Teachers, parents, communities, and policymakers have mobilized to support children's learning. Parents have played an important role in supporting learning especially where there is limited access to technology (Brossard et al., 2020; Azubuike & Aina, 2020). Community groups and CSOs have also implemented new approaches to ensure children can learn despite school closures (see Box 1). Many governments have rolled out distance learning programs in an effort to support continuity of learning (Carvalho & Hares, 2020; World Bank, 2020b).

Box 1: Community Cluster Learning Pods (CCLPs)

Teach for Uganda has created Community Cluster Learning Pods (CCLPs) to support learning continuity since March when Uganda's schools were closed (Arinaitwe, 2020; Mbabaali, 2020). A Teach for Uganda Fellow (a recent graduate carrying out a two-year teaching fellowship) has worked with communities to identify a central location where learning pods of five to ten students meet while following prescribed COVID-19 prevention procedures. Fellows make daily home visits in the morning to mobilize children to attend lessons and monitor their well-being against all forms of abuses, including child labor, sexual violence, etc. before heading to the meeting location to prepare for lessons that are aligned to the Ugandan curriculum. In one week, one Fellow can facilitate learning among 50-80 students. The emphasis has been on improving reading and comprehension skills, while also imparting employability skills, promoting menstrual hygiene with skills on making of reusable sanitary pads, or making masks to prevent COVID-19 spread within the community. In recent months, Fellows have reported improvements in reading and comprehension skills, increased confidence among students, and the willingness of parents to have their children attend classes.

However, remote learning due to COVID-19 has exacerbated existing inequalities. Analysis of remote learning policies and access to technology across the world estimates that at least 463 million, or almost a third of students from pre-primary to upper secondary school, have not been reached due to either lack of remote learning policies or lack of technology (UNICEF, 2020b). Across the world, 3 out of 4 students not reached live in the poorest households and/or in rural areas, a share that is much higher in low-income countries (UNICEF, 2020b). Around 40 percent of countries had no remote learning policies in place for the pre-primary level, excluding the youngest learners from continued learning amidst school closures (UNICEF, 2020b). Access to technology, including television, radio, internet, cell phones, and electricity, have become significantly more crucial learning tools, but also drivers of further inequity. In low- and lower-middle-income countries, only 20 percent of households have access to the internet and around half have access to radio or television (Carvalho & Hares, 2020; Dreesen et al., 2020; Hereward et al., 2020). For displaced learners living in settlements, infrastructure to support digital remote learning may be even more limited, especially for the 85 percent of refugees who live in developing or least developed countries where devices and connectivity, including to radio, are not readily available (UNHCR, 2020a). The digital divide is exac-

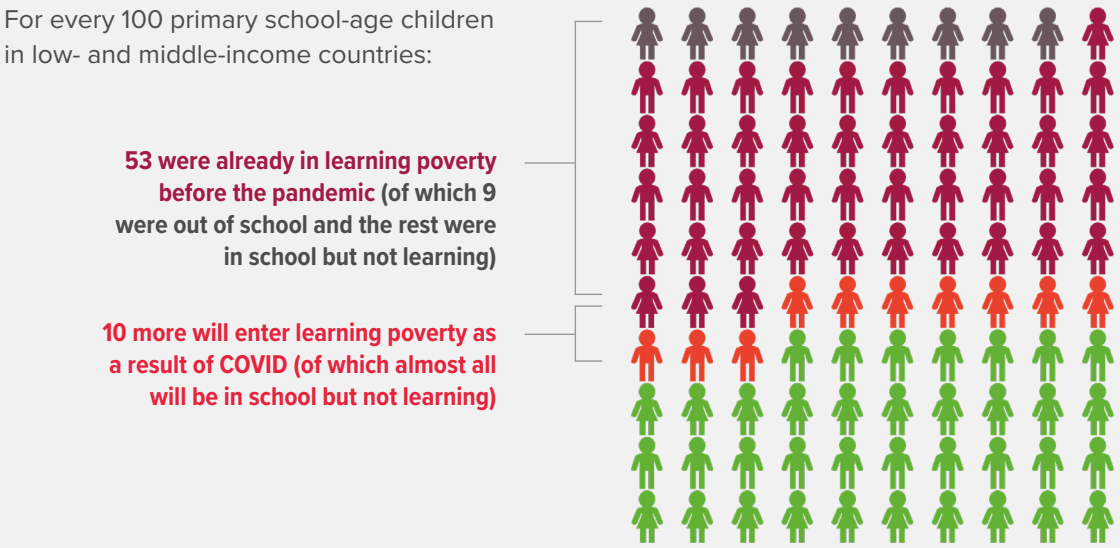
[4] Note: According to a WFP projection, the number of people facing acute food insecurity stands to rise to 265 million in 2020, up by 130 million from the 135 million in 2019, as a result of the economic impact of COVID-19; 28 percent of these people are school children aged 5–18.

erbated for girls, as harmful gender norms and perceptions of risk to girls' safety or reputation make parents reluctant to allow girls access to devices (Girl Effect, 2017; Amaro et al., 2020).

The extent of learning poverty is already shocking and COVID-19 will increase it even further. The scale of global school closures is unprecedented, and the impacts will be added on to a pre-existing learning crisis of vast scale (Figure 2). This means that the children who fall into learning poverty as a direct result of COVID-19 will be joining many other children who have been excluded from quality education long before COVID-19.

FIGURE 2 **COVID-19 learning losses come on top of a severe pre-existing learning crisis**

Children are considered to be in *learning poverty* if they reach age 10 without being able to read a simple text or are out of school. Most children who cannot read by age 10 never master reading.



Based on simulations by the World Bank Learning Poverty (LP) team and UNESCO's Institute of Statistics (UIS). Out of the 53% of children in learning poverty, 44% are in-school children, who fail to meet minimum proficiency, and 9% are out-of-school children. The World Bank team estimates, as of August 2020, an additional 10.5% (rounded to 10%) children will enter learning poverty in 2020 due to the impact of COVID-19 pandemic closures, out of which 10.2% will be children in school, and 0.3% will be children out-of-school (this small percentage is not demonstrated on the figure above). The team's estimates are from their 'pessimistic' simulation projection as per Azevedo (2020). The UIS estimate for the increase of the share of children below the minimum proficiency at the end of primary is 7.6% (rounded to 8%), but this does not include out-of-school children and uses different assumptions regarding mitigation and remediation effectiveness, which would increase the number.

Learning losses could result in approximately $10 trillion of earnings lost for this generation of learners, which amounts to one-tenth of global GDP (Azevedo et al., 2020). This effect has been estimated largely on the assumption that 0.6 years of learning will be lost due to the pandemic, which roughly equates to $16,000 of wages lost for each student over the course of their lifetime. There is evidence that the learning losses could be equivalent to a period far greater than actual school closures. For example, evidence from the 14-week school closure as a result of the 2015 Pakistan earthquake resulted in learning losses of 1.5 school years (Andrabi et al., 2020).

There is an urgent need to focus on remedial action for children who have missed out on school. But in doing so, it will be important that we consider the risk of unintended consequences—the worst-case scenario is that we divert funding and attention towards addressing only the direct impacts of COVID-19 and that this worsens educational provision for marginalized children overall.

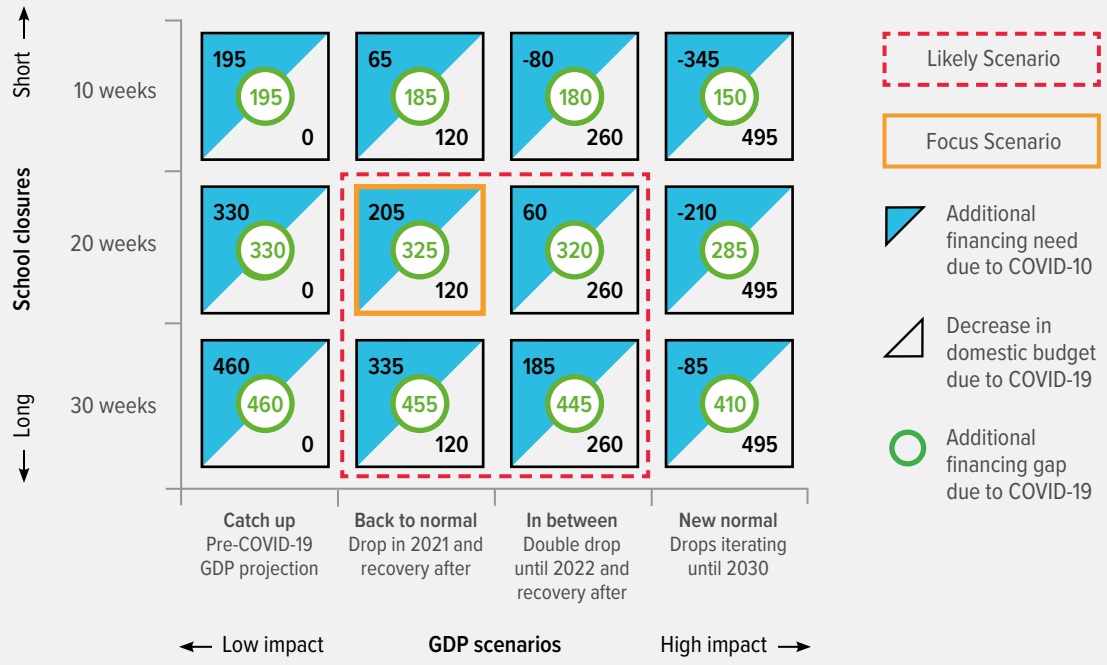
Finance gap

Education financing is under threat. Just as governments need to take urgent action to reopen schools, provide alternative pathways for learning, and target much-needed additional resources to ensure no child is left behind, education spending is threatened by three compounding crises: (1) slow or negative growth that will undermine government revenues and scarce resources may be shifted to prioritizing health and economic recovery leading to falling budgets; (2) falling household budgets and remittance flows due to lockdowns and job losses; and (3) fiscal pressures on donor countries and multilaterals that will lead to reductions in aid flows to education.

Photo by GPE/Livia Barton

Countries face a daunting financing gap. Even if budget allocations as a percent of GDP are maintained, it is likely there will be less money for education in absolute terms due to projected drops in GDP. According to UNESCO estimates, drops in GDP and revenue may result in global public education spending being 8 percent lower than in 2019 (UNESCO, forthcoming). Even more worrying is that initial estimates also predict that education as a share of total budgets could drop by as much as 10 percent due to a reprioritization of spending toward other sectors (Al-Samarrai, 2020a; Warren & Wagner, 2020). This would represent a drop in public education spending for low- and middle-income countries of over $83 billion in 2020 and $109 billion in 2021 according to initial estimates (Warren & Wagner, 2020). Some countries are already making trade-offs that have led to cuts in education budgets. In Ukraine, the education budget is set for a cut of around 4 percent in 2020 to release resources to deal with COVID-related shocks; in Kenya, cuts to spending on tertiary and basic education curriculum reform are being deemed as necessary to support their COVID-19 response plan; and in Nigeria approximately 45 percent ($130 million) from the Universal Basic Education Commission budget is suggested to be cut (World Bank, 2020c). Recent estimates suggest that the cumulative external financing gap—the shortfall between available domestic expenditure and what is needed to achieve Sustainable Development Goal 4 (SDG 4) by 2030—could increase by somewhere between $150 and $460 billion compared to pre-COVID estimates, taking into account the effects of slower GDP growth on government budgets and increased financing needs for remediation, re-enrollment and second-chance programs, and infrastructure costs (UNESCO, 2020e). In the likeliest scenarios, this means that countries face an annual financing gap of between $178 and $193 billion for the 2020-2030 period (Figure 3).

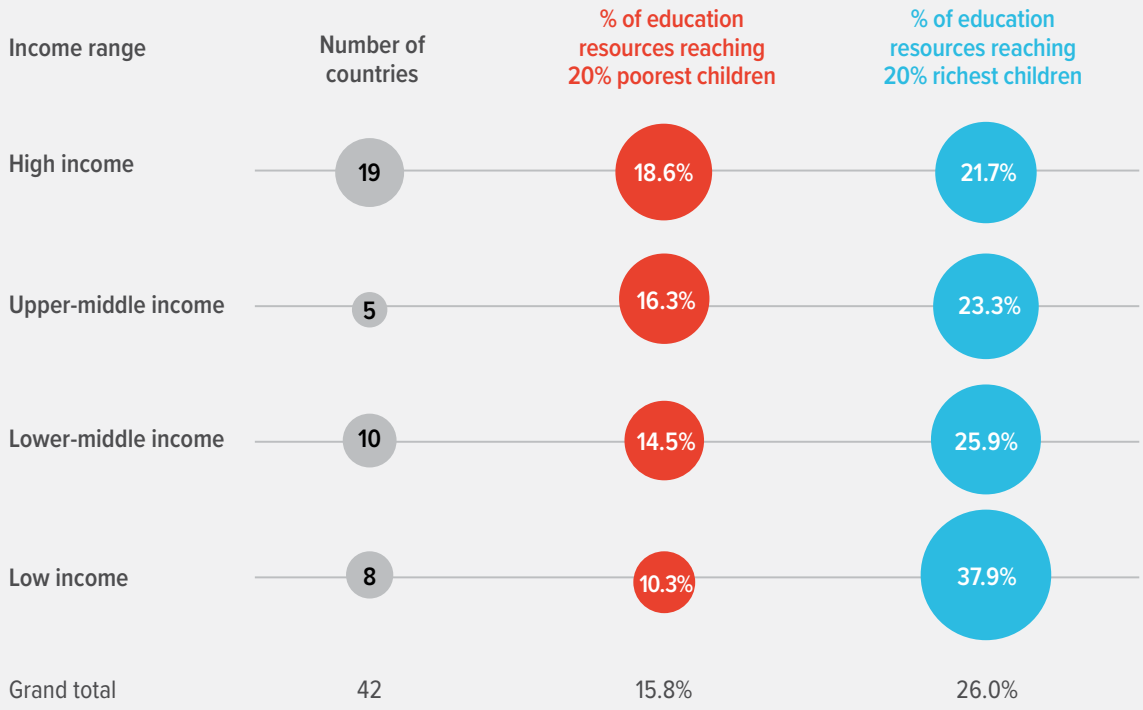
FIGURE 3 **Low- and middle-income countries face huge financing gaps for education**



UNESCO modeling of additional financing need, decrease in domestic budget, and additional financing gap due to COVID-19 in low- and lower-middle income countries between 2020 and 2030, by school closure duration and GDP scenarios, USD $billion (UNESCO, 2020a).

Falling budgets will further exacerbate existing inequities in spending and resource allocation. Even before COVID-19, the distribution of education spending at the country level was highly inequitable due to a lack of sufficient prioritization of public budgets on the lower levels of education [starting from pre-primary] and most marginalized learners. Evidence from 42 countries shows that, on average, only 16 percent of public education spending goes towards the poorest 20 percent of children in school, compared to 26 percent that goes towards the wealthiest 20 percent of children in school (Figure 4; UNICEF, 2020a). Disparities become even more evident during humanitarian and financial crises. In Guinea, which endured the 2014-16 Ebola outbreak, public education spending per child in the poorest quintile was only one eighth of the amount spent per child in the wealthiest quintile (UNICEF, 2020a) and actions taken by countries in response to previous financial crises have widened gender disparities, as spending cuts often affect services that disproportionately affect women (Stavropoulou & Jones, 2013). And with only 31 low- and middle-income countries having specific budget allocations for students with disabilities or for special education (Development Finance International, 2016), reactionary measures through widespread budget cuts threaten to decrease spending for marginalized students whose needs are not adequately budgeted for in the first place.

FIGURE 4 **Allocation of public education resources is highly inequitable in low- and middle-income countries**



Average share of public education resources reaching children from poorest and richest quintiles according to UNICEF calculations using the World Inequality Database on Education and UIS data (UNICEF, 2020a)

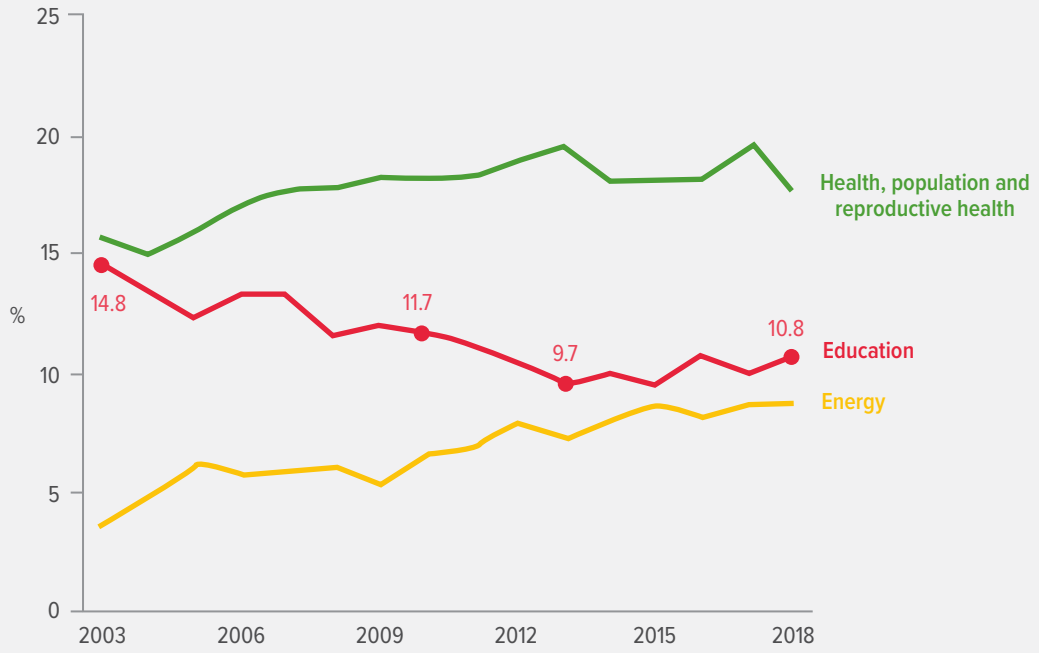
This strain on country budgets will be magnified by shrinking household budgets and aid flows.

- **Households are suffering**. Generally, the poorer the country, the larger the share of total education spending that comes from household-level investment (UNESCO, 2020e). These resources are now also under threat as a result of COVID-19 lockdowns and restrictions on movement, 4 out of every 5 workers globally have been affected, impacting household income and spending on education (Al-Samarrai, 2020b; ILO, 2020). Declining household incomes may also lead to shifts in enrollment from private schools to public schools, adding further pressure on stretched public education budgets (Strauss et al., 2004). Remittances, typically an important source of household education resources in many countries, are likely to decline by 23 percent this year (Ratha et al., 2019; World Bank, 2020a). The loss of school meal programs (discussed in Action Area 1) can have the equivalent value of around 10 percent of household income per child (Bundy et al., 2009). These household income shocks threaten to disproportionately affect the most marginalized learners. A study in Brazil found that economic shocks, such as parental unemployment, increased the likelihood of girls dropping out of school by up to 60 percent (Duryea, Lam, & Levison, 2007). Children with disabilities are at greater risk of not returning to school due to constrained household resources (World Bank, 2020d). For displaced populations engaged in informal labor markets, threats to household income may be even more drastic. In Turkey, which hosts the largest number of refugees globally, 69 percent of households reported a loss of employment as a result of COVID-19, and 82 percent of households reported having no member

engaged in income-generating activities, compounding challenges in accessing food, healthcare, education, and paying for other types of living expenses (IFRC, 2020).

- **Donors cutting back.** The pandemic could also lead to contractions—of more than 10 percent—in aid to education due to reprioritization. Adding to this, the forecasted GDP growth rate for the eight largest donors to education will be –8 percent in 2020 and 5 percent in 2021, which may cause a further reduction in aid spending. New estimates suggest that between 2020-2022, there could be a drop as steep as 12 percent in aid to education (UNESCO, 2020e). This adds additional challenges to an already constrained environment, where education consistently receives less aid from official and philanthropic donors as compared to other sectors (Figure 5). Similarly, while aid to education in humanitarian situations has increased in the past decade due to increased total flows as well as greater prioritization, the share of education in global humanitarian funding— at just 5.1 percent—is well below need (ECW, 2020).

FIGURE 5 **The proportion of aid spent on education has decreased**



Education, energy, and health, population, and reproductive health policies and programs as a share of total sector allocable aid, 2003-2018 based on data from OECD (UNESCO, 2020e)

Education as the solution

While education is clearly a victim of the pandemic, it can also be the solution to the longer-term recovery from COVID-19. Education creates the health workers, the entrepreneurs, the engineers and the thought-leaders of the future. Education is essential to achieve every one of the SDGs (Figure 6).

FIGURE 6 **Education is a key driver of sustainable development**

HEALTH BEHAVIOR

Education is strongly linked to healthy behaviors, preventative care, and a reduction of risky behaviors (Feinstein et al., 2006). Maternal education is a key determinant for children's health; around half of the under-five mortality reduction between 1970-2009 was attributable to increases in education levels for women (UNICEF, 2015).

PEACE, TOLERANCE, AND COMMUNITY COHESION

In low- and middle-income countries, the probability of conflict almost tripled from 3.8 percent to 9.5 percent when the level of educational inequality doubled (UNESCO, 2014). Tolerance is related to educational level. For example, secondary school graduates in sub-Saharan Africa were 23 percent more likely to express tolerance towards people with HIV than those without any education, while Latin American secondary school graduates were 47 percent more likely to express tolerance towards other racial groups (UNESCO, 2014).

GENDER EQUALITY

Education is a critical driver for gender quality and ensuring that girls and boys, women and men, not only gain access to and complete education cycles, but are equally empowered through education. Higher levels of education for girls is associated with delayed marriage and childbirth (UNESCO, 2014) as girls without higher levels of education are three times more likely to be married before age 18 (UNFPA, 2012). One additional year of school can increase a woman's earnings by up to 20 percent (Wodon et al., 2018a). Evidence also suggests that boys and men who have completed secondary education and higher, tend to hold more gender equitable attitudes, report less use of violence, and have higher rates of participation in care work (UNFPA, 2012).

CLIMATE ACTION

The higher an individual's level of education, the more likely (s)he was to express concern over the environment, with a person who completed secondary education being 10 percentage points more likely to express concern than an individual with only primary education. Individuals with higher levels of education have also been shown to engage in actions and political movements that support protecting the environment (UNESCO, 2016a).

GLOBAL CITIZENSHIP

Education can develop future citizens with the skills to contribute to vibrant, democratic societies (Yemini, 2017). Education which develops 21st century skills such as critical thinking and information literacy can help build young people's resilience to extremist narratives and hate speech and equip them with the ability to spot "fake news" and conspiracy theories (Cooke, 2018), which they may have been increasingly exposed to during protracted periods of online activity during the pandemic. Citizenship skills such as the ability to make decisions collectively and democratically are vital to children and youth's development in contemporary societies (Hart, 1992).

Linkages between the sustainable development outcomes listed in Figure 6 have been shown despite the low learning outcomes being achieved in many low- and middle-income countries. But to truly accelerate the achievement of all the sustainable development goals, there is an urgent need to reform education to drive learning and build the range of skills needed to accelerate progress (UNESCO, 2017). This means that simply reopening schools and resuming education as it has been delivered in the past will not be sufficient. We need to drive a global change in pedagogy so that children benefit from inclusive, engaging, and adaptive teaching. These changes, when embedded within an education system, will make education far more effective at building individual skills, but they will also have the potential to catalyze far-reaching changes. For example, young people would have the tools to solve the problems facing the world, their curiosity could drive further exploration, and their skills in creativity, problem-solving, and appraising information would allow them to direct their own lifelong learning. This will in turn give them the skills to adapt to new labor market trends and to fulfill their potential to contribute positively to the world around them.

Photo by GPE/ Kelley Lynch

Summary

The world is facing an education catastrophe. Closed schools mean that hundreds of millions of children are not learning and getting services which are vital for their well-being. Significant numbers of the world's children were not learning even before the pandemic, and without urgent action, this learning crisis will spread and deepen. By focusing attention on education, there is an opportunity to drive improvements not just in learning, but across all the SDGs. In Part 2 of this paper we set out seven areas for priority action for governments, development partners, and all engaged in delivering SDG 4.

Photo by Dominic Chavez/World Bank

Part 2: Action to Avoid a Learning Catastrophe

What outcomes are we aiming for?

Given the scale of the crisis outlined above, the case for improving education is overwhelming, but the challenge for many policymakers, both domestically and internationally, is deciding what to prioritize. The organizations issuing this paper are firmly committed to achieving SDG 4 and indeed all the SDGs. While there are many actions that could be taken by countries to benefit education systems, the dire situation and falling funding will require prioritizing public resources and focusing on the most cost-effective approaches to maximize the chance of success. The Paris Principles highlight that it is countries who should determine the priorities and donors should align to those priorities. However, donors can also play an important role in supporting countries to prioritize evidence-informed interventions and effective implementation. The analysis and suggestions in this paper have been guided by two priority outcomes which are enshrined in SDG 4: equity and learning.

Equity – leaving no one behind

Every action area discussed below has been guided by a focus on equity. Concentrating on the children who are most left behind is an ethical imperative, but it is also the most effective way to improve learning overall (Crouch & Gustafsson, 2018; Crouch & Rolleston, 2017). It is important to note that the best interventions to support the most marginalized are not necessarily those which target

only marginalized children. For example, differentiated instruction can benefit all children, but the improvements in learning are particularly pronounced in those children who are most left behind by current education systems (Banerjee et al., 2016). In some cases, a combination of interventions targeted at specific marginalized groups and more systemic interventions will be required. For example, targeted finance such as cash transfers can help get girls into school, but systemic interventions to improve teaching may be needed to ensure that all children in school (including girls) are learning (DFID, 2018b). It is also important to note that marginalized children are not only in the poorest countries. Large numbers of poor children live in middle-income countries.

■ Poor and rural communities

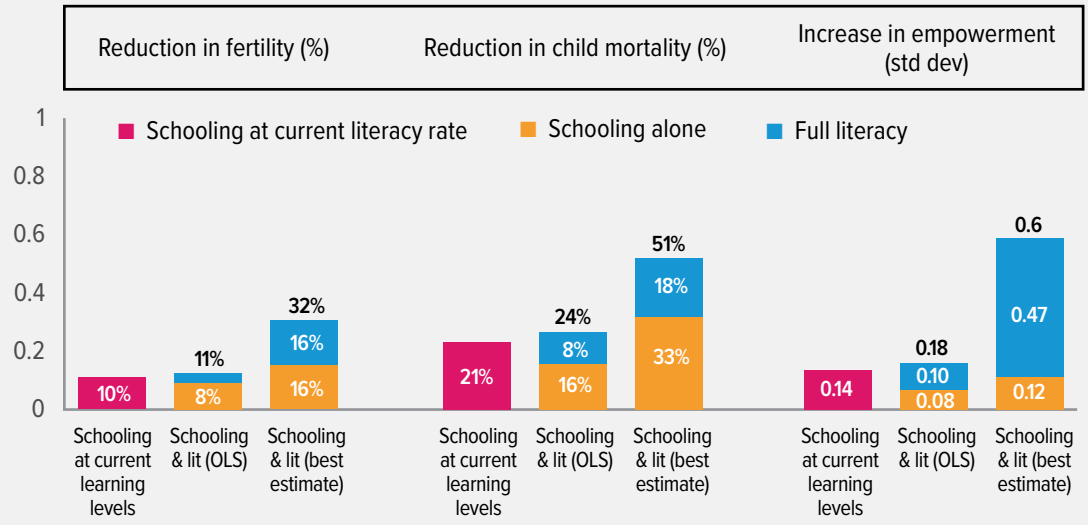
The vast majority of children in learning poverty come from poor and/or rural households. In countries participating in the Program for International Student Assessment, differences in attainment between rural and urban setting were mainly explained by socioeconomic differences (Echazarra & Radinger, 2019). Allocation of education resources currently favors wealthier households and those living in urban areas (Education Commission, 2016; UNICEF, 2020a). This is in part due to high levels of investment in higher levels of education which are generally only accessible to those from wealthier households and in part due to inequitable allocation of teachers and funds within school levels.

It is important to note that in some countries, the vast majority of the population is poor and learning very little. Notably, across sub-Saharan Africa, 85 percent of children are estimated to be not even learning the basics (see Part 1, Figure 1). This means that almost the entire population of many countries may be considered as marginalized compared to global norms. This is important because in these contexts, narrowing the gap between the highest- and lowest-performing children will not be enough. Instead there will need to be fundamental changes so that systems can deliver learning (Pritchett, 2019). When developing action areas, we focused both on these children living in contexts where almost nobody is learning and on children who are falling behind compared to others. ***In Action Area 2 we set out how education systems can focus on inclusive and engaging teaching and how they can become adaptive so they respond to the needs of those who are not learning (who will often be poor students). In Action Area 3 we set out some of the urgent reforms which will be needed to strengthen the workforce so that all children can learn. In Action Areas 3 and 5 we discuss how allocation of the workforce and funding can be made more equitable so that poor and rural communities are not disadvantaged.***

■ Girls

Even without accounting for learning, just being in school brings a range of positive benefits for girls including delaying marriage and pregnancy (Sperling & Winthrop, 2016; Breierova & Duflo, 2004; Duflo et al., 2015a; Koppensteiner & Matheson, 2019). However, recent evidence demonstrates that these impacts are substantially improved for girls who are in school and learning (Figure 7). Interventions to improve learning for girls need to be carefully designed to address the specific contextual barriers to learning. In some cases, this will involve actions which are targeted only at girls; however, in most cases, systemic barriers to learning—in particular poor quality of teaching—will also need to be addressed.

FIGURE 7 **The impact of schooling for girls is much greater if they are learning, particularly if they are learning to read**



Source: Kaffenberger & Pritchett (2020)

Gender parity for school attendance decreases as girls move up levels of education, thus emphasizing the importance of targeted interventions to get adolescent girls into school (UNESCO, 2020g). ***In Action Area 5, we have highlighted the importance of targeting financial support to marginalized children—in particular adolescent girls—to get them back into school. We also emphasize the importance of equitable allocation of funding to poor and rural areas, noting that girls may be disproportionately impacted by a lack of local facilities (Burde & Linden, 2013).***

Getting girls into school will not necessarily lead to substantial increases in learning if the quality of teaching is poor. For example, in Zambia, even if the two-thirds of 15-year-old girls who are currently out of school were enrolled in school, the proportion of Zambian 15-year-old girls achieving grade-level reading proficiency would only rise from 2.4 percent to 6.5 percent (Spivack, 2020). Given this, in low-learning environments, girls education interventions will need to enable access for girls but also improve teaching quality (DFID, 2018b). Furthermore, evidence shows that the most important priority in working towards the goal of 12 years of quality learning for girls is to focus attention first on achieving foundational skills (Gordon et al., 2019). ***In Action Areas 2, 3, and 5 we emphasize the need to focus on high quality basic education provision to ensure both girls and boys achieve foundational learning.***

School curricula and non-formal education can be an important influence on societal perspectives on gender (Muñoz Boudet et al., 2013). Damaging gender norms lead to compounding risks as girls grow older. Low academic expectations, requirements to carry out significant unpaid domestic work, and reduced mobility can lead to drop-out from school (Oviedo & Spurzem, 2019). Adolescent girls are also at increased risk of gender-based violence, child marriage, female genital mutilation, and sexual exploitation (Harper, 2019). Education, both formal and non-formal, can drive more equitable societies by building positive gender norms and promoting women's empower-

ment (Marcus, 2018). ***Action Area 2 outlines how education can be re-oriented to drive a range of sustainable development outcomes, including gender equity.***

Children with disabilities

Children with disabilities are often the most left behind in education systems. Globally, 1 in 3 primary school-aged children with disabilities is out of school compared to 1 in 7 children without disabilities (UN, 2018). Even if children with disabilities are in school, their learning levels are significantly below those of their classmates without disabilities (Wodon et al., 2018b). There has been a global movement to ensure that all children, including those with disabilities, are fully included in education systems (UNICEF, 2017a).

People with disabilities have heightened health risks due to COVID-19 including the increased risk of transmission due to hands-on assistance with daily tasks; risk of inaccessible WASH facilities; and risk of de-prioritized access to healthcare due to negative perceptions about their value to society (IASC, 2020). ***In Action Area 1, we set out the need to explicitly consider the needs of children and members of the workforce with disabilities while countries take all possible measures to safely reopen schools.***

While policymakers have expressed broad support for inclusive education, many barriers to achieving inclusive education for all remain. One potential reason is that policymakers fear that it will be expensive or that it will be disadvantageous for children who do not have disabilities. However, evidence indicates that including all children in education is beneficial both for children with disabilities and those without (EASNIE, 2018; Florian et al., 2016; Hehir et al., 2017) and that inclusive education is more cost-effective than education of children in separate spaces (ADB, 2010; Banks & Polack, 2013; UNICEF, 2015). More work is needed to ensure governments are supported to and held accountable for implementing policies aligned to inclusive education principles. ***In Action Area 5, we set out the need to build the case for education which prioritizes learning and equity — including inclusive education for children with disabilities.***

Inclusive pedagogy will benefit all learners, especially children with disabilities. To make sure children with disabilities can learn when they are in school, there is a need for education which responds to different needs. In some cases, there may need to be additional support provided but in others, good quality teaching which is responsive to differing needs within the classroom will be sufficient to help children with disabilities to learn — and will also help all children (UNICEF, 2017a; Rose & Meyer, 2006). ***Action Area 2 sets out the need to shift towards more inclusive and adaptive approaches to teaching.***

Displaced children and children in conflict settings

The 75 million school-aged children and youth who are marginalized due to armed conflict, forced displacement, and humanitarian crises are now facing further risk to their education as a result of COVID-19 (ECW, 2020). While some gains to include refugees in national education systems have been made, COVID-19 has widened inequalities for refugee and displaced students, especially those learning in refugee or informal settlements, many of which are in remote areas and cannot be reached by remote learning modalities like radio or tv broadcasts. Poor access to remote learning through any medium (radio, television, computer-based, etc.) is preventing a vast number of displaced children from learning. Even when in school before COVID-19, displaced children faced compounding barriers to learning, including language barriers, inaccessible and culturally non-inclusive curriculum and textbooks, and inadequate support from teachers. Global data on learning access and quality is insufficient for refugee and displaced learners, making monitoring of global

progress challenging. ***Action Area 4 illuminates the inequities in remote learning opportunities and frames the need to leverage technology to fill data gaps on refugee and displaced learners, while Action Area 2 sets out the need for more inclusive approaches to teaching and learning.***

The impact of COVID-19, on top of pre-existing psychological stressors, is leading to alarming rates of mental health concerns for displaced children as well (ECW, 2020; Norwegian Refugee Council, 2020). Children who are displaced or living in conflict settings rely on access to school as a place of refuge from violence and trauma and for the delivery of vital services, such as food, healthcare, and psychosocial support. ***Action Area 1 sets out the need for countries to take all possible measures to safely open schools and to explicitly consider the needs and well-being of refugee populations in reopening plans.***

Financial stressors at all levels, including the international, national, and household level also threaten to disproportionately affect displaced learners. Without necessary action, humanitarian aid to education, which currently stands at just 5 percent, may decrease, leaving host countries with even fewer financial resources necessary to invest in durable solutions that support children's holistic well-being and education. Household incomes for displaced families are also predicted to suffer, especially for displaced individuals barred from the formal labor market, which may lead to difficult trade-offs for families without targeted policies. ***Action Areas 5 and 6 propose a vision for what is required to adequately finance education for all and to mitigate financial constraints for households that prevent students' return to school.***

Learning – ensuring education is the engine of sustainable development

In addition to driving equity, we are explicitly aiming to drive learning through our action areas. The SDGs brought in a far stronger focus on achieving learning than had been present in previous frameworks and explicitly make the link between quality education and achievement of all the other development goals. Our actions areas were guided by the aim to develop a broad range of skills including basic skills such as literacy and numeracy, more advanced technical knowledge and skills, socio-emotional skills and broader 21st century skills such as problem solving and critical thinking.

Improving learning will contribute to multiple sustainable development priorities. As governments lead the recovery from the COVID-19 pandemic, they will have to consider acute priorities such as public health and the economic impacts of COVID-19; but they will also need to be cognizant of ongoing priorities such as security, employability, and climate adaptation. Learning can have positive contribution to both the short-term and long-term priorities; the ability to critically appraise information will be critical in avoiding fake news whether related to COVID-19 vaccines or related to climate change while the development of citizenship skills will enhance community-driven responses to the pandemic as well as improving peace and security in the longer term (UNESCO, 2016a; Kotite, 2012; Leckman et al., 2014). Crucially, skills which enable life-long learning will enable young people to adapt and reskill as the labor market evolves, which will be critical to their resilience and livelihoods (Kim & Park, 2020). ***Action Area 2 focuses on the need to align education systems to the goal of improving learning for all so that education can continue driving all other sustainable development goals.***

Schools in many low- and middle-income countries are not developing even the most basic of skills (discussed in more detail in Part 1). The absence of basic literacy amongst vast swathes of the world's children is particularly concerning since without the ability to read, it is almost impos-

sible for young people to achieve their potential; children who cannot read by the end of primary school generally never achieve a good grasp of literacy (World Bank, 2019a; Fiester, 2010). Investment in higher levels of learning will have limited impact if those entering these levels have such weak foundations (Pritchett, 2016). Worryingly, beyond the global education sector, the magnitude of this learning crisis is not well understood. In some cases, policymakers are focusing on interventions that appear to offer the chance to "leapfrog" but which in reality are very unlikely to be cost-effective unless the roots of the learning crisis are tackled first. In order to tackle the learning crisis, policymakers will need to focus particularly on foundational skills including literacy, numeracy, and socio-emotional skills. ***Action Area 2 sets out the evidence on differentiated instruction approaches which are a key and evidence-based tool to engage children in learning and improve outcomes particularly for those most left behind. Action Area 3 focuses on reforms needed to get an effective workforce in place. Action Area 4 sets out why some technology solutions which appear attractive may not be cost-effective but instead suggests some approaches drawing on technologies which are more likely to succeed. Action Areas 5 and 6 set out the urgent need to raise the alarm about the levels of learning and to make the case to invest urgently in learning.***

Socio-emotional and 21st century skills are complementary to basic academic skills. It is important to note that developing socio-emotional and 21st century skills does not come at the expense of a focus on basic literacy and numeracy. A simplified way to consider teaching approaches is to think of them as a continuum running from highly didactic/teacher-centered approaches at one end of the spectrum to more learner-centered approaches at the other (Brown, 2003; Weimer, 2013). Basic skills can be built quite successfully through approaches which are highly teacher-centered or through approaches which include more learner-centered elements. However, by using approaches which include more learner-centered elements to build these basic skills, education systems can begin developing a far broader range of skills from an earlier age. These broader skills, in turn, can help children build other skills (Winsler et al., 2014; OECD, 2017) but also have significant impacts on a range of life outcomes from happiness to future employment (OECD, 2017). It is important to note that teaching in many countries is both teacher-centered and very poor quality and is therefore not developing knowledge, academic skills, or broader skills. ***Action Area 2 sets out the need to move towards teaching approaches which are interactive while Action Area 3 suggests how the workforce can be strengthened so children from pre-primary onwards experience pedagogical approaches which will support development of socio-emotional and 21st century skills.***

ACTION AREA 1

▶ Prioritize reopening schools, deliver vital services to children, and treat the workforce as frontline workers

Schools do much more than support student learning—they provide nutrition, health, and hygiene services; mental health and psychosocial support; and dramatically reduce the risk of violence, early pregnancy, and more. We know that the long-term impact of extending school closures reaches far beyond the risk of learning losses and can cause even greater harm to the most marginalized, particularly children who are displaced or living in conflict settings for whom school may be a refuge. In planning school reopenings, the first step for governments is to take all possible measures to protect the health and safety of children and the education workforce. Measures to prevent the potential spread of COVID-19 and preserve the health and wellbeing of students and the workforce should include provision of basic and accessible hygienic infrastructure; evidence-based safety measures, such as physical distancing; and provision of essential feeding and health services. During reopening, the education workforce must be regarded as frontline workers who support health and safety; continued learning; and provision of essential services. Their human and labor rights must be ensured, and they must be included in the crisis and recovery planning and decisions. The protection of students and the workforce will require close coordination across the education, health, and social sectors.

Take all possible measures to reopen safely and treat the education workforce as frontline workers

School reopening plans must include all possible measures to protect the health and safety of all members of the workforce and all learners, especially the most marginalized. Essential to preventing the spread of COVID-19 is ensuring that schools have adequate gender-responsive water, sanitation, and hygiene (WASH) facilities and sufficient classroom infrastructure to facilitate social distancing. Members of the workforce and students with disabilities face a range of additional risks due to COVID-19 and therefore policymakers should explicitly consider their needs within reopening plans following guidance from the Inter-Agency Standing Committee (IASC, 2020). Countries with refugee populations will also need to plan explicitly for the needs of these populations, ensuring that durable solutions aligned to Inter-agency Network for Education in Emergencies (INEE) Minimum Standards are put in place within refugee settlements and host communities.

Hygiene services should be considered as part of reopening plans. Two in five schools globally do not have handwashing facilities, leaving 818 million learners and their teachers without one of the most essential preventative measures against the spread of COVID-19 (WHO & UNICEF, 2020). There are also 698 million children who attend schools that lacked basic sanitation (defined as single-sex and usable) at their school prior to COVID-19, with rural schools twice as likely as urban schools to lack adequate facilities (WHO & UNICEF, 2020). At the pre-primary levels, these estimates may be even higher, but only 16 countries have estimates available for pre-primary schools, compared to 130 countries with estimates for primary schools and 117 countries with estimates for secondary schools (WHO & UNICEF, 2020). Ensuring access to adequate and gender-responsive

WASH is critical, especially for the most marginalized students. Globally, 37 percent of schools have toilets that are not accessible to students with physical disabilities, and an even higher number are not adapted for students with other types of impairments, such as visual, hearing, or speech (WHO & UNICEF, 2020). While data on WASH infrastructure for schools is more readily available, data on waste management and disinfection and cleaning processes within schools is needed to understand the extent to which schools are prepared to properly dispose of possible contaminated waste and sanitize classrooms and sanitation facilities. A recent survey in Tunisia revealed that 18.5 percent of primary schools lacked sufficient cleaning supplies and equipment to undertake routine disinfection (WHO & UNICEF, 2020). Based on these data and in light of the current pandemic, it is vital that governments do all they can to provide adequate hygiene facilities for learners and the education workforce.

Physical distancing is also an important consideration for school reopening plans (WHO, UNESCO, & UNICEF, 2020), but schools have varying abilities to add to or modify existing classroom spaces to ensure adherence to WHO social distancing guidelines. Overcrowded classrooms are pervasive across low- and middle-income countries. In the Central African Republic, the average primary school class has 83 students for just one teacher and in Rwanda, 60 students per teacher (World Bank, 2018b). In crisis and conflict-affected settings, these numbers are likely even higher. For refugee-hosting schools in Uganda, the pupil-teacher ratio at primary schools is 85 students for one teacher, and for pre-primary 55 students per teacher. The class sizes at the pre-primary level in refugee-hosting schools are more than double those of non-refugee-hosting schools (Uganda Ministry of Education and Sports, 2018). Contextually appropriate actions will need to be taken to allow distancing. For some education systems that cannot support immediate investments in infrastructure, moving classes to outdoor spaces, creating shifts in the school day to reduce class sizes, or staggering start and end times for the school day provide possible solutions. Parents should receive adequate information on school reopening plans and health and safety measures to reassure them of their child's safety and gain their support, minimizing fears that may prevent children from returning to school.

Teachers and the education workforce are essential in the fight against the pandemic and must be treated as essential workers in response measures and school reopenings. This means ensuring that teachers are designated as a priority group for accessing COVID-19 testing, as well as vaccines and therapeutics when initial supplies are available. This requires that the education sector and its representatives be included in broader multi-sectoral COVID-19 response agendas, such as the Access to COVID-19 Tools (ACT) Accelerator—a global collaboration to ensure equitable distribution of tests, treatments, and vaccines to protect and promote human well-being, including child development. Dialogue with these coalitions is key, as the ACT Accelerator will inform and influence global and national principles. Independent guidance from WHO's Strategic Advisory Group of Experts on Immunization has identified teachers as integral to protect the continuing functioning of essential public services.

In addition to priority access to COVID-19 testing and vaccines, broader measures to ensure physical and mental health and well-being should be a top priority given that teachers and other education workers are at risk – they have to staff schools, reach out to parents and communities, and provide instruction and support to children of essential workers and vulnerable populations, including socio-emotional support (UNESCO & ILO, 2020). This means first ensuring their labor rights to decent work and adequate and timely pay. Further examples include access to healthcare and support structures for vulnerable staff, such as allowing teachers who are at high risk to teach remotely where possible (Education International, 2020). Measures should consider gender dimensions of school reopening (UNESCO et al., 2020a). For example, understanding

and planning for teachers' childcare responsibilities should consider that female teachers may be disproportionately affected given the gendered division of household labor (ILO, 2020; UNFPA, 2020). Clear conditions must be agreed for when schools may need to be closed again for the safety of students and the education workforce. Teachers and the education workforce will need professional development and capacity building to ensure they have the knowledge, skills, and strategies to take all possible measures to reopen safely.

Support all children to return to school

Photo by Asian Development Bank/Xaykhame Manilasit

Clear communication and inclusive policies are needed to get children back into schools. After many months spent at home there will be significant barriers for some children to return to school. Some groups such as adolescent girls, refugee children, and children with disabilities are at particularly high risk of not returning. Without targeted interventions, an estimated 7 million students across primary and secondary schools worldwide could drop out due to income shocks related to COVID-19 (Azevedo et al., 2020). Prolonged school closures due to COVID-19 put previously enrolled children living with disabilities at greater risk of not returning due to parental fear for their health and safety, and lost household livelihoods (World Bank, 2020d). Previous crises suggest that girls may face additional barriers to returning to school, due to poverty, unplanned pregnancy, and early marriage. For example, the re-enrollment of girls in Sierra Leone following the Ebola crisis was initially negatively affected by policies that did not allow visibly pregnant girls to return (Bandiera et al., 2019) despite the fact that in some communities, teen pregnancy rose by nearly 65 percent (UNDP, 2015). There are still 24 African countries that lack a re-entry policy or law to uphold the right to education for pregnant girls (Human Rights Watch, 2018). Yet most countries have not established plans to monitor re-enrollment of students or conduct outreach to re-enroll previously enrolled students. Even fewer have established mechanisms to track the number of girls not returning to school, and outreach to children who were out of school even before COVID-19 was rarely reported as part of national school reopening responses (Nugroho et al., 2020). Governments will need to communicate clearly the plans regarding reopening including providing information on COVID-19 risks and mitigation strategies (Warren & Wagner, 2020). Messages about the advantages to education, particularly for marginalized groups, can be a powerful way to get more children back into school (Nguyen, 2008).

Targeted support can ensure marginalized children return. As the COVID-19 crisis plunges more people into extreme poverty, it may be difficult for households to afford to send children to school due both to expenses (e.g. for uniforms, books, etc.) and the potential loss of earnings from children who are able to work. The ILO & UNICEF (2020) identify closed schools as one cause of increased child labor during the pandemic. Older children, who can find jobs, may be less likely to return to school, and children of families who have been affected most by the pandemic may be more likely to engage in informal, often dangerous, work. As discussed above, provision of school meals can be an important incentive to offset the costs to families of sending children to school. Governments may also wish to consider reducing and abolishing school fees to encourage stu-

dents to return (Hallgarten, 2020). Finally, cash transfer schemes, either conditional or unconditional, can be important tools to enable the most marginalized children—particularly girls—to return to school (Cristescu, 2019; Baird et al., 2019). See also Action Area 5 for additional information on targeted financing to households.

Provide vital services

In addition to physical health, education systems must also respond to students' and teachers' socio-emotional needs and provide adequate psychosocial support. In the midst of school closures, children may have been exposed to violence in their homes and communities, particularly as a result of economic insecurity and poverty-related stress (UNICEF, forthcoming, a) and under quarantine conditions may have been unable to escape cycles of violence and receive adequate care. These traumas could impede their ability to make learning progress without adequate attention. Evidence from the Ebola outbreaks shows that school closures led to declines in countries' child protection scores (UNICEF, forthcoming, a). The provision of psychosocial support has been a key pillar in response plans for countries affected by crisis and conflict. In Palestine, training provided to teachers and parents to support children in managing traumatic stress has shown impacts for child well-being (Shah, 2017). Attention to the psychosocial and socio-emotional needs of teachers is also critical, as they are often the main adult supporting student well-being**.** Teachers' emotions and stress levels have been found to influence those of students and other teachers. Teacher well-being has been linked not only to teachers' physical health, but also to stability in schools and to teaching effectiveness and student achievement (Becker et al., 2014; Jennings & Greenberg, 2009). Those designing psychosocial support should follow good practice guidelines—for example the INEE's guidance notes on psychosocial support (INEE, 2018) to ensure the support has maximum positive impact and avoids the risk of causing harm (Wessells, 2008).

In order to protect children's nutrition and provide incentives for children to return to school, school meals for the most vulnerable children must be restored. School meals programs can address multiple forms of malnutrition, including reducing anemia in primary school-aged children and adolescent girls, through the provision of healthy, balanced meals and snacks (Shrestha et al., 2020; Adelman et al., 2019). Feeding programs have a strong impact on equity and inclusion in education (Mundy et al., 2019). As the world's largest safety net, school feeding programs also reduce vulnerability and boost family incomes, especially in times of crisis: the value of meals in school is equivalent to about 10 percent of a household's income, per child, which can add to substantial savings for families with several children in school (Bundy et al., 2018). School meals based on local food sources can promote more diversified local dietary habits and inclusion of more fresh foods, helping to address increasing overweight and obesity issues among school children (Fernandes et al., 2016), while enhancing local economic development and smallholder farmers' access and integration into markets (Hunter et al., 2017). Over 70 countries have made efforts to continue supporting children's access to nutritious meals through take-home rations, vouchers, or cash transfers during school closures and school feeding programs must be urgently restored upon reopening (Box 2).

Schools are also a key location for delivery of health interventions and school-based or school-linked health services already exist in at least 102 countries (Baltag et al., 2015). With more than 90 percent of primary-school-age children enrolled in school globally, they have the potential to reach over 600 million learners (UIS, 2019). However, it must be cautioned that education facilities should not be used as health centers or quarantine centers amidst COVID-19 (UNICEF, WHO, & IFRC, 2020).

Ensure close coordination with the education workforce and across other sectors

All actions will require coordination and dialogue with the education workforce. Measures taken around organizing the workforce in the response to and recovery from the crisis should involve dialogue with teachers and their representative organizations, both private and public, (Education International, 2020) as well as with roles beyond teachers— such as school leaders, district officials, and education support personnel through their representative organizations.

Box 2: Coordinated efforts to restore school children's access to daily meals

More than 70 countries have adapted their school feeding programs to continue supporting children amidst school closures. Around 6.9 million children in 45 low-income countries have been reached since the onset of the crisis with take-home rations by governments with support from the World Food Programme, UNICEF, and other partners (WFP & UNICEF, 2020). As schools reopen, school health and nutrition interventions are more important than ever because they address child hunger, provide powerful incentives for parents to re-enroll children in school, and increase retention rates.

Côte d'Ivoire, for example, has reached more than 130,000 children with school meals since reopening its schools in May. Additional cash transfers have been provided to around 900 of the poorest households as an extra incentive for parents to send children back to school, particularly girls. The government has adopted new protocols to ensure the safety of school feeding operations, including distributing personal protective equipment to schools, staggering mealtimes, and using outdoor spaces to safely distribute meals to children.

Special consideration should be taken to ensure women's participation in decisions on crisis response and school reopening. The fact that women make up an overwhelming proportion of teachers in most countries is well-known (Commonwealth Secretariat & UNESCO, 2011), but less attention is paid to women's participation in education leadership, which typically decreases at higher levels (European Commission et al., 2013). For example, in Rwanda, only 30 percent of primary and 19 percent of secondary school principals were women (USAID, 2014). Women also tend to be under-represented on school management committees that shape decisions on school personnel, curricula, and other critical issues (Barrera-Osorio et al., 2009; Bruns et al., 2011; Demas & Arcia, 2015). Even when they do hold positions on school management committees, women tend to be assigned to social and welfare related roles and not to executive or financial decision-making roles (UNESCO, 2018b).

In addition, all health and safety efforts will require close coordination between the education sector and the health and social service sectors and sustained, collaborative investment. For example, close coordination with child protection services is essential for identifying and mitigating risks around disease control and school reopening measures that do not consider the special needs of learners with disabilities or the vulnerabilities of women and girls (INEE, 2020). However, there is currently very limited guidance on investing and coordinating—such as sharing data and evidence—across sectors. Much more collaborative work will be needed in the future to build more resilient systems.

☑ Actions to safely reopen schools and deliver vital services to children

IMMEDIATE ACTIONS

- All levels of government to take all possible measures to **reopen schools safely as soon as possible** based on balanced and contextualized analysis that considers international and national safety guidelines and dialogue with the education workforce and their representative organizations. Measures should be taken to ensure women's participation in dialogue and decision-making. Taking all possible measures to reopen safely includes upgrading hygiene services, implementing physical distancing measures, and ensuring the needs of children and members of the workforce with disabilities, refugee children, and girls are explicitly considered and that policies do not prohibit pregnant girls or mothers from returning to school.
- Governments, donors, agencies and civil society to **ensure that all children, particularly the most marginalized, are able to return to school** through the roll-out of communications campaigns, scaling up school meals, and targeted cash transfers.
- School leaders, teachers and other members of the education workforce (through their representative organizations) to **actively participate in planning and preparing for school reopenings**, prioritizing their students' and their own health and well-being needs.
- National governments to **treat the education workforce as frontline workers** ensuring their safety; physical and mental well-being; labor rights, including decent work and regular and timely pay, whether they are in the public or private sector; and capacity building so they can support safe school reopening. Measures should consider gendered dimensions of school closures and reopening.
- Country governments and international organizations – working with partners in the ACT Accelerator, including WHO, GAVI, and CEPI as conveners of the COVID-19 Vaccine Global Access (COVAX) Facility – to **advocate for teachers and the education workforce to be treated as essential workers,** initiating dialogue with multi-sectoral coalitions to ensure teachers are included in priority access to COVID-19 testing, treatment, and vaccines. National governments to monitor school reopenings, including tracking COVID-19 cases for students and the education workforce, and ensuring a decision model is in place for reclosing and reopening schools as needed where transmission rates increase in accordance with international human rights (e.g. right to privacy, right to education) and standards.
- All levels of governments to **ensure vital services** such as school feeding, WASH, physical and mental health services, and child protection services are delivered as soon as schools are reopened, especially to the most marginalized.

MID- TO LONGER-TERM ACTIONS

- All levels of governments and development partners to **increase collaboration and coordination** – in financing, data, and research across the health, social, and education sectors, in accordance with data protection norms (UN, 2018), to maximize the safety and health and provide holistic support for all students and the education workforce.

ACTION AREA 2

▶ Make education inclusive, engaging, and adaptive

Education systems which are aligned to learning will benefit children who are most left behind, as the focus shifts from input-based results (such as enrollment or attendance), to learning outcomes for all students. To achieve learning outcomes there is a need to shift from didactic pedagogy and rote learning to inclusive, engaging, and adaptive teaching. Through measurement, a system must also continuously learn from itself to deliver its core priority of student learning. In the immediate post-pandemic recovery period, education systems must systematically measure student learning and deliver engaging instruction which is aligned to the learning levels and needs of students. The power of measurement can then be further leveraged to align stakeholders towards a shared learning agenda.

Support inclusive, engaging, and adaptive teaching

Our aim is high-quality education which is inclusive for all learners. At present, teaching in low- and middle-income countries is generally highly didactic with little communication between teachers and students (Molina et al., 2018; Newman et al., 2020). More interactive teaching will improve development of basic skills such as literacy and numeracy, develop socio-emotional and 21st century skills, and be significantly more engaging for children. The action areas in this paper aim to create education systems which are inclusive of all children including children with disabilities. Children with disabilities have the right to the same education as other children. In addition, taking an approach which includes learners with a range of different needs is beneficial to all. The Universal Design for Learning Framework sets out approaches to teaching which maximize learning (Rose & Meyer, 2006). It does not advocate that teachers must teach each child in a hyper-individualized way but instead it aims to make education more engaging and accessible to all learners by using a variety of teaching approaches (Sanger, 2020).

Pedagogical approaches to building literacy and numeracy. Given the scale of the learning crisis, particular attention will need to be paid to approaches to building foundational skills. Foundational literacy is predicated on strong oral language skills and is best established in the native language first (Alidou et al., 2006; Nag et al., 2014; Walter, 2011). Community roles, such as volunteer learning assistants acting as part of teacher-led learning teams, can help with mother-tongue instruction to support foundational learning while interventions targeted at parents can help build strong oral language skills (Hoff, 2013; Roy & Chiat, 2013; see also Action Area 3). Where classes are taught in languages which are not the mother-tongue for some children, it can be helpful for teachers to switch languages to explain concepts in an alternative language. Both the time taken to master literacy and the approach used to build decoding skills depends on the language of instructions; so, for example syllable processing is particularly important for learning Kannada, phoneme processing for Bahasa Indonesia, and morphological knowledge for Turkish (Gove & Wetterberg, 2011; Nag et al., 2014). The predominance of rote learning in many low- and middle-income countries limits a focus on understanding, building connection, and making inferences and thus interventions that shift practice to more engaging and interactive approaches that enable children to make links

to their experience are critical (Akyeampong et al., 2011; Nag et al., 2014). Approaches to building foundational skills which have focused on individual inputs or short-term training have generally not been successful (Global Education Evidence Advisory Panel, forthcoming). Instead, programs need to take a holistic approach to create the conditions that enable learning. For example, USAID, which has focused on basic literacy as a major priority in its education programs for many years, has developed the Reading Matters Framework which focuses on mentors, administrators, teachers, texts, extra practice, regular assessment, and standards (USAID, 2019).

Photo by GPE/Alexandra Humme

Socio-emotional and 21st century skills can be built from a young age (Jensen et al., 2019; Dowd & Thomsen, forthcoming). To focus on children's academic achievement, parents and teachers sometimes feel they should focus on academic pursuits rather than fun and play (Doepke & Zilibotti, 2019; Wolf et al., 2019). However, emerging evidence reveals that play is crucial for early brain development and that it is the major way in which young children learn (Whitebread et al., 2017; Yogman et al., 2018). Facilitating play can be a powerful way to build foundational learning in particular the foundational socio-emotional skills which children need to be able to learn (OECD, 2017; Sanchez Puerta et al., 2016). As well as providing the necessary foundations for further learning, socio-emotional skills will be particularly vital at this time to help children, particularly the most vulnerable, deal with the psychological impacts of COVID-19 (Dalton et al., 2020; Jiao et al., 2020; Moroni et al., 2020; Norwegian Refugee Council 2020; OECD, 2017).

Policymakers who wish to shift pedagogical practice should recognize the challenges but also the opportunities. More interactive and inclusive pedagogy is crucial for developing strong foundational skills; but, it will also be important throughout education systems to meet policymakers' ambition of developing "skills for the future". Long-term changes will require a combination of reformed initial teacher education and continuous professional development to ensure that trainee teachers are exposed to interactive and inclusive pedagogy from the outset of their career and given opportunities for iterative cycles of practicing and receiving constructive feedback. There is evidence that top-down approaches to changing pedagogy have not achieved the desired impact due to resistance from teachers and parents (Brinkmann, 2019; You, 2019). Therefore, genuine change will need to include consultative processes to involving existing teachers, teacher trainers, parents, community leaders, and children. Policymakers should not underestimate the challenge of shifting pedagogy and will need to ensure that lessons are learned from previous attempts (Dowd & Thomsen, forthcoming; Mtika & Gates, 2010; Schweisfurth, 2013; Weimer, 2013). However, this does not mean that change is impossible, and the current crisis could be a huge opportunity to rethink the type of education that all children deserve.

Use differentiated instruction to get all children learning

Classroom instruction is most effective when it is aligned with children's current learning levels. This principle is supported by a wide range of evidence across academic disciplines and education systems. For example, cognitive science research demonstrates that the human brain incorporates new knowledge on the basis of prior knowledge (Kirschner et al., 2006; National Academies of Sciences, Engineering, and Medicine, 2018). Additionally, research in education and pedagogy has

long emphasized the importance of aligning instruction with students' developmental needs, whether under the banner of scaffolding (e.g. Wood et al., 1976), differentiation (e.g. Tomlinson et al., 2003), mastery learning (e.g. Kulik et al., 1990), or the zone of proximal development (Vygotsky, 1978).

While approaches to aligning instruction to children's learning levels vary, such approaches often implicitly share a common set of principles. These principles include prioritizing all children mastering foundational skills (including literacy, numeracy, and socio-emotional learning); assessing children's learning levels; adapting instruction to more engaging approaches and aligning with these learning levels; and adapting the approach to the opportunities and constraints of the context (Hwa et al., forthcoming). These principles take many forms in practice. Examples from low- and middle-income countries include: refocusing the national curriculum for the early primary years to prioritize the foundational literacy and numeracy (e.g. Tanzania's "3Rs" reform; Mbiti & Rodriguez-Segura, forthcoming); supporting teachers to better meet the learning needs of their students by providing them with well-aligned instructional materials and teacher training (e.g. Tusome in Kenya; Piper et al., 2018a); offering catch-up instruction to small groups of children who lack the foundational learning that their more privileged peers have mastered (e.g. Teaching at the Right Level in India and several African countries; Banerjee et al., 2017); and teaching a condensed version of the curriculum to enable out-of-school children to transition back to mainstream education (e.g. Complementary Basic Education in Ghana; Akyeampong et al., 2019). In short, instruction should be adaptive not only to align with children's current learning needs at the classroom level, but also to align with system-level challenges, constraints, and opportunities.

In the current global context, efforts that apply principles of adaptive learning are urgently needed to mitigate learning loss as students return to school. With wide variation in access to learning opportunities amidst school closures, COVID-19 threatens to deepen existing inequities in learning across and within countries, making learning levels even more varied upon students' return to school (UNICEF, 2020b). For the most marginalized learners, learning losses may be even more significant. More than 100 countries globally have reported that they intend to introduce remedial programs as part of their school reopening plans, which could include additional before- or after-school programs, increasing classroom learning time, or leveraging differentiated instruction approaches (Nugroho et al., 2020). Using differentiated instruction to align with students' learning levels, rather than by their age or grade level, is a proven way to help students master essential skills, especially in literacy and numeracy and making instruction more engaging and interactive builds vital socio-emotional skills (Global Education Evidence Advisory Panel, forthcoming). These foundational skills are often the most difficult to recover and can result in incalculable damage to children's accumulated learning and lifelong opportunities (Alban et al., 2020). Community roles can provide additional support to teachers for differentiated instruction programs (Duflo et al., 2020; J-PAL, 2006) and facilitate closer ties among schools, families, and communities that are critical for student achievement (Deforges & Abouchaar, 2003; Naylor et al., 2019) (see also Action Area 3).

Differentiated instruction approaches, such as Pratham's Teaching at the Right Level (TaRL) method, support children to master foundational skills in literacy and numeracy while using approaches which also develop key socio-emotional skills. The approach begins by measuring children's learning levels using a simple, often localized assessment tool and grouping children for a fixed amount of time based on their learning level rather than their age or grade, helping children to progress quickly in mastering skills by using a combination of engaging, fun, and level-appropriate activities. Trained instructors focus on foundational skills through engaging teaching and learning activities and classroom strategies, and continually track children's progress through simple formative assessments (such as ASER, ICAN, and Uwezo). As children progress, they move across groups and levels.

Differentiated instruction must be designed locally and implemented carefully to ensure it drives equity and in particular does not stigmatize children with disabilities. Effective differentiated instruction approaches have been delivered through a variety of models. The design of differentiated instruction will need to be locally driven in consultation with teachers and their representative organizations— however, important principles can be learned from the global evidence base. Differentiated instruction is particularly needed in contexts where children are learning below grade level, where there is large variation in learning levels within the same classroom, or where incentive or accountability structures make it difficult for teachers to break free of the prescribed curriculum to support students who are lagging behind. This means that while there may not be appropriate interventions in most high-income countries, in low- or middle-income countries where learning levels are very low, they may be critically important. It is crucial that such an approach is implemented in a way that reduces rather than exacerbates inequality. Streaming children into ability groups permanently can have negative impacts on equity and goes against the principle of inclusive education. Thus, differentiated instruction should be carried out with the primary goal of helping children who are behind the level of instruction to catch up. Such programs can be conducted after school, during summer holidays, or during short periods within the school day. While existing teaching approaches are most likely to benefit the children at the top of the class, the aim of differentiated instruction is to ensure that those who are most left behind, including children with disabilities, are also receiving instruction which meets their needs. By focusing attention on these children during these targeted sessions, they can be assisted to catch up so that they can benefit more from all the teaching offered.

Differentiated instruction approaches positively impact students' acquisition of literacy and numeracy skills (Banerjee et al., 2007; Banerjee et al., 2010; Banerjee et al., 2017; Cabezas et al., 2011; Cook et al., 2014; Cook et al., 2015; Duflo et al., 2011; Duflo et al., 2015b; Duflo et al., 2020; Lakshminarayana et al., 2013; Muralidharan et al., 2019; Saavedra et al., 2017). In the COVID-19 context, differentiated instruction can be used as an effective remediation approach, helping learners to catch up on lost learning in short periods of time. However, given that in many low- and middle-income countries the majority of children were not learning even before the pandemic, the approach could do much more than just overcome learning losses directly caused by COVID-19. Through TaRL in India, the number of children who could read a simple paragraph doubled in just 50 days (Banerjee et al., 2017). A similar program in Botswana shows that the percentage of innumerate students dropped from 30 percent to 4 percent and nearly 90 percent of students improved at least one skill level in just a single school term (Young 1ove, 2019). In northern Nigeria, a TaRL program led to a 31 percent increase in the number of students able to read a full paragraph and a 48 percent increase in the number of students proficient in subtraction (Nugroho et al., 2020; UNICEF, 2019b). Evidence from TaRL in Zambia also shows notable improvements in students' learning outcomes, with a 21-percentage point increase in students reading with basic proficiency (from 35 percent at baseline to 56 percent at endline) and a 24 percentage point increase in students with basic proficiency in subtraction (from 27 percent at baseline to 51 percent at endline) (Vromant et al., forthcoming). Evidence from a range of contexts shows that TaRL can deliver impressive learning gains for all children, including those who are most left behind (Banerjee et al., 2016). In contexts where all or almost all children are marginalized on a global scale, an approach which benefits all appears to be most suitable. In contexts where some are learning effectively while others are left behind, an approach which focuses purely on the most left behind may be more appropriate.

Preparing the education workforce to adopt differentiated instruction approaches. Differentiated instruction approaches are most effective when the education workforce, including teachers and school leaders and other members of learning teams such as trained facilitators, are adequately prepared and supported throughout implementation (Box 3). Evidence from India shows

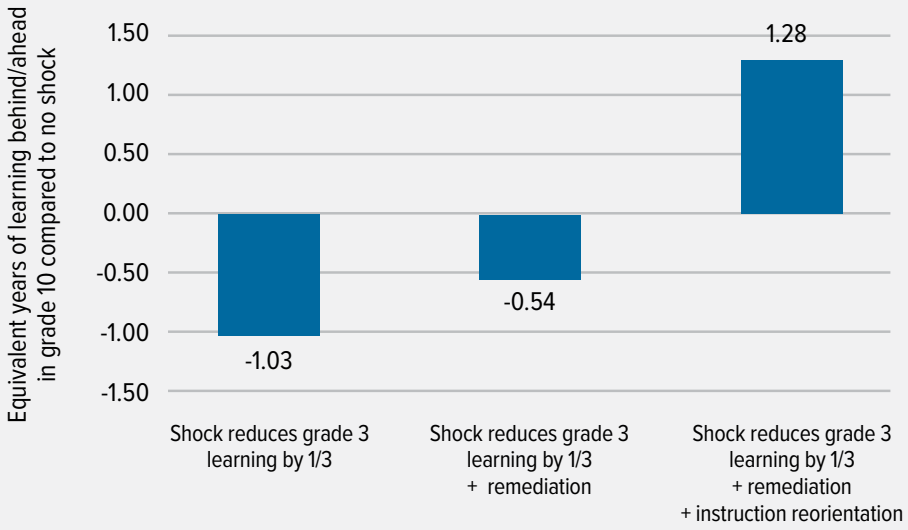
that mentoring and monitoring is critical to ensure that teachers feel supported by their supervisors when deviating from the regular prescribed curriculum to teach foundational skills (Banerjee et al., 2017). While differentiated instruction can be used effectively for short-term remediation, the principles of aligning instruction to children's current learning levels can be adopted as a broader pedagogical practice. To achieve this, teachers must be better supported through initial teacher education and continuous professional development in effective pedagogy related to formative assessment and aligning instruction to the level of the student (see also Action Area 3).

Box 3: Supporting teachers to use differentiated instruction to meet learners where they are

The Ministry of Education of Ghana, with support from Ghana Education Service, UNICEF, and Innovations for Poverty Action co-created and launched the STARS project during the 2018-2019 school year (Beg et al., 2020). STARS aimed to improve the implementation of differentiated instruction approaches by supporting school leadership and teachers through coaching and mentoring activities. Through STARS, classroom teachers from primary grades four through six assessed students with a simple tool in order to group them by their learning level. During the school day, for one hour each day, four days each week, over eight weeks of each school term, students were grouped and taught according to these levels through interactive whole-class, small group, and individual learning activities. Assessments of student learning progress were completed each term and, where appropriate, students were reassigned to higher levels according to their learning progress. A recent evaluation of the program shows that fidelity of implementation increased to 60 percent and student learning outcomes increased by around a third of a school year.

Differentiated instruction, in conjunction with short- and long-term curriculum changes, can accelerate learning progress. Effective remediation efforts immediately upon students' return to school could reduce long-term learning loss for students by half (Kaffenberger, 2020). However, condensing the curriculum, even in the shortterm, can help alleviate pressure teachers face to cover the curriculum and syllabus in preparation for national exams, and instead focus on helping students to master the foundational skills critical to continuing their learning. A condensed curriculum should center around priority learning objectives and key knowledge and skills that students need to achieve grade-level proficiency, rather than teaching all subject areas faster (Accelerated Education Working Group, 2020). A condensed curriculum should prioritize foundational skills in literacy and numeracy, while also embedding socio-emotional learning that supports students to develop skills for collaboration, communication, and coping, especially with possible traumas resulting from schooling disruptions. As national governments work towards identifying priority learning objectives, they should keep in mind knowledge and skills that students will need throughout their lives that are interdisciplinary, and used across multiple subject areas, and that are essential for students to master before being able to advance to the next level of instruction (Accelerated Education Working Group, 2020). Combining short-term remediation efforts with longer-term efforts, like large-scale curriculum reforms to match the pace of student learning, could not only fully mitigate the long-term learning loss of the COVID-related school closures, but could support students in achieving more than a year's worth of learning outcomes than they would have without COVID closures (Figure 8, Kaffenberger, 2020).

FIGURE 8 **Taking action now could mitigate learning loss**



Source: RISE Insight - Modeling the Long-Run Learning Impact of the COVID-19 Learning Shock: Actions to (More Than) Mitigate Loss

Long-term learning loss from COVID-19 school closures and mitigation strategies for the grade 3 cohort Kaffenberger (2020).

Align systems to the goal of learning

In the longer term, entire education systems need to be aligned with the goal of learning. Immediate efforts to ensure instruction is aligned with learning level could be extended to build back a better education system in the long term, with measurement as the first step in this process (World Bank, 2020b). The lack of capacity of many countries to measure learning outcomes, disaggregated for marginalized groups, and to track progress over time, holds back progress on learning (World Bank, 2018a). The efforts of the Global Alliance to Monitor Learning to prioritize and empower governments to measure learning should be built upon as more attention is brought to this critical input for policy action. Data can be a powerful political and motivational tool to wake up system actors to the learning crisis and realign them to priorities, particularly when focused on a few indicators which are easy to communicate and act upon (Crouch, 2020; USAID, 2016). The learning poverty indicator —which measures the share of children at late primary age who cannot read—is an example of a simple, easy to communicate indicator which can suit this purpose. It combines two core SDG indicators— out-of-school children and children attaining at least minimum proficiency (SDG 4.1.1b). To ensure that the power of data is leveraged, it is important for partners to support governments in aligning systems to learning by coalescing around a single or a few indicators of foundational learning, such as learning poverty.

CSOs can play a crucial role in highlighting the learning crisis and pushing for action. The Annual Status of Education Reports published in India and Pakistan demonstrate how citizen-led learning assessments can provide high-quality data which captures the attention of the media and policymakers (ASER, 2020; ASER Pakistan, 2020). The People's Action for Learning (PAL) Network has recently developed the International Common Assessment of Numeracy—an assessment tool for

citizen-led assessment of basic mathematics skills available in 11 languages (PAL Network, 2020). The Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA) are oral assessment frameworks which have been used in many countries around the world both by governments and by CSOs to understand the learning crisis and spur policymakers into action on foundational skills (USAID, 2016). It is important to note that assessments of basic skills such as literacy and numeracy should not be seen as indications that these skills are all that matter; while these basic skills are extremely important, they are also good indicators of a far greater range of skills and, as outlined above, interventions to boost literacy and numeracy are most effective if they use interactive pedagogical approaches which will also build socio-emotional and 21st century skills.

Photo by UN Photo/Milton Grant

Governments will need to build local ecosystems of research and development to measure learning and ensure that governments, district offices, and schools have data that is timely, relevant, and actionable. Learning data can then be used to improve policy implementation, iterating on and improving interventions to enhance efficacy, monitor progress, and inform action from the school level up to the regional and national levels. Policy and reforms should be based on evidence of where student learning currently stands, what works for improving learning, and how to replicate what works at scale (see Action Area 7). This is also essential to inform programming and spending equity. Data can also be used to identify new solutions at a local level which are easily scalable and cost-effective. Governments will need to prioritize data on learning at a classroom level as well as on comparative international assessments. Corresponding investments must be made to build the appetite and ability of the bureaucracy and schools to use the information, and CSOs and other sector actors to amplify data, translate it for local communities and citizens, and maintain a demand for action on system weaknesses made apparent by learning data. There is potential to harness the support for EdTech to maximize progress in this area (see Action Area 4).

Gradually shift curricula to support achieving all of the SDGs. While the immediate focus for countries facing severe learning crises will need to be aligning the system with foundational learning, our goal in supporting education is much broader than simply achieving foundational skills; we aim to enable learners to become lifelong learners who can fulfill their potential to contribute to a better world. Across many of the world's education systems, curriculum remains overly ambitious, posing a key barrier to learning progress (Beatty & Pritchett, 2015; Bhattacharjea et al., 2011; Crouch & Korda, 2009; Dubeck et al. 2012; Korda & Piper, 2011; Piper, 2009; World Bank, 2005). In many countries, curriculum review and reform are undertaken at the national level every seven to ten years; yet the content included in curriculum has remained relatively unchanged since education institutions were first established (Fadel et al., 2015). Governments who are undertaking curricula review have the opportunity to align curricula with their own development priorities, identifying

the critical skills, competencies, and attitudes students should acquire as they complete schooling. This will require reaching out to and building partnerships with employers and with other development sectors to understand the needs of the labor market.

A broader coalition will be needed to drive change. The scale of change required to align education systems with learning will only be politically feasible if there are strong and sustained calls for governments to focus on education as a key driver of sustainable development. While many sectors acknowledge the key role that education plays in driving their agenda, awareness of the scale of the crisis in education is low.[5] There is a need to build the case that education can be a key tool to drive other sectors' priorities, but that to achieve this, the education sector urgently needs support. Other sectors can lend their voice to the calls to align the system with learning. They can also play an important role in directly supporting educational interventions which help drive their sectoral goals. These interventions can provide valuable enrichment of educational provision and have substantial impacts on achieving the SDGs (Box 4).

Box 4: Engaging youth through non-formal education to drive global sustainability

Through the "Tide Turners Plastic Challenge Badge," the United Nations Environment Programme (UNEP 2020), together with partners such as the World Organization of the Scout Movement, Junior Achievement, and the World Association of Girl Guides and Girl Scouts, is working to educate youth on marine plastic pollution and how they can address it in their communities. Youth who complete all three levels of the program are well equipped with the knowledge needed to be leaders in their communities driving action on marine plastic pollution, one of the biggest environmental challenges facing the world.

Since February 2019, the program has been rolled out in 24 countries and engaged over 225,000 youth. Tide Turners Plastic Challenge is a key challenge of the Earth Tribe, a ground-breaking initiative that offers youth an opportunity to learn and act around key environmental issues aggregated on one platform. During 2020-2021, the Tide Turners project will be expanded into new countries and the generation of "Tide Turners" that have completed all levels of the badge will graduate to "Wave Makers" through a new digital and advocacy component built into the program.

[5] Consultations carried out with a range of development sectors in the process of developing this paper revealed low levels of awareness about the learning crisis.

☑ Actions to make education inclusive, engaging, and adaptive

IMMEDIATE ACTIONS

- Government agencies responsible for education workforce and curricula to **commit to driving inclusive, interactive, and adaptive pedagogy** and, with support from development partners, to adapt the system to ensure this is delivered (see also Action Area 3).
- All levels of governments, with support from development partners, to **support schools to execute simple, rapid assessments of all students' learning levels** upon their return to school and as regular practice and to urgently implement differentiated instruction to ensure all children achieve foundational learning.
- Governments globally to endorse and support the process led by UNESCO to **develop and adopt intermediate benchmarks for SDG indicators** as a key driver of the focus on learning.
- CSOs and development partners to build broad cross-sectoral coalitions **to gather and publicize learning outcome data**; to **amplify the urgent need to address the learning crisis** to the broader public, and to step in to **provide interventions** (through formal and/or non-formal education) to build critical skills and knowledge to contribute to the SDGs.

MID- TO LONGER-TERM ACTIONS

- All levels of governments, with support from development partners, and in consultation with employers to **perform analyses on alignment (or misalignment) of systems/stakeholders' incentives and related accountabilities;**[6] to **strengthen their data systems** and capacity to measure learning and access (disaggregated for marginalized groups); to **ensure that results are used** to improve the teaching and learning process; and to take advantage of upcoming cycles of reform to **reorient curricula and pedagogy** to build the knowledge and skills needed to drive sustainable development and meet the needs of the labor market.

[6] For example, using the recent methodology developed jointly by FCDO, forthcoming

ACTION AREA 3

▶ Strengthen the education workforce

Teachers are the single most important influence on learning outcomes, but they need to be supported to be able to effectively respond to the learning crisis. An effective teacher can make a major difference to a student's learning trajectory—increasing learning significantly and impacting long-term student well-being, future academic achievement, and economic outcomes (Chetty et al., 2014; Evans & Yuan, 2018; Hanushek et al., 2005; Hanushek et al., 2010). Several years of outstanding teaching may also improve equity, offsetting learning deficits of disadvantaged students (Parks & Hannum, 2001; Rivkin et al., 2005).

Other roles and relationships, such as school leadership, are also strongly associated with better educational outcomes. The education workforce consists of teachers and all people who work directly to support the provision of education to students in education systems (see Definition List for a fuller description). Specialist and complementary education support roles have been effective in reaching those left behind and enabling inclusion. District roles have been powerful in supporting teachers and leaders to improve their practice and sustain change and national level roles can use evidence to drive strategic investment and system change. Crisis response and recovery plans need to consider the potential of the broader education workforce.

Uphold the rights of the education workforce and engage them in decision-making

To ensure teaching and learning continues, it is critical that education systems uphold the labor and human rights of the workforce to decent work, support, and regular, adequate pay as set out in the ILO/UNESCO Recommendation concerning the Status of Teachers (1966) and the UNESCO Recommendation concerning the Status of Higher-Education Teaching Personnel (1997). The COVID-19 crisis has increased income and job security concerns for many teachers, especially private sector and contract teachers, due to massive, often long-term school closures. It is critical that teachers and all members of the workforce wherever they work—public and private sectors, community schools, refugee settings— continue to get paid adequate wages on time.

All actions taken must preserve the right of the education workforce to participate in decision-making through social and policy dialogue as well as other institutional mechanisms and formal practices (ILO & UNESCO, 1966). Engaging the workforce ensures their expertise and experience inform change. Social and policy dialogue requires a deliberate regulatory environment, funding, and institutional mechanisms to do so (ILO, 2012), such as social dialogue frameworks, governing bodies, and participation of the workforce in local education groups (UNESCO, 2018a). Many teacher unions have developed their own policy guidelines to ensure the safety of staff and students for school reopenings. These can be used in social dialogue with government or made available to union representatives and members to use at the school, local, or district level to demand occupational safety (Education International, 2020).

Increase qualified teachers, focus on more equitable allocation, and share existing expertise

Education systems must ensure there are enough effective teachers in the right places to meet growing demand and serve the most marginalized in light of the crisis and beyond. Evidence suggests that more qualified teachers often disproportionately work with more advantaged schools and privileged students, have smaller class sizes, and focus on later grades (OECD, 2018). Many interrelated factors drive shortage issues: inequitable allocation can lead to both shortages of qualified teachers in the most disadvantaged areas and a workforce that is not representative of the population it serves in terms of gender, ethnicity, indigeneity, and linguistic group. The workforce itself must be inclusive in terms of its composition, design, professional development, and career opportunities to promote inclusive and equitable education for students. Where the majority of teachers are untrained, such as in refugee settings which are not part of the national education system, there is an opportunity to build those teachers into national approaches, significantly improving quality for some of the most marginalized children.

Box 5: Providing pathways to teaching qualification for local female learning assistants

The Sierra Leone GATE program supports young women who show an interest in becoming teachers, but do not have the required qualifications or funding needed to enter teacher education programs (Martin et al., 2017; Naylor et al., 2019). Women participate in a bridging program, where they become learning assistants in a local primary school and participate in a distance learning program in mathematics and English supported by a tutor. Highly interactive study materials guide their participation in the program. After 12-18 months, learning assistants take the entrance exam for the Teacher Training College. Those who are successful continue their school placements whilst studying on the Teachers' Certificate Distance program to become qualified primary school teachers. The program has already supported over 750 learning assistants, who have been shown to make a difference to the quality of rural schools and the experiences of children. They promote learning and aspiration, particularly for female pupils.

Incentives to attract and retain teachers in underserved areas, especially those typically in short supply like female or science teachers, can be effective in the short term to improve education for poor and marginalized children. In Sierra Leone, only 27 percent of teachers at primary level and 14 percent at secondary level are female (UIS, 2016). This has immediate consequences for girls' enrollment, retention, and achievement as well as the school culture and longer-term impact on girls' aspirations, safety in school, and job prospects (Evans & Le Nestor, 2019; Kirk, 2006) Strategies to encourage female teachers to accept positions in rural or underserved areas include career guarantees for accompanying spouses, housing and transportation, and provision of local in-situ training (Mulkeen et al., 2017). In 2016, the Philippines, with support from UNICEF's Data Must Speak Initiative, developed a hardship index in collaboration with teachers to encourage deployment and retainment of experienced teachers in disadvantaged schools. The index determines levels of special allowances for teachers who are teaching in difficult contexts by combining factors of hardship, including travel times, internet access, and municipality poverty levels (Jarousse et al., 2019). Some countries have recruited teachers directly from underserved areas or provided alternative pathways to qualification for unqualified teachers, training them in schools supported by distance learning (Box 5; Mukeredzi et al., 2015; Mulkeen et al., 2017; UNESCO, 2014).

Using better data in smarter ways can drive more equitable allocation and improve the quality and availability of teachers in the most marginalized communities. Supporting the collection and analysis of data is one of the most promising ways EdTech can promote inclusive education (see also Action Area 4). Better data can provide critical information to make smarter decisions on where more qualified teachers or leaders are needed and where support and resources need to be prioritized. For example, despite initially lacking theit needed to focus on the most underserved communities, by transitioning to a digital census in just ten weeks. This was realized through strong commitment from the Ministry of Finance to prioritize education, and the result included accurate digitized data on enrollment and infrastructure data for all 11,000 schools in the country, including pictures, GPS coordinates, data on absenteeism, and the development of a teacher database (Namit & Mai, 2019).

Strategic use of geographic information systems data and technology can be used to identify how specialist expertise can be shared across schools (World Bank, 2016; Mackintosh et al., 2020b). For example, in Sierra Leone, the use of geographic information systems data to map distances between schools showed that up to a third of schools lacking a subject specialist could be jointly served by specialists at nearby schools with space in their timetable (Mackintosh et al., 2020a). Broadcasting technology can also help with sharing subject or pedagogical specialists across schools remotely. The MGCubed project in Ghana delivered lessons by expert teachers via video to rural populations, which led to improved English and mathematics scores and reduced out-of-school rates (Johnston & Ksoll, 2017).

Photo by Dominic Chavez/World Bank

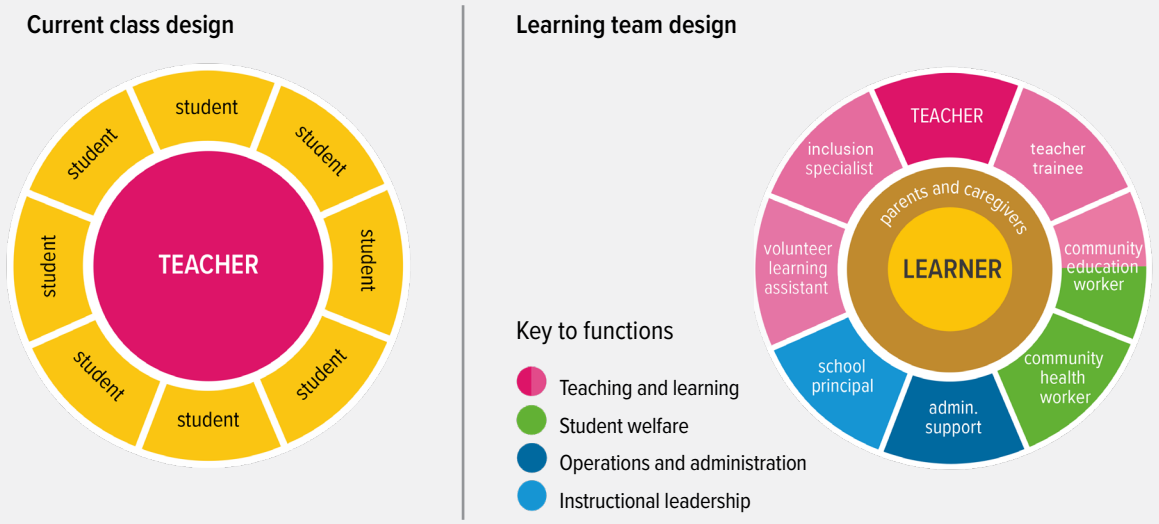
Create student-centered learning teams, drawing on the broader education workforce, community, and professionals from other sectors

Creating learning teams can provide teachers with more support during the crisis response, maintain continuity of learning during school closures, engage parents and the community, and target the inclusion of marginalized groups to achieve foundational learning. The COVID-19 crisis has highlighted that teachers cannot continue to work alone. Teachers, supported by school leaders, have been working closely with parents, caregivers, and community members, including those from CSOs, to ensure learning continues and no child is left behind. Understanding how different roles can work collaboratively in a team to support quality, equitable, and inclusive ed-

ucation is the first step toward creating learning teams that can respond to the crisis (Education Commission, 2019). Learning teams will be different in every context and can include trainee teachers, specialist teaching roles, education support personnel, parents and the local community, and professionals from other sectors (Figure 9). No matter the combination of roles, the team should be focused on learners and their immediate needs. A few examples of potential roles and their relationship in a learning team are outlined below.

FIGURE 9 **Moving Towards Learning Teams**

Learning Teams Would Differ by Context



Note: *Figure 9 shows how a learning team design represents a shift from current class design where teachers tend to be at the center undertaking many different roles to a design with learners at the center supported by a teacher-led collaborative team of professionals and other adults which collectively focus on improving a wide range of education outcomes and inclusion of all students (Education Commission, 2019). Parents and caregivers are shown surrounding learners and touching each of the learning team roles to illustrate the critical role parents play in supporting all student outcomes – from learning to welfare – and their potential interactions with the entire learning team.*

Supporting teachers with existing teaching and learning roles— including trainee teachers, learning support staff, and specialist teachers—in teams has multiple immediate benefits. For example, including trainee teachers as part of learning teams at school level can provide better initial preparation for them, as studies show it is crucial for future teachers to gain practical experience in classrooms during their pre-service education (Bramwell et al., 2014). It can also support teachers by freeing them of tasks that do not necessarily require a qualified teacher but have a positive impact on learning outcomes. Teaming the most experienced and strongest teachers and those with specialist skills with trainee teachers, less experienced teachers, and learning support staff can help share expertise within schools and support peer learning (Arizona State University, 2020; Basile, 2020).

Box 6: Community health workers facilitate remote learning for girls

In Kenya, Education Development Trust (EDT) is working with an extended "learning team" of community health volunteers, parents, teachers, and instructional coaches as part of distance learning support for marginalized girls, especially those in rural areas who cannot attend school, lack access to mobile resources, or cannot receive radio broadcasts during the COVID-19 crisis (Amenya et al., forthcoming) as part of the larger UKAid-funded Girls' Education Challenge Transition program, *Wasichana Wetu Wafaulu* (Let Our Girls Succeed).

Recent student assessment data is used to design targeted learning tutorials to accelerate learning gains. A network of community health volunteers delivers hard copies of learning materials to households as part of their health circuits and gathers intelligence on any risks or challenges girls are facing to feed back to program staff. Parents or literate adults use marking guides to provide the first round of feedback to students in the household. The health volunteers deliver the transcripts back to schools, and a team of two dedicated teachers and one coach per school cluster moderates the marked transcripts, which are returned to students in the next delivery cycle.

Initial research findings show that 90 percent of girls in rural areas are achieving at least two hours of learning per day. Community health workers play a key role in supporting this learning continuity: 91 percent of them are encouraging girls to access radio/TV lessons, 67 percent are encouraging parents to allow girls to access the lessons, and 78 percent are undertaking household visits to motivate girls to continue to study privately with the tutorials delivered.

There are a variety of community education worker roles, often provided by local CSOs, that have had a positive impact on foundational learning, inclusion, welfare, and well-being Several studies find that remedial instruction programs have strong impacts on learning outcomes when implemented by members of the community with training, particularly in instances where student learning levels are low (Duflo, et al., 2020; J-PAL, 2006; see Action Area 2). Community roles can also provide additional support to teachers and facilitate closer ties among schools, families, and communities that are critical for student achievement (Deforges & Abouchaar, 2003; Naylor et al., 2019). One example is Camfed's Learner Guides who act as the missing link between school and community, with a particular focus on health and welfare issues. They have demonstrated positive impact on girls' confidence, retention, engagement, and math and English scores (Camfed, 2017). Identifying members of the community and parents as "community education workers" could mitigate the impact of repeated closures and support important response activities such as outreach to the most vulnerable children to get them back into school or providing them with learning resources; acting as a multi-way communication focal point with schools; liaising with other community-based roles such as community health workers to ensure health and other needs are met; and as already mentioned, providing remedial learning support under the guidance of a qualified teacher (Box 6). Preparation and training for community education worker roles need to be planned for as well as supported and supervised by qualified teachers and coordinated with civil society and the health and social sectors.

Box 7: Harnessing education support roles and the community to promote inclusive education

The Sierra Leone GATE program (see Box 5) also strongly supports inclusion, with a focus on marginalized girls and children with disabilities (Jigsaw Consulting, 2020). learning assistants are trained on inclusive education principles and support inclusion within their classrooms and communities. The program is piloting itinerant specialist teachers who are given additional training and move from school to school to support classroom teachers and learning assistants with children who have specific learning needs or accommodations to be able to access education. The program also utilizes over 200 "community-based rehab volunteers" who are given training to support identification of children with disabilities at the community level and liaise with families to encourage and support them to enroll and keep children with disabilities in school. These volunteers are chosen by the community and often have a disability themselves.

Learning team partnerships across sectors and with the wider community—youth organizations, higher education, cultural institutions, and the private sector for example—can support broader education goals, such as socio-emotional and 21st century skills and the transition to further education and work. For example, Educate! in Uganda draws on entrepreneurs and employees from local businesses to teach the entrepreneurship curriculum alongside teachers in schools, which has led to positive impact on student employment and earnings (Robinson & Winthrop, 2016). It is important to note that when involving support from outside the school, additional safeguarding requirements may be needed.

Learning teams can drive longer-term transformation. Actions taken toward creating learning teams in response to the crisis can help lay the foundations essential for longer-term transformation of the workforce. For example, they can help the shift to a more student-centered system with the involvement of a broader, more inclusive, and team-based workforce. To help make that shift, diagnosing key challenges and promising practices, identifying and tracking key indicators on the workforce response to the crisis, and collecting evidence on effective learning team strategies could support more systemic workforce reform in the future.

Provide proven and collaborative professional development focused on learning

Professional development over the next two years needs to be focused on the immediate needs of learners, priorities of each country, and targeted at teachers and leaders who need it the most. Priorities for training and capacity building may include a focus on inclusion, especially for mitigating dropouts during school reopening; communication and collaboration with parents and communities; teaching foundational knowledge and skills; blended and remote learning approaches; and working in learning teams. Training on interactive pedagogy and formative and ongoing assessment in support of differentiated teaching could also be very impactful during this time (see Action Area 2). In very low-capacity situations where classroom teachers lack the core competencies to be effective, it can be helpful to provide evidence-based structured pedagogy such as loosely scripted lesson plans or instructional guidelines in the form of videos or simplified text (Sneilstveit et al., 2015). For example, the *Tusome* program in Kenya provided teachers with structured lesson plans—a loose script—together with training and materials to help them implement those plans. This led to significant gains both at the pilot stage and scaled to the national level (Piper et al., 2018a). Where appropriate, structured pedagogy should aim to incorporate elements of interac-

tive pedagogies and differentiated instruction given the benefits of these approaches outlined in Action Area 2.

Research shows that ongoing professional development is most effective when it is school-based, focused on a specific subject or pedagogical approach, tailored to topics relevant to the local context, and provides supporting materials, follow-up visits, and collaboration opportunities to complement training (Popova et al., 2016). Teacher development has too often focused on training events that are off-site and sometimes one-off, delivered in a cascaded way and dislocated from the classroom context without the follow-up required to tangibly change behaviors and practice. Instead, professional development should involve practice-based cycles that are practical, specific, and focused on improving learning outcomes and should align with initial teacher education curricula and instruction to ensure systematic alignment and impact (Popova et al., 2016). Professional development should be free and widely available to all teachers as well as evaluated for effectiveness. Teachers and other key roles should be consulted on what they need.

Coaching is emerging as a promising practice for professional development, including in low- and middle-income countries and could be critical to support teachers in this crisis. It should be data-driven and structured to include reflections on practice, strategies for improvement, clarity around the why as well as the what is being done, new practice trials, and progress reviews (Coetzee, 2019; Kraft et al., 2016; Naylor et al., 2019). In the *Tusome* example described above, the program also used existing school inspectors as curriculum support coaches who made regular classroom visits and used tablets to provide instruction support and upload data on student reading progress and teacher practice. This allowed district offices to generate an aggregate picture of their progress compared with other districts, as well as comparative data on their own schools (Piper et al., 2018b). By providing additional structure to responsibilities that were already part of the inspectors' jobs, the program helped professionals do their existing jobs more effectively, which may work better at scale than creating brand-new structures (Beteille & Evans, 2019).

Collaborative professional practices will be even more important when working in learning teams in response to the crisis. Approaches such as peer collaboration have strong positive impacts on learning outcomes (Patterson, 2014; Vangrieken et al., 2015) and professional learning communities and communities of practice have shown improved teaching and learning outcomes and motivation (Darling-Hammond et al., 2017; Dogan et al., 2015; Ratts et al., 2015; Vescio et al., 2008). Collaboration within and across schools as well as with parents and the community, especially during the crisis, will require strong leadership.

The post-COVID reality is forcing many systems to reopen schools and deal with repeated closures using blended delivery models, which has increased demand for professional development for remote and blended teaching using no-, low-, and high-tech enabled delivery models. In remote and blended teaching, research highlights the importance of "teaching presence" for student success (Garrison & Anderson, 2003), which involves a specific set of skills to ensure the social interactions and relationships with students continue remotely. Evidence suggests that this requires different forms of dialogue with remote students and diverse opportunities for the teacher to demonstrate "presence" to students (McAleavy & Gorgen, 2020). Even in contexts with low or no internet connectivity or smart devices, "teaching presence" can be enabled through remote connection to students by leveraging feature phone technology (for example, through SMS/text or live connection to teachers through virtual call centers). While teaching presence can be promoted no matter the form of remote instruction, the professional development to support these skills needs to be provided and contextualized to local delivery methods.

Transformation of initial teacher education is a critical step to improving teaching and professional development; however, this work is extremely challenging and will be even more difficult within the immediate response to COVID-19. Challenges include weaknesses in teacher educators' knowledge and teaching experience; perpetuation of teacher-centered instructional approaches even when teacher education curriculum encourages student-centered strategies; omission of a broader range of skills; and limited use of technology (Lewin & Stuart, 2003; Mtika & Gates, 2010; Sayed, 2011; Mulkeen, et al., 2017). In the Gambia, for example, 77 percent of primary school teacher preparation instructors surveyed had never taught in a primary school themselves (Mulkeen & Crowe-Taft, 2010). Teacher education in foundational skills could be prioritized and include curriculum developers and teacher educators working together to update pre-service programs to align to immediate curriculum priorities and include evidence-based strategies and concrete activities on how to teach beginning reading, basic mathematics, and foundational socio-emotional skills and what is needed to get children to catch up on any lost learning and progress at the expected rate (Akyeampong et al., 2011). Collaboration with teacher education institutions will be key to providing professional development efforts during the crisis and recovery.

Reorient leaders toward instructional leadership

School leaders need to be supported and given clear and timely guidance to successfully meet the heightened needs of students and staff during the crisis. During the COVID-19 crisis, school leaders have adapted and innovated alongside teachers to continue learning, often with little support or prior training to guide them. In addition to ensure learning can continue, school leaders are having to support student and teacher health and well-being in extremely challenging conditions. As students start returning to school, leaders now also have to manage safe reopenings and potential repeated closures.

Photo by GPE/Kelley Lynch

A key element of leadership for school reopening will be regular, clear communication with parents and the community. Guidance on maximizing the impact of leaders during closures and subsequent reopenings suggests that school leaders should be provided with resources and diverse ways to reach out to families (Global School Leaders, 2020; UNESCO & ILO, 2020). Emerging insights have also identified parents and communities (including CSOs) as a key resource *for* school leaders, providing additional expertise, knowledge, and local capacity. Forging stronger links with parents and community groups is now a necessity to deal with COVID-19 related impacts (Harris & Jones, 2020). Including parents and the community in learning teams is one

way to harness their capacity and ensure they are deeply engaged with their students' continued learning and school response to the crisis.

Evidence suggests that school leadership that provides instructional guidance and fosters continuous improvement is the key to successful, large-scale, and sustainable education reform (UNESCO, 2016b). While safety and logistical issues are a critical first step to ensure learning continues, school leaders need to be able to focus on ensuring that teachers are present and utilizing effective and appropriate teaching practices to help students catch up on lost learning. Instructional leadership happens most powerfully when school leaders support teacher learning and motivation (Leithwood et al., 2008) and create a culture of collaboration and shared responsibility (Leithwood & Jantzi, 2008).

Leaders also need to manage their workforce effectively, including addressing absenteeism, which can accelerate crisis-related learning losses and reinforce disparities (UNESCO, 2014). Multiple interacting factors — related to the education system and outside it — affect low teacher attendance and instructional time. These include inaccessible and untimely salaries, school remoteness, inefficient classroom management practices (OECD, 2014; Bruns & Luque, 2015), non-instructional duties (Elvers & Kneyber, 2016), ineffective accountability systems and misaligned incentive structures (World Bank, 2018a), and absence of headteachers (Bold et al., 2017). UNICEF's Time to Teach study in Africa found that inadequate head teacher training in personnel management and leadership skills was one of the most frequently cited factors preventing head teachers from effectively managing and providing instructional mentoring to teachers which could discourage absenteeism (UNICEF, forthcoming, b).

Studies from high-income contexts show that districts (or middle-level education structures) can also play a role in leadership for inclusion and improving teaching and learning (Fullan, 2015; Harris et al., 2019; UNESCO IIEP, 2018). For example, the data analysis function at the district level can shift to support data-driven planning, provide analysis to help school leaders identify gaps in performance among schools, teachers, and students, and prioritize district-wide resources. Identifying high-performing school and district leaders could support facilitating collaboration, learning, and the sharing of resources across schools. This could include partnering low- and high-performing schools and should complement supportive supervision and coaching for school leaders where possible.

Leadership as a principle—and not merely a position—should be encouraged, meaning teachers themselves must be recognized as leaders of their profession (Education International, 2020). The COVID-19 pandemic has shown how critical it is that teachers be empowered to lead and innovate during times of change. Leadership at all levels is needed, but especially from teachers who are on the frontlines working with students and families.

Professional development will be needed to ensure leaders at all levels can be effective. Professional development needs to be offered to school and district leaders that enables them to manage their workforce effectively, for example to improve attendance and reduce absenteeism; make evidence-based decisions during and post-crisis response, including on remote and blended learning; facilitate school-centered teacher professional development; provide data-driven instructional leadership; and lead learning teams.

☑ Actions to strengthen the education workforce

IMMEDIATE ACTIONS

- Local education authorities and schools in collaboration with teachers, communities, and other sectors to **take immediate steps to maximize support for student learning by creating student-centered learning teams** — for example, by supporting teachers with existing teaching and learning roles (such as teacher trainees); teaming the most experienced and strongest teachers with those with less experience; and recruiting and training community members and parents as "community education workers" to support differentiated instruction, continuity of learning, and the welfare and inclusion of all children.

- All levels of governments to work with teacher education institutions to **provide rapid evidence-based professional development for the highest need teachers** (based on evidence such as learner assessments and other data). This could include content knowledge, strategies for differentiated instruction, effective pedagogy (particularly for building foundational skills), no- and low-tech ways of teaching and learning remotely, and working in learning teams. School-centered and collaborative approaches including coaching should be used where possible and technology harnessed where proven and available.

- All levels of governments to **provide school leaders with resources, evidence for decision-making, and clear and timely guidance to successfully navigate crisis responses and professional development** that enables safe school reopening, undertaking immediate learner assessments, remote and blended learning, and facilitating collaborative professional development.

- All levels of governments to use data-driven approaches to **improve the quality and availability of teachers in the most marginalized areas**, for example through incentives to address workforce needs and gender, inclusion, and specific subject gaps; improve attendance; re-allocation of qualified teachers at a local level; and sharing shortage expertise and specialist skills across schools in person and remotely, supported by technology where appropriate.

- National and local governments to create the policies and structures, including legislative measures, to **ensure fair, inclusive, and effective social and policy dialogue** with members of the workforce in both public and private sectors and proactively engage the workforce in formal decision-making, including in Local Education Groups or their equivalent. This dialogue should be continuous so it can respond in a timely way to changing contexts.

MID- TO LONGER-TERM ACTIONS

- All levels of government, with support from development partners, to **commit to longer-term strengthening of the workforce** — including transforming initial teacher education; exploring alternative routes into teaching to address teacher shortages; providing evidence-based collaborative professional development for all members of the workforce; establishing the policies, funding, and structures to uphold the rights of the workforce, ensuring social and policy dialogue with them and their representative organizations; collecting key data on the workforce to aid decision-making and evaluating what does and does not work.

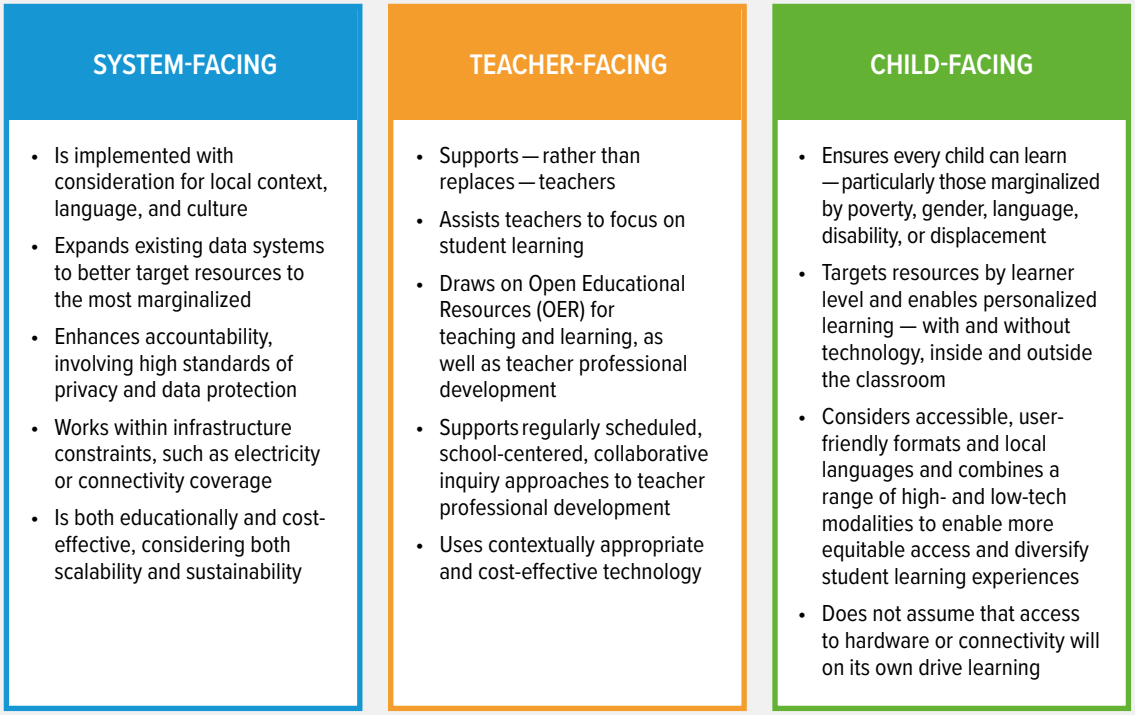
ACTION AREA 4

▶ Focus education technology (EdTech) where it is proven to be effective

Photo by PSIPSE/Zachary Rosen

National governments have turned to technology to support the immediate educational response to COVID-19 as well as long-term system recovery. EdTech solutions can be either systems-facing, teacher-facing, or child-facing as shown in Figure 10. Since the onset of the pandemic, 186 countries and territories have attempted to use radio, television, or online platforms to provide children with learning continuity (Hares & Crawford, 2020). Policymakers are exploring the option of using technology as part of a mixed or blended education model to support remedial learning and build resilience to future crises when schools reopen (World Bank, 2020b). However, such technology-enabled responses have been met with mixed success at best, with vast numbers of children not reached through remote learning (McBurnie & Haßler, 2020). Given that evidence suggests access to technology does not necessarily translate to learning and the use of EdTech can amplify—rather than reduce—inequalities, technology needs to be harnessed in ways that have been proven to work. In any adoption of new technology, it is essential that policymakers and stakeholders ask "why?" first. Policymakers need to identify first what the challenges are and what specific outcomes they would like to see (World Bank, forthcoming, b).

FIGURE 10 **Best practice in EdTech depends on whether the intervention is system-facing, teacher-facing, or child-facing**



Source: EdTech Hub

First, do no harm

Emerging evidence indicates that few children in low- and middle-income countries are using EdTech to learn. Global estimates show that, at minimum, 463 million, or 31 percent of school-children, cannot be reached by digital or broadcast remote learning programs due to a lack of either effective policies geared towards their need or access to devices and connectivity (UNICEF, 2020b). Sub-Saharan Africa is worst affected, with only 1 in every 2 students being reached (UNICEF, 2020b). In Senegal, less than 11 percent of students have used radio, television, or web-based courses to study while out of school (Le Nestour et al., 2020). Only 22 percent of children in Kenya currently have access to digital learning materials even though the government has established an ostensibly supportive policy environment (Uwezo, 2020). The situation is worse for students from remote areas and poorer households. Only 2.6 percent of learners from rural villages in Senegal have pursued technology-based learning activities since schools closed (Le Nestour et al., 2020). In Kenya, children enrolled at private primary schools are three times more likely to have access to digital resources than their public-school counterparts (Uwezo, 2020). Gender norms in many communities and within households may prohibit girls from accessing and utilizing technology at the same rates as boys, with an estimated 433 million women in low- and middle-income countries entirely disconnected (Mlambo-Ngcuka & Albrectsen, 2020). Furthermore, while global estimates for displaced learners are difficult to calculate, many refugee settlements are in remote or rural areas where access to devices and hardware may be limited and financial resources even more constrained (UNHCR, 2020b). In Bangladesh, for example, more than 300,000 refugee children in

Cox's Bazar have been missing out on education since school closures, and since a Bangladeshi government directive imposed in 2019 banned internet access within the camp (Katende et al., 2020). In Turkey, which hosts nearly 4 million refugees — the largest number globally — 48 percent of those surveyed reported barriers to accessing online education (UNHCR, 2020c). Furthermore, access to electricity is critical for both online and broadcast (i.e., radio and TV) technologies that require an electrical connection. On average, in the 28 countries with recent data, only 65 percent of the poorest households have electricity, compared to 98 percent of households from the wealthiest quintile. In seven countries (Côte d'Ivoire, Lesotho, Kiribati, Sudan, The Gambia, Guinea-Bissau, and Mauritania), less than 10 percent of the poorest households have electricity (Dreesen et al., 2020). COVID-19 is a clear reminder of the digital divide. Young people, especially from poor and marginalized backgrounds, are unable to access the technology they need to use for learning, providing a stark contrast to the narrative that EdTech can disproportionately benefit the most marginalized.

Access to technology does not necessarily translate into technology-enabled learning. A survey of secondary schools in Bangladesh found that only half of students with access to TV-based learning programs choose to watch them, and of the 21 percent of children who can access online learning programs, a mere 2 percent choose to do so (Biswas et al., 2020). This was attributed partly to the lack of instructional support at home. Half of parents from the same survey reported that they could not help their children with new topics. Between and within countries, the share of parents who regularly assist their children with learning varies greatly, with wealth being a major determinant (Brossard et al., 2020). In Ecuador, although the majority of students, even those without home internet access, were taking part in remote learning, students from poorer backgrounds were more likely to not be engaged in any learning during the school shutdown (Asanov et al., 2020). A survey of educators from 48 learning centers delivering remote learning for refugees in Lebanon identified consistent communication between education actors, communities, and caregivers as a critical factor in effective delivery of technology-based remote learning (Alban et al., 2020). These results demonstrate the importance of having an engaged parent to help facilitate learning and are consistent with research that shows that technology-based approaches to teaching are generally not effective in the absence of effective teachers to facilitate learning (Snilstveit et al., 2015).

It is critical that any adoption of EdTech does not exacerbate marginalization of already disadvantaged learners. In particular, the limits of infrastructure need to be taken into account when considering the use of EdTech (Tauson & Stannard, 2018). Infrastructural constraints may bring challenges to providing EdTech to marginalized groups. A word of caution is given to local contexts where resources allotted to education are already very limited: the opportunity costs in investing substantially in infrastructure may be very high. Even with widespread presence of connectivity, equitable policies are required to overcome the risk of only providing EdTech to schools with existing infrastructure (DFID, 2018a).

Use technology to strengthen data collection and use

One of the most promising uses of EdTech is to support the collection — and use of — educational data across multiple areas of an education system. This approach can provide critical information on where the most urgent improvements are needed. Evidence suggests that both the lack of available data and the poor use of existing data preclude educational improvements (Crouch, 2019). Only 23 percent of countries report on the full range of SDG 4 indicators to UNESCO's Institute for Statistics (Lynch, 2019). Available data tends to focus on access to learning rather than learning quality (Crouch, 2019). The use of existing data is a significant challenge as low-income

countries often lack the capacity to interpret and exploit data to meet the needs of schools and to improve education planning (Piper et al., 2018a). When governments lack data or do not use it properly, they may find themselves making crucial decisions on policies and resource allocation without the necessary data to support their decision-making (World Bank, 2018a).

Photo by GPE/Ludovica Pellicioli

The use of data can act as a lever of change, helping governments prioritize resources and monitor improvements for marginalized learners. Strengthening and expanding data systems enable policymakers to gather and analyze school- and learner-level data to then be able to identify the most pressing systemic challenges as well as address areas of inequity. In Pakistan, for example, real-time school monitoring systems feed governance data back to policymakers who can direct funds to struggling schools (GPE, 2019a). Without robust data on workforce management, it is difficult to direct resources to address the needs of rural children (Naylor et al., 2019). Studies on the *Tusome* program in Kenya suggest that high-quality data enabled teachers to quickly adapt and improve their teaching model by providing rapid feedback (Piper et al., 2018a). Some other ways data systems can be improved include developing context-specific data management protocols, leveraging the computing power of digital platforms to manage large amounts of data, and utilizing data to target resources to the most marginalized students and out-of-school children. EdTech interventions must conform to high standards of privacy and data protection, particularly in countries with little or no data protection laws.

Technology can further be utilized to enable smarter processes for increasing accountability and decreasing fraud. Since 2014, the Data Must Speak (DMS) initiative has provided technical support to various ministries of education to ensure that existing administrative datasets are effectively analyzed and used. The information is then sent back to local education offices, schools, and communities through report cards, which in turn increase social accountability for school performance (UNICEF, n.d., a). In addition to data being leveraged in education management, data can also be used to check for anomalous information in the system. Open contracting enabled and disseminated via digital platforms allows public contracting to be tracked and monitored. Through open contracting, Colombia's Ministry of Education was able to dismantle a suspected $22 million price-fixing scheme in the school meals program. In addition to delivering public policy reforms, the government saw total savings of 10-15 percent and quadrupled the competition in the procurement process (Open Government Partnership, 2019).

Use technology to enhance workforce professional development

Technology can be harnessed to support—and not replace—school-centered approaches to teacher professional development (Box 8; McAleavy et al., 2018; Oakley et al., 2018; Education Commission, 2019). In Indonesia, Burns (2013) compared a fully online approach to teacher professional development (TPD) with models that used online learning to supplement school-based coaching. While less than a third of participants completed the online course, no teachers dropped out of the hybrid school-based programs. These findings align with studies that identify high attrition rates as a limitation of massive open online courses (Lim et al., 2018) and highlight the potential of using a hybrid approach for professional development (English in Action, 2015).

Mobile technologies can be used to strengthen peer communication and collaborative learning. In Nigeria, a mobile learning service was deployed to teachers to improve quality of English language instruction via daily, sequenced messages accompanied by an image or graphic (Miao et al., 2017). After 52 weeks of the program, communities of practice were formed by participating teachers whose frequency of mobile use to communicate with co-teachers increased significantly (Miao et al., 2017). Mobile technologies can also support teachers to facilitate school-based teacher collaboration. In Zambia, the Roger Federer Foundation developed the iAct Android application to offer support to school-based communities of practice (Roger Federer Foundation, 2016). The application provides scaffolding for teacher-facilitators to organize and administer workshops on learner-centered teaching and videos of interactive teaching to watch and discuss. Teachers can also record and share videos of each other's lessons to identify meaningful steps to improve their practice (Borko et al., 2008).

Box 8: Using technology to expand and enhance teacher professional development

In the Kakuma refugee camp in Kenya, 80 percent of teachers are refugees, but only 31 percent of these teachers have formal training (Mendenhall, 2017). Through the Teachers for Teachers program, teachers leverage WhatsApp to create a virtual support group to share strategies and resources enhancing their instructional practices. Through WhatsApp, teachers cross-pollinated ideas and resources on classroom management, lesson planning, and student assessment with support from local coaches and international mentors. After the first year of the program, nearly 50 percent of participating teachers reported that they had effectively adapted pedagogical approaches in their classrooms (Mendenhall, 2017).

With 68.8 million additional teachers needing to be recruited and trained globally (UNESCO, 2016b), scaling effective teacher professional development (TPD) becomes essential and where appropriate, technology may need to be leveraged. The TPD@Scale Coalition for the Global South is a joint effort between ministries of education, international and local non-government organizations, academic institutions, and the private sector to promote equitable technology-enabled teacher professional development at scale. TPD@Scale aims to achieve quality (through effective TPD), equity (through technology designed for accessibility and inclusion), and efficiency (through optimization of inputs and cost-effective measures). In Latin America and the Caribbean, TPD@Scale is being implemented through the establishment of a regional network that will share, adapt, and mobilize TPD@Scale models and provide strategic support to governments (TPD@Scale Coalition for the Global South, 2019).

Open Educational Resources (OER) can also provide logically structured content for regularly scheduled school-centered teacher and workforce education programs. In Zambia, the OER-4Schools program developed openly licensed teacher professional development materials with session plans and exercises for 28 peer-led workshops on interactive subject pedagogy, questioning, group work, and Assessment for Learning (Hennessy et al., 2014). After completing the program, participants increasingly adapted their teaching to students' learning levels (Hennessy et al., 2016). In Ghana, the government's Transforming Teacher Education and Learning (T-TEL) initiative developed a set of OER to support teacher education in the country's 46 public colleges of education. Like OER4Schools, the T-TEL program structured teacher professional development content into different thematic areas such as questioning and group work. During the first two years of program implementation, the percentage of teachers using student-centered pedagogies rose from 26.1 percent to 65.9 percent (T-TEL, 2017).

Research and test child-facing technology including low-tech solutions

Photo by UNICEF/Kanobana

As discussed above, EdTech-only interventions targeted directly at students have generally not achieved their expected outcomes. In general, EdTech solutions have worked best where they are combined with effective teaching/facilitation and therefore developing the workforce will need to be a major priority for policymakers. Nevertheless, there are some promising student-facing interventions particularly using low-tech modalities, which may play an important role in supplementing in-person teaching.

Immediate interventions in light of the COVID-19 pandemic have involved a range of technologies, including low-tech modalities such as radio, television, and mobile phones (Vegas, 2020). Education providers have adopted multiple modalities to reach a higher proportion of learners (Dreesen et al., 2020). Findings from a recent study on two low-tech interventions in Botswana appear promising. The first intervention used SMS messages to send weekly numeracy problems to parents while the second intervention used weekly direct phone calls between the parent (with the student present) and the facilitator to deliver additional personalized and live support (Angrist et al., 2020). Early results show both interventions resulted in reduction in innumeracy of up to 52 percent (Angrist et al., 2020). Broadcasting lessons through radio may benefit learners without internet access (David et al., 2020). Using pre-existing technology, interventions can be set up efficiently in times of emergencies and crises (USAID, 2020). Radio-based instruction was adopted in light of school closures during the Ebola crisis (David et al., 2020). The USAID-funded Advancing Youth Project in Liberia broadcast lessons on basic numeracy and literacy across community radio stations in parallel with SMS text messaging to disseminate radio broadcast alerts and schedules (Education Development Center, 2014); such radio instruction materials have also been made available during the current crisis (Center for Education Innovations & Plaut, 2020).

Governments could test and evaluate low-tech approaches to expand access to high quality learning materials and to target the most marginalized. Learners can use different EdTech modalities — openly licensed and printable learning materials, interactive radio instruction, engaging educational television — to diversify their learning experiences (Morpeth et al., 2009). In India, the Technology Tools for Teaching and Training program used interactive radio instruction and educational television to support hard-to-reach students and girls (USAID, 2010). The program reached 40 million learners and led to improved learning outcomes in English, mathematics, and environmental science (Carlson, 2013). Evidence from the Ebola crisis suggests that using multiple modalities to deliver content to — and communicate with — girls can enhance the reach of educational programs (Rafaeli, 2020). Meanwhile, local networks and community groups, some connected by technology, can play an important role in maintaining contact with girls and ensuring girls return to school (Bandiera et al., 2019). Technology also has the potential to support learning for some marginalized learners. For instance, learners with physical or visual impairments could engage with the audio elements of educational television programs and radio broadcasts (Bakshi, 2011). However, radio programming may be inaccessible to those with hearing impairments and learners who do not speak the dominant language (USAID, 2020). Mobile devices offer multiple accessibility features: voice recognition, screen readers, adjustable screen displays, and different language settings (Dodson et al., 2013; Alasuutari, 2020; Comings, 2020). A range of modalities and media types, made freely available, are required to ensure that there are no accessibility gaps (Humanity and Inclusion, 2020). Furthermore, it should be noted that OER play a vital role in ensuring access to the most marginalized. UNESCO's Recommendation on OER supports the "creation, use, and adaptation of inclusive and quality OER," highlighting the need for supportive policy for OER as well as capacity-building efforts to ensure that stakeholders, including teachers, are able to access, create, adapt, and redistribute OER for classroom use (UNESCO, 2019b).

Testing and engaging EdTech solutions with different users with varying needs may ensure equity and scalability (World Bank, forthcoming, b). The design of any technology should be user-centered, and this means testing solutions with all possible end users, including, but not limited to, students, parents, teachers, and administrators, including those with disabilities, (World Bank, forthcoming, b). Beginning the design process with how the specific technology will lead to inclusion for *all* could lead to efforts that are intrinsically equitable in various contexts and can be scaled for success (World Bank, forthcoming, b). We should guard against interventions that require unrealistic conditions for success. Effective underpinning design principles that allow for flexibility in deployment can promote local adaptation across various contexts (Haßler et al., 2018; Joyce & Cartwright, 2019).

Use a systems-thinking approach to consider the potential of EdTech and create an enabling environment

EdTech does not improve learning outcomes in isolation and needs to be embedded within the broader education system (OECD, 2015; DFID, 2018a). It needs to be carefully and thoughtfully integrated contextually within the education system and take into account the voice of the users. A systems approach can inform why "common sense" interventions to improve education may not work (Steiner-Khamsi, 2015; Pritchett, 2015) and emphasize that the success or failure of education interventions partly depends on the wider political and socio-economic context (Kingdon et al., 2014). Evidence suggests that simple, affordable, and scalable EdTech is more likely to be educationally effective and economically sustainable (Krätli & Dyer, 2009). There is a balance to be struck between centralized and locally adaptive approaches. For example, education decision-makers should consider the ideas and inputs of local teachers when designing technology-supported

professional development programs (Crouch, 2020). There is also growing evidence that EdTech has the biggest impact on student outcomes when it is combined with effective teaching practices (such as feedback, self-regulation, collaborative learning (Education Endowment Foundation, 2020). Interventions that respond to systemic constraints — by carefully selecting and combining appropriate high-, low-, and no-tech approaches — are essential in reaching marginalized children (INEE, 2012). For example, refugee children may not have access to high-tech products and thus not benefit from national distance learning efforts.

The enabling environment for EdTech interventions needs to be considered. Some considerations include the political context in which the education system operates (DFID, 2018a); cooperation among stakeholders; a dedicated EdTech policy that sits within a wider education plan (Groeneveld & Taddese, 2020); the EdTech infrastructure; and the capacity of the workforce to be able to access and use technology. Any EdTech must also conform to high standards of privacy and data protection, particularly in countries with few or no data protection laws (Haßler, 2020). The sustained commitment of all components of education systems, including finance, is needed (Levin & Fullan, 2008).

Variations in implementation can significantly impact the success of EdTech interventions (Kerwin & Thornton, 2020; Outhwaite et al., 2019). The rush to implement in times of crises may mask inequities in practice unless an attempt is made to support marginalized populations (Wagner, 2001; Wagner, 2018; Rubagiza et al., 2011). Notably, rigorous evidence about what is most effective in using EdTech is limited and much more needs to be done in the medium and long term to enhance this evidence base (Hennessy et al., 2020). Systematic monitoring and evaluation need to become standard practice in EdTech interventions (Wagner et al., 2005).

Alternative financing instruments should be explored for funding technology infrastructure so education budgets are not diverted. Sources of private financing may be best suited for investment in national infrastructure given the substantial capital expenditures required to develop it, particularly in countries with already very limited budgets for education. The Giga initiative, a joint project of UNICEF and the International Telecommunication Union (ITU), aims to leverage private financing to provide better connectivity, including to schools. One approach is the use of Universal Service Funds (USFs) to deliver connectivity to rural areas, such as the recent Ghana example (International Telecommunication Union, 2018); however, evidence suggests that these funds have generally not delivered on their promise and that more than half of the funds collected globally for USFs have never been used (International Telecommunication Union, 2013). Further work is needed to identify ways to ensure private sector telecommunications infrastructure investments benefit educational establishments.

☑ Actions to focus EdTech programs where they are proven to be effective and most equitable

IMMEDIATE ACTIONS

- Development partners and all levels of governments with existing EdTech programs to carry out analysis and appropriate action to **ensure they are not exacerbating marginalization**, to consider the opportunity costs of focusing on EdTech solutions, and to consider pivoting to user-centered approaches which are likely to generate maximum benefit for the most marginalized.
- National governments to use open curricular content and to **ensure that there will be low- or no-cost ways for teachers, parents, and students to access** content digitally, offline, through radio, through television, or in print.
- Multilateral and bilateral organizations, national governments, and the private sector to **co-create mechanisms to share openly licensed, printable, and editable content for the core curriculum**, including teacher guides, structured lesson plans, textbooks, workbooks, teacher professional development materials, and other resources in accessible, user-friendly formats and local languages, differentiated for learning level.
- National governments, multilateral and bilateral organizations, and the private sector to **engage creatively in mechanisms and partnerships to increase funding for connectivity (without impacting education budgets),** including the use of licensing and renewals to Internet Service Providers on provisions of allocating connectivity to under-resourced schools and households.
- National governments with support from development partners to **strengthen education management information system (EMIS) data collection** to ensure enrollment, attendance, transition, and learning data is measured for all students (including those who are currently "invisible"); ensure data is collected on all roles within the education workforce; and ensure data is disaggregated for marginalized groups and available in a timely manner to education stakeholders for data-driven, evidence-based decision-making while maintaining high standards of privacy and data protection.
- Researchers, development partners, and governments to **rapidly test technology-based approaches to scale up effective workforce professional development and collaboration** (e.g. to facilitate peer collaboration, strengthen school-based communities of practice, and disseminate OER) with a focus on effective teaching practices for improved learning outcomes.
- Governments with support from development partners and researchers to **test and evaluate child-centered approaches to learning for the most marginalized** with emphasis on contextualization, needs identification, relevance, and cost-effectiveness.
- Ministries of education, local governments, and development partners with support from national governments to **support, train, and capacitate households (parents)** to actively and appropriately engage with their children's distance learning experience.

MID- TO LONGER-TERM ACTIONS

- Governments with support from development partners to **strengthen and contextualize research and testing on tech-enabled solutions**, including generating a robust and relevant evidence base for such interventions, testing solutions with a wide variety of local stakeholders and possible end users, as well as ensuring inclusion at the core of the design and delivery of such solutions.

ACTION AREA 5

▶ Protect education budgets and target public spending at those left furthest behind

It is critical to protect and strengthen domestic education budgets and recognize education as essential to the recovery effort. As highlighted in Part 1, in the wake of COVID-19, financing available for education will come under significant pressure on multiple fronts. Slow or negative growth is diminishing government tax revenues; intensifying pressure in donor countries is threatening aid volumes for education; and governments are facing the difficult choice of how to prioritize expenditure on health and education when allocating limited funds (Evans et al., 2020).

Protect domestic and household spending on education

Given compounding finance constraints, it will be all the more critical to protect and strengthen domestic education budgets and recognize education as a fundamental human right and as essential to the recovery effort. While the best pathway is for governments in low- and middle-income countries to expand their revenues by increasing tax revenues and reassess macro-economic policies, we recognize these efforts may be politically and technically challenging in the near term.

In the immediate term, education must receive equal standing in its recognition as a key sector for recovery. Education must be prioritized and recognized as an essential building block for future growth and resilience as finance ministers and heads of state articulate the financial response to address the crisis at the national and international level. Education is linked to progress in virtually every area of human and economic development—from child survival to maternal health, gender equality, job creation, and inclusive economic growth—and is a critical sector to stem the worst effects of the pandemic and safeguard progress toward the achievement of the SDGs. This recognition has already led to a recent shift in the policies and procedures of the IMF, which recommends that countries protect spending on education (rather than being subject to austerity measures) as the sector is critical to the overall health of economies in terms of growth and stability (IMF, 2019).

It will be essential to harness additional public finance by integrating with efforts to finance the COVID-19 recovery through action on taxation, debt relief, humanitarian assistance, and stemming illicit financial flows. Actors working on education finance need to be engaged as governments and the international community design strategies to finance the COVID-19 response. For instance, the Debt Service Suspension Initiative (DSSI), which suspends bilateral debt repayments, could provide relief amounting to $12 billion in 2020 and $17 billion in 2021, and civil society groups have gone even further to call for the permanent cancellation of all debt repayments, which would free up $25.5 billion in 2020 (Kharas & Dooley, 2020). At an even larger scale, minimizing corporate tax shifting could provide low-income countries over $200 billion in lost revenue, and stemming corruption leakage and other illicit flows could generate revenues worth many times more than current levels of ODA (Kharas & Dooley, 2020). Recognizing that these initiatives are technically and politically difficult, ministries of education and international education actors need to make additional efforts to be part of these wider Financing for Development dialogues, as high-

lighted in a recent joint call to Action on Domestic Financing of Education post-COVID led by civil society. In the case of debt, for instance, Save the Children has called for the international development architecture to create a facility to convert suspended debt service payments directly into investments in children (Warren & Wagner, 2020). This will also require better integration of education into humanitarian actions supporting the COVID-19 response. For instance, the Global Education Cluster calls for education to be explicitly listed as a priority in all revised Humanitarian Response Plans (GHRPs) and response strategies, arguing that education is one of the most underfunded sectors in humanitarian response plans and is particularly vulnerable to economic shocks (Global Education Cluster, 2020).

Efforts must also be made to minimize the impact of economic shocks on household spending on education by compensating households and introducing measures to reduce the transaction costs of remittances. Estimates suggest that around 230 million people could be pushed into poverty as a result of COVID-19, and up-front costs to smooth economic shocks are far lower than the cost of lifting households out of poverty (Omtzigt & Pople, 2020). Yet 2 out of every 3 children have no access to social protection services that are vital to address the immediate needs of families and provide stability in the face of uncertainty (UNICEF, 2020d). Conditional and unconditional cash transfer programs must be put in place or scaled up to provide immediate relief and ensure that families have sufficient resources to meet basic needs and send children to school or to facilitate learning in the home while school closures are in place. These programs must include families engaged in informal economies and should be in alignment with humanitarian cash transfer interventions. Such programs can play a particularly important role in getting adolescent girls back into school (Baird et al., 2019). To further supplement household budgets, national governments must declare remittance services to be essential—and thus remain open and available during lockdowns—and seek further reductions in remittance transfer costs. A conservative pre-COVID estimate suggests that lowering remittance costs to meet the SDG goal of 3 percent would allow households to spend an additional $1 billion on education per year, though this is likely an understatement given that a high proportion of remittances are spent on education in many low- and lower-middle-income countries (UNESCO, 2019a).

Ensure education budgets prioritize inclusion and equity

Governments should pursue principles of progressive universalism, which match financing to need by targeting resources at lower levels of education starting from pre-primary and the most vulnerable across the education system. Foundational learning is a critical step in the journey to becoming a life long learner and enables participation in school through secondary and higher levels. Spending on pre-primary education and foundational learning is also cost-effective. Every dollar spent on pre-primary education results in $9 of benefits to society and a 10-percentage-point increase in the pre-primary enrollment rate is associated with an increase of 0.14 years of schooling attended and a 0.55 percent reduction in primary school repetition (Muroga et al., 2020). Yet, while quality early childhood education is a critical method for closing equity gaps and preparing children to learn, only 46 countries have set a date for the reopening of pre-primary schools (Nugroho et al., 2020).

Country-level education spending down to the student level is determined by budgeting methods, which have the potential to be reformed for more inclusive allocations and greater learning outcomes. Many countries lack necessary data, capacity, and platforms to manage planning and monitoring of allocations for education, particularly equity-based allocations. Strengthening these systems will require significant government support and a commitment to equity. Several countries have adopted needs-based financing models to support greater equity in education spending.

For instance, Rwanda introduced an allocation formula for block grants to local governments that included weighting for population, poverty, area, and the estimated financing gap between revenue collected and costs (Education Commission, 2016). Similarly, the Government of Nepal, with support from UNICEF, recently developed an Equity in Education Index as a core planning and monitoring tool to support the government in targeting equity-based allocations to the most disadvantaged districts (UNICEF, n.d., b). Targeting support to ensure adequate education provision in poor, rural areas can have disproportionately positive impacts on girls who may face additional barriers to attendance (Burde & Linden, 2013). Developing tools that support countries to monitor their financing allocations, such as UNICEF's Benefit Incident Analysis of Public Education Expenditure, should be supported further (UNICEF, 2020a).

Building broad-based support for a foundational learning agenda as well as strongly prioritizing spending on those who are most marginalized will require political leadership and strong advocacy. Alignment of all actors in a system to a shared goal of learning for all is simple in theory; in practice, it is highly challenging. Strong political will is needed to realign and reorient a system that may be designed to produce improvements in access, but not for learning. As a first step to address this in the post-COVID recovery period and what will likely be a highly constrained fiscal environment, governments will need to clearly express their policy priorities for equity and learning. In particular, building the case for investment in foundational skills as the key to supporting lifelong learning will be critical. In many countries, targeted advocacy will be required to make the case for education that is fully inclusive of children with disabilities as both an ethical imperative and a cost-effective strategy (EASNIE, 2018; UNICEF, 2015). In some countries, policymakers will also need to consider how to make the case for inclusion of refugee populations within the education system in a way that maximizes benefits for both host communities and refugees (UNHCR, 2019a; UNHCR, 2019b). In addition to outlining what they will focus on, governments will need to set out their strategy for handling the difficult trade-offs to prioritize, sequence, and fund their learning agenda. This will require advocating and communicating this agenda to the sector, to ministries of finance, to the public, and to development partners. In turn, development partners can support by targeting funding and technical support to governments which take a progressive universalism approach (Box 9).

Box 9: Maximizing support to governments that commit to foundational learning

As part of the World Bank's new Foundational Learning Compact (FLC), several development partners are aligning efforts to support a new accelerator program (World Bank, forthcoming, a). The initiative aims to support countries demonstrating the strong political will needed to tackle learning poverty at scale. Building on the evidence of what works, the accelerator program supports governments in: (1) establishing and publicizing a few ambitious but achievable targets related to foundational literacy; (2) aligning government and development partners behind a prioritized, costed, and evidence-backed approach to reach those targets; and (3) strengthening implementation capacity. Several development partners (including UNESCO-UIS, BMGF, UNICEF, FCDO, USAID, and World Bank) are discussing how to best leverage their respective contributions and strengths in this effort.

Strong political will and advocacy need to go hand-in-hand with more inclusive decision-making which will improve policy as well as build support for change. Shifting education systems requires behavior change across a wide range of stakeholders. To ensure the change has the highest chance of success, a whole range of stakeholders will need to be consulted and involved in decision-making. One key constituency will be teachers and their representative organizations as outlined in Action Area 3. In addition, it will also be critical to involve parents as well as children and young people in meaningful ways (Hart, 1992). Furthermore, it will be important to ensure decision-making involves stakeholders who mirror the diversity of populations including people with disabilities and people who have experienced forced displacement.

Develop plans to fully finance education by exploring additional sources of finance for upper levels of education and skills training

The concept of progressive universalism aims to clarify and add rationality to planning and public spending decisions in constrained financial contexts. It also clarifies where additional efforts to identify alternative resources of finance could be concentrated. Progressive universalism recommends that, when balancing spending across levels of education and population groups, decision-makers should prioritize public spending for equity and social returns. In countries where the overwhelming majority of children are not learning even foundational skills, this approach would recommend a strong focus on early levels of education. However, progressive universalism does not preclude public investments from being allocated to upper levels of education and older population groups. In countries where a sizeable proportion of children are learning at earlier levels of the school system, investment in higher levels of education, which is focused so that it benefits poor and marginalized populations, will be vital not only for the social returns that such education generates but also as a key motivator of children at earlier levels.

Photo by Asian Development Bank/Samir Jung Thapa

Public financing could focus on offering "second chance" opportunities for youth that focus on building foundational learning. Youth unemployment is a huge policy concern for many developing countries. It is important for policymakers to invest in skills development and at the same time be realistic about the role that training programs can play on labor market outcomes given both the range of potential factors contributing to availability of jobs and the quality and relevance of TVET in many contexts (Tripney et al., 2013; McKenzie, 2017; Kluve et al., 2019; Betcherman et al., 2004). Allocating public resources to prioritize the development of foundational skills may be a critical first step and will improve students' abilities to direct their own learning and become lifelong learners who can adapt to future labor market changes (Filmer & Fox, 2014). It will be very difficult for young people to fulfill their potential without these foundations and it is worth noting that teaching basic skills such as literacy and numeracy as well as socio-emotional and 21st century skills are increasingly in demand from firms. Where more technical skills programs are supported it is vital that they are closely matched to genuine skills needs in the local labor market in order to achieve success (McKenzie, 2017; Allais, 2017).

Several policy options exist for mobilizing additional resources and thereby easing pressure on government budgets. These should be further explored and their effectiveness measured. For example, given the comparatively higher private returns to higher education (Patrinos, 2020), some level of individual cost-sharing for wealthier population groups may be warranted depending on context. Governments could also explore opportunities to incentivize provision of skills training by the private sector both as a way of attracting private financing and as an approach that could bring better alignment between labor markets and training delivery (Bandura & Grainger, 2019). While bringing in additional sources of finance is a key priority for governments in the current climate, and while engagement with employers can bring important benefits in terms of students' employability, public-private partnerships have had a mixed record of success (Languille, 2017; Aslam et al., 2017) and will depend on the structure of economies, the organization of the private sector, and their capacity to engage in this partnership. Governments will need to be alert to the potential challenges and it will be crucial to learn lessons from successful and unsuccessful past efforts. Care should also be taken to ensure that these initiatives benefit underserved populations. For example, in the area of student loans, income-based repayment plans that tie financing to a borrower's expected future income rather than existing collateral will ensure that students from poor families are not excluded from access to funding.

Strengthen efficiency and equity of budgets and allocations

Improving the equity and efficiency of education systems requires well-functioning public financial management and accountability systems. Shortcomings of a public financial management and accountability system will need to be addressed in order to ensure that scarce financial resources are allocated efficiently and equitably. The Education Commission estimated that about 2 percent of GDP spending on education in low- and middle-income countries is lost due to inefficient spending and management (Education Commission, 2016). Common obstacles hampering well-executed education funding allocation are attributed to constrained data collection, capacity challenges, low budget priorities, weak financial accountability, and limited coordination between education and finance ministries (UNICEF, 2017b). Strengthening public financial management and accountability systems—including budget formulation, approval, execution, and evaluation—will be essential to improve efficiency in spending. For example, while Togo and Burundi spend approximately the same amount per student ($177 and $186 respectively), better management systems in Togo lead to an additional learning adjusted year of schooling (5.5) compared to Burundi (4.6) (World Bank, 2019a). Greater global efforts to ensure governments—both central and local—have the tools and resources available to better analyze, plan, and monitor the equitable and efficient financing of their education systems are urgently needed. It will also be essential to build frameworks to estimate and track financing from all sources, including from external partners. Without any type of centralized framework for education expenditure, information collected at the country level tends to be dispersed between an array of organizations because of the capacity constraints and the complexity around collecting enormous amounts of data (Grant Lewis & Montoya, 2016). Civil society voices must also have the necessary political space to play a crucial role in tracking budgets, making sure that allocated money arrives, and decisions are made transparently at the appropriate level (ActionAid, 2020).

☑ Actions to protect domestic education investments and enhance efficiency

IMMEDIATE ACTIONS

- National governments to commit to **maintaining or increasing public spending on education** through prioritizing education as part of recovery discussions and planning. Development partners to engage across sectors to ensure prioritization of education in national country development plans and provide technical and other assistance to incentivize and make the case for countries to maintain or increase expenditures per capita in their domestic budgets allocated to education in line with targets in the Education 2030 Framework for Action.
- All levels of governments to **use cash transfer programs and other targeted efforts to reduce barriers to re-entry** and ensure the most vulnerable children, in particular adolescent girls, refugees, and students with disabilities, return to school and receive support to learn. This could also include working with other sectors to declare remittance transfer services as essential and easing taxes and regulations on those transfers.
- National governments, in consultation with a broad range of stakeholders, to **develop credible financing plans to *fully* finance education following principles of progressive universalism**, including adopting equity financing formulas that reflect the needs of the most marginalized children. Development partners to prioritize funding for countries and programs which take a progressive universalism approach and support efforts to develop better data on education financing, estimate costs, and track resource availability from all sources and provide tools to guide equitable spending.
- Governments and civil society to work together to **ensure education is included as an essential sector for COVID-19 response** in national, global, and regional multisectoral development finance conversations and include a wide range of stakeholders in decision-making to improve education policy-making and build the case for urgent support to education. Establish a COVID-19 recovery financing task force to develop strategies and concrete proposals to ensure education is considered in negotiations of COVID-19 recovery packages.

MID- TO LONGER-TERM ACTIONS

- National and international education actors work more closely with other sectors to **prioritize action on growing domestic revenues** (e.g. through progressive taxation and efforts to stem illicit financial flows) and **strengthening of public financial management systems and data systems** to improve equity and efficiency in planning, budgeting, and expenditure, including in the production of education-focused Public Expenditure Reviews.
- All actors to work together to **harness innovative financing and alternative financing options where possible in TVET and post-secondary education** to enable public funds to be more focused on foundational learning. Donors to support these efforts by establishing an innovative financing task force to help identify and test such financing options.

ACTION AREA 6

▶ Mobilize international resources to fully finance education

Fully financing SDG4 will require a major effort to mobilize international financing from all possible sources to help close the education financing gap. Due to additional pressures on domestic resources from the pandemic, as well as the costs of additional measures to respond to COVID-19 education challenges, the annual external financing gap could increase to an estimated $178 to $193 billion annually between 2020-2030, depending on assumptions related to the length of closures and economic impact (UNESCO, 2020a). While the financing gap could be somewhat smaller depending on epidemiological conditions and policy responses, it is likely to be sizable and many multiples of current annual ODA allocated to education, which stood at just $16 billion in 2018.

As discussed previously, a large share of this effort will be borne by countries themselves, but international support will become even more critical given the context of scarce public and household resources exacerbated by the impact of COVID-19. To build back better, we must capture and exploit all sources and methods of support to education, taking into account the specific needs of countries at different stages of development. This includes protecting and optimizing aid allocations and harnessing innovative financing.

Maximize aid for education

Given the size of the estimated financing gap, it is essential that aid to education is protected as an essential part of global COVID-19 recovery efforts. Donors must protect and grow aid budgets for education and supplement efforts by drawing in new funding. Delivering on existing ODA targets would make a substantial contribution to closing financing gaps and safeguarding education aid in the near future. Pre-COVID estimates by the IMF found that meeting the 0.7 percent of gross national income target would provide about $230 billion in additional funding to key SDG sectors, including education, health, water and sanitation, transportation, and energy (Gaspar et al., 2019). Adding to this, education must be increasingly prioritized as a share of total aid in order to reach 15 percent, mirroring targets for domestic budgets. Expanding ODA levels will also require engaging non-traditional donors in education. In response to the pandemic, non-DAC donors including South Korea have been active in supporting education and now is a critical moment for others to follow suit. In addition, efforts should be made to increase funding from philanthropists, corporations, and charitable organizations for education in line with other sectors such as health and climate action.

It is important that international finance institutions mobilize substantial additional financial resources. The IMF and multilateral development banks (MDBs) have been working to mobilize substantial financial resources in the face of the crisis. For instance, the IMF has pledged to fully tap its lending capacity (about $1 trillion) to support governments, and the World Bank has committed to mobilizing $160 billion and regional MDBs $80 billion in the near term to respond to countries' immediate needs. However, these efforts may not be enough and there are a number of additional policy actions that could further strengthen the response, such as MDBs expanding IDA and other equivalent concessional financing for education, and the IMF issuing Special Drawing Rights

(SDRs). For instance, to generate much-needed additional financing from the MDBs, one option is for bilateral donors to commit new funding to IDA as well as to the concessional arms of the regional MDBs. This could be paired with efforts to revise existing criteria that determines access to concessional financing to consider factors beyond per capita income (e.g., vulnerability), providing temporary support measures to recent graduates to higher-income statuses, and reassessing statutory limits and capital adequacy calculation (UN Background Document, 2020; Landers, Lee, & Morros, 2020). In addition to already agreed-upon IMF responses, including greater flexibility of lending practices, increased access to emergency assistance, and debt service relief, there are many voices that propose the IMF should issue SDRs to assist countries in addressing immediate liquidity issues (Plant, 2020). If this is not feasible in the immediate term for geopolitical reasons, higher-income countries should reallocate existing SDRs (valued at around $190 billion) to developing countries (Plant, 2020).

Optimize allocations to reach areas most in need

With increased pressures on volumes, aid will need to be directed to those most in need in low- and lower-middle-income countries and with priority to foundational learning—in line with principles of progressive universalism. ODA is most critical for low-income and crisis-affected countries and marginalized populations, yet many donors continue to direct a large proportion of their grants to higher-income countries and to upper levels of education, which are less likely to benefit the most marginalized students. For instance, Germany and France are two of the top three donors to education but 58 percent of Germany's and 69 percent of France's aid is directed at scholarships and costs for students from developing countries to access tertiary education (Warren & Wagner, 2020). Only 0.7 percent of ODA is currently spent on pre-primary and early childhood education, while 10 percent is recommended (UNICEF, 2019a; Zubairi & Rose, 2019). Similarly, donors primarily support project-based aid rather than channeling investments into system-level reforms that are necessary to improve quality and promote learning.

Increasing financing to multilaterals that target funding based on need is crucial for maintaining focus on areas most in need. Where possible, bilateral donors should be encouraged to invest in multilateral grant funds for education (rather than their own bilateral channels), which can more effectively and efficiently pool and target funding to more marginalized countries and populations. The Global Partnership for Education (GPE), for instance, mobilizes investments in nearly 70 low-income, lower-middle-income and fragile and conflict-affected partner countries, and Education Cannot Wait (ECW) is a global fund dedicated exclusively to supporting 75 million school-aged children and youth in emergencies and protracted crises. Increasing financing to multilaterals that target funding based on need is crucial for maintaining focus on the most vulnerable. These multilateral initiatives also go further to offer flexible and efficient funding modalities in times of crisis. For instance, GPE has made more than $500 million available to support partner countries with planning and implementing their COVID-19 response plans in alignment with existing education sector plans, and ECW has activated a "First Emergency Response" funding window to redirect current funds as well as raise additional funds to respond to COVID-related education needs. In the absence of a full replenishment of ECW and GPE, the most vulnerable countries and populations will face dangerous shortages in education resources following the pandemic.

Diversify sources of financing

Additional catalytic financing using the leveraging capacity of the MDBs will be critical to filling the financing gap. The unique financial structure of the MDBs allows them to leverage contributions from their shareholders and multiply them into financing at low cost. Rather than paid-in capital,

however, contributors could also pledge quasi-capital (also known as guarantees) that carry a similar standing as paid-in capital and can expand MDBs' capacity for additional lending (Humphrey, 2020). The International Finance Facility for Education (IFFEd), currently being established, could be one way to mobilize additional financing for education challenges. It will address both supply and demand challenges for education financing by using contingent financing provided by contributors to generate additional lending, and also by providing grants to make the terms of loans more attractive to developing countries (IFFEd, 2020). IFFEd will target lower-middle-income countries (LMICs), which face a structural challenge in financing education — the "missing middle" — where aid volumes fall faster than tax revenues grow as countries transition away from the levels of concessional financing available to low-income countries (Engen & Prizzon, 2019; Rogers et al., 2014).

Multisectoral approaches can also help leverage alternative sources of funding for investment in education. The education crisis is complex on its own but should also be considered critical as an interlocking element of a wider system in search of sustainable and equitable development. This necessitates moving beyond a "silo approach" in development to work cross-sectorally. Key to this will be to work within broader national development frameworks and strategies. For instance, the WHO has successfully positioned health workforce investments in Guinea and Niger within a broader national development investment plan, enabling these national governments to source and secure significant additional domestic, donor, and UNDAF funding, as part of a broader rural economic development initiative that includes education (SDG 4), health (SDG 3), job creation (SDG 8) and women's/girls'/youth participation and economic empowerment (SDG 5, SDG 8). Similarly, WaterAid has called for Sierra Leone to integrate financing for improved WASH facilities and sanitation in schools as part of the country's *Education for Development* medium-term plan (Cheah, 2019). Similar cross-sectoral opportunities must be identified for education, particularly with billions in funding and stimulus packages being channeled to support post-COVID recovery and resilience efforts. One opportunity for entry could be engaging with countries as they conduct Voluntary National Reviews, presented at the annual High-Level Political Forum as part of the follow-up on the SDGs. There are also opportunities to integrate education and skills-training opportunities into large-scale development programs implemented in other sectors. For instance, the Asian Development Bank (ADB) and the German Federal Ministry for Economic Cooperation and Development (BMZ) have partnered to integrate work-based vocational training into infrastructure projects in Mongolia and Pakistan (Box 10).

Box 10: Building skills training into large-scale infrastructure projects: Evidence from ADB's Build4Skills Program in Pakistan and Mongolia

The ADB and the German Federal Ministry for Economic Cooperation and Development (BMZ) have formed a strategic partnership united in the belief that infrastructure investments hold an untapped potential for work-based training (GIZ, 2020). By combining work-based vocational training measures inspired by the German dual training system and ADB's strong engagement in infrastructure, the "Build4Skills" project demonstrates how inter-agency cooperation addresses the prevalent lack of industry-driven, practical vocational training – beyond sectoral boundaries. The approach is implemented by GIZ together with contractors and local training providers in Mongolia and Pakistan, generating new skilling and employment opportunities for the local communities and strengthening the availability of a skilled workforce needed for infrastructure investments. Lessons learned from pilot implementation are currently being documented in a toolkit to facilitate replication and upscaling of the approach.

☑ Actions to mobilize international resources to fully finance education

IMMEDIATE ACTIONS

- Education development partners to work with other sectors to **support calls for increased and more targeted international aid** including through the call for meeting the 0.7 percent of gross national income (GNI) aid commitment, with a focus on least developed countries (LDCs) by disbursing at least 0.15 to 0.20 percent of GNI on the most vulnerable countries; encouraging the IMF to utilize its Special Drawing Rights (its global reserve asset) to be channeled toward the countries that need it most; and improving access to concessional finance to countries most in need by revising access criteria.

- Aid donors and international institutions to **mobilize additional resources for education including by collectively increasing the share of education in international aid.** Some agencies involved in this report advocate specific targets, including a 15 percent floor on education's share, matching the recommended efforts by national governments as highlighted in Action Area 5. Given that sector allocable aid from international donors is currently at $150 billion per year according to the OECD-DAC, this would mean $22.5 billion per year allocated to education from those donors. Others question whether a single target applied to donors in different positions is the right approach. But all signatories to this document agree increasing the overall amount of donor finance provided to education is critical during this period. This includes allocating an increased share of humanitarian funding to education interventions.

- Based on current spending trends and funding targets, multilateral agencies engaged in this report (MDBs and UN organizations) as well as the education funds (ECW, GPE, IFFEd, EOF) could—with necessary support from official and private donors—at a minimum **deliver an estimated $9 billion in aid for education annually in the immediate term**. This includes support for education as well as related services (health and nutrition) channeled through these organizations. Additional support is needed to meet this minimum. This does not include much needed additional financing that could be mobilized through the MDBs non-concessional windows.

- Donors to establish and support mechanisms that can quickly leverage additional affordable financing for education, including through the innovative use of guarantees in combination with grants to expand the capacity of MDBs as proposed by IFFEd.

MID- TO LONGER-TERM ACTIONS

- Development partners to **increase efforts to diversify funding for education** including by increasing non-DAC and nontraditional donors' commitment to education; by further exploring innovative financing approaches; by ramping up calls for support among philanthropists and corporations; and by working across sectors to leverage investments in other critical development sectors for education (e.g. by engaging in Voluntary National SDG Reviews and exploring opportunities for education and skills training in large-scale projects in complementary sectors).

ACTION AREA 7

▶ Use resources better by improving evidence generation, coordination, alignment, and effectiveness

Addressing the challenges before us will require a concerted effort and close collaboration and coordination between the countries that need to make progress, donors, and international institutions.

Given the relatively small share of international resources in total education spending, it is critical that these resources are spent as effectively as possible. Many UN agencies (UNESCO, UNICEF, UNRWA, UNHCR, UNOCHA), multilateral development banks (World Bank and regional development banks), international partnerships and major funds (e.g. GPE, ECW, IFFEd), and bilateral donors have independent and interlinked responsibilities that can, at times, prove challenging to organize and align to support countries to deliver the scale of change necessary. Strengthened collaboration and coordination of international actors both at the global and country level, and with other sectors, is essential.

Some of the challenges with coordination currently include:

- The high transaction costs resulting from a multiplicity of donors operating in the same environment with limited coordination of efforts and/or financing, as described in the Accra Agenda;
- The need for enhanced coordination at the humanitarian-development nexus, including through solutions like sequencing emergency and development spending in education, to avoid education "slipping through the cracks" in fragile and conflict-affected states;
- Improving understanding of what interventions are most effective in improving learning outcomes, but an ongoing need to understand how to translate this into impact at scale and ensure the knowledge is applied by donors and governments alike.

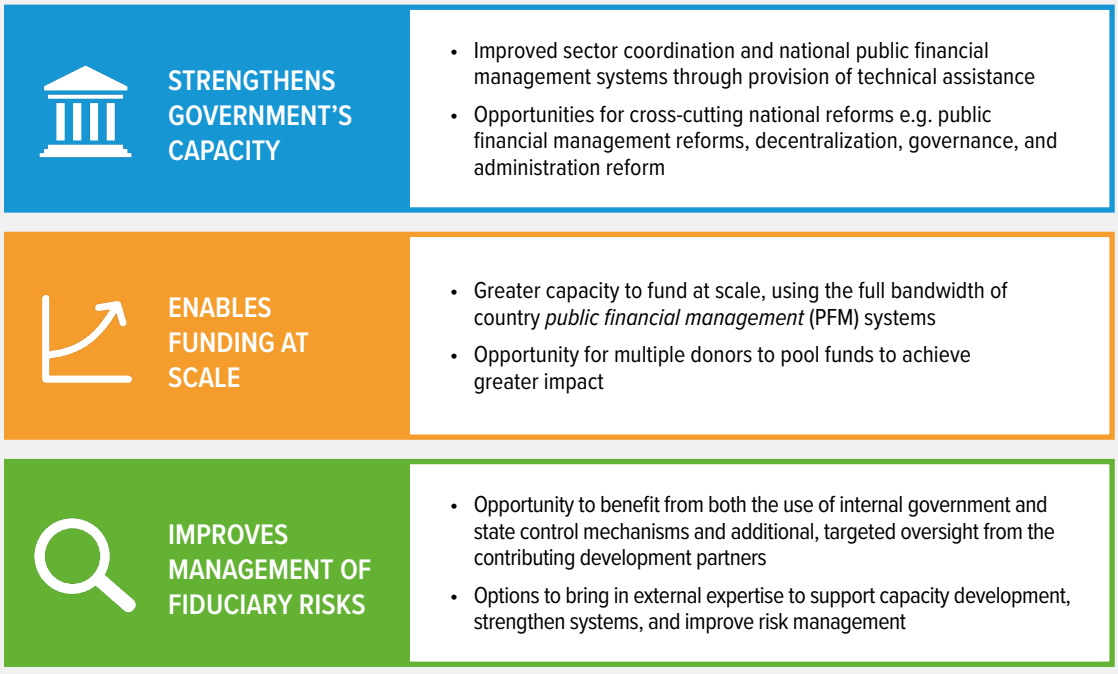
Coordination at country level

Local education groups (LEGs) could play a critical role in country coordination, but evidence on their effectiveness is varied. Led by the government, LEGs are generally comprised of all development partners, including civil society organizations, teacher associations, donors, multilateral agencies, and private sector partners. Well-constituted and efficient LEGs can serve as country-level coordination mechanisms for the education sector and enable education partners to contribute to the education sector at all stages of the education planning, implementation, and monitoring cycle. Potential benefits include helping address and influence education financing and resource use; promoting harmonization and alignment of external funding with national systems; helping avoid fragmentation and resource inefficiencies; and fostering mutual accountability between stakeholders. However, the performance of LEGS has also been limited by certain challenges, including unclear mandates and functions and role vis-à-vis other institutional and sub-sector coordination structures; lack of a balanced agenda for addressing sector issues; lack of up-to-date information, evidence, and analysis; inconsistent participation and lack of continuous dialogue through the pol-

icy cycle; poor representation and inclusivity by stakeholders; absence of regular monitoring and reporting; and difficulties in sustaining country leadership. In response, GPE developed *Principles towards Effective Local Education Groups* to facilitate reflection and guide countries in optimizing the potential of LEGs. It proposes some critical organizational and collaborative capacities for effective LEGs to optimize their potential (GPE, 2020).

In addition to coordination through LEG structures, pooled funding may also be explored to streamline funding at country level. Education sector budget support is a good option for recipient countries with relatively strong systems, however its associated fiduciary risk with weaker systems is often high. Education sector pooled funds can provide an alternative mechanism to engage with country systems and pool donor resources with the reassurance of adequate fiduciary management and effective and timely use of resources (Figure 11). Such funds make use of country systems, while using a partner country's public institutions, human resources, procedures, and tools as the mainstays for implementation. They allow the option of tracking the pooled resources in the national budget and, hence, targeting of additional fiduciary risk management controls (in contrast to full budget support, where external aid cannot be distinguished from the regular national budget). Pooled funds can potentially provide financing for education expenditure across both investment and (usually non-wage) recurrent activities, in line with the national education sector plan (ESP) and country needs for funding at scale. They may also allow easy access for multiple development partner contributions, and opportunities for greater volumes and better predictability of funding over time, as well as reduced transaction costs and economies of scale.

FIGURE 11 **Education sector pooled funding mechanisms offer a range of potential benefits**



Coordination at the humanitarian-development nexus

Education is critical from the earliest stages of a crises. There has been long-standing consensus across both humanitarian and development agencies that "education reconstruction begins at the earliest stages of a crisis… [and should be] undertaken concurrently with humanitarian relief" (OCHA, 2017, as cited in Mendenhall, 2019). For education, this means that education specialists, ministry authorities, donors, and policymakers, amongst others, need to find ways to improve coordination across their humanitarian, development, and peacebuilding activities as they consider both short- and long-term education responses (Mendenhall, 2019).

Actors should align around existing plans. Education actors in crisis contexts should align around and build on existing and, where possible, country- and government-led Humanitarian Response Plans, Refugee Response Plans, Education Cluster Strategies, Comprehensive Refugee Response Frameworks, Education Sector Plans, and Transitional Educations Plans. The plans and programs should coordinate on data and strategies to ensure concerted efforts by all stakeholders. This means ensuring that national education sector plans address the needs of children and youth in crisis contexts and that humanitarian plans align with national priorities and processes (INEE, forthcoming).

Early action is needed to align different coordination mechanisms. Different mechanisms for policy dialogue like the country Education Clusters, Refugee Education Working Groups and Local Education Groups (LEGs) (which often have common membership and participation) should coordinate efforts from the outset and take up multi-year planning to advance humanitarian-development coherence. Early and aggressive efforts to coordinate and align will enable humanitarian and development actors to avoid duplication, parallel dialogues, and fragmentation, and in turn result in strengthened local capacities and delivery of results at scale. Coordination is also key at the funding and program design levels, and critically, to build resilience of education systems. This can be facilitated, by example, through LEG participation in the Steering Committee which develops Multi-Year Resilience Programs to ensure coordination in planning and implementation.

In-country leadership of the coordination is key. Resident Coordinators (RC) and Humanitarian Coordinators (HC) represent the UN Secretary-General's office and lead and coordinate the Humanitarian Country and UN Country Teams, including the Inter-Agency Standing Committee's Education in Emergency Cluster. In refugee responses the Refugee Coordinator (or his/her government counterpart) play a key role in inter-sectoral coordination of efforts to meet refugee needs. In non-refugee settings, HCs/RCs work with national governments to deliver education and other basic services to internally displaced populations (IDPs). In complex emergencies where the host government is unable or unwilling to deliver basic services like education, this coordination structure is particularly relevant (ECW, 2019). As many HCs are also serving as RCs, they are in a unique position to drive forward enhancements to the humanitarian-development coordination structure through the New Way of Working by ensuring coordination takes place at the point of delivery and is grounded in UN conventions and principles. Leveraging the oversight and leadership of the UN representative in country also ensures a multisectoral approach to education, including protection and gender, to more holistically advance the SDGs (ECW, 2019).

The Global Compact on Refugees calls for inclusion of refugees into national education systems. In refugee situations, UNHCR—as the guardian of the 1951 Convention Relating to the Status of Refugees—and the host government, coordinate the response through Education in Emergency Working Groups. The optimal response lies in applying the New Way of Working (which can be led by the aforementioned RCs/HCs) in combination with the comprehensive approach outlined in the Global Compact on Refugees (ECW, 2019).

Financing and coordination both need to grow. Greater financing of education for displaced children is needed but, as donors channel more funding into needs for children in crisis, coordination efforts will need to grow apace. At the 2019 Global Refugee Forum, the World Bank, GPE, and ECW made a joint decision to improve collaboration, coordination, and financing of global efforts in support of education for refugees and host communities (World Bank, GPE, & ECW, 2019). This includes working together to provide increased and improved financial support and technical assistance to countries hosting large refugee populations to meet their educational needs through their national education systems; and supporting governments and country-level partners to coordinate and align planning, financing, and delivery of education assistance to host communities and refugees. In addition to this commitment, GPE's approach to accelerated financing ensures systematic consultation with both the LEG and Cluster (where active), and GPE's close coordination with other actors (such as ECW, UNICEF, UNHCR, Save the Children, and other INGOs) is focused on maximizing complementarity and avoiding duplication.

Coordination at global level

We need a streamlined, accountable, and agile global education architecture to respond to the scale of the current crisis and the changing landscape of education. The global education architecture must guide and support learning continuity and educational recovery, mobilize funding, and forcefully make the case for education as a political priority for every nation. There is an opportunity to build upon the momentum and spirit of collaboration created by the current crisis to both strengthen synergies and efficiencies for the crisis response as well as lay the foundation for elaborating a stronger, better adapted global education architecture in the future.

■ Build on the current momentum

The pandemic has provided some promising examples of inter- and cross-sectoral collaboration, for example, related to *encouraging awareness and joint action around the education crisis* as exemplified by the Save Our Future campaign which is rallying donors, CSOs, and youth to protect education and bringing international actors together around a joint narrative for global action set out in this white paper; related to *policy guidance*, as shown in the joint policy framework on the reopening of schools (UNESCO et al., 2020); or related to *increased coordination and collaboration* among donors and implementing agencies in the crisis response in countries, as demonstrated by GPE's and ECW's accelerated and crisis funding windows and at global level through the Global Education Forum. Global education partners have increasingly demonstrated their capacity and desire to improve coordination and efficiency in response to crisis. This is the momentum we need to build on going forward.

New types of partnerships have also emerged. UNESCO established the Global Education Coalition that includes more than 150 members, including multilaterals, regional organizations, development banks, public and private partners to support countries in designing and scaling up remote learning solutions. This Coalition offers an innovative framework for intervention, mobilizing non-traditional partners, in-kind contributions, and leading to new global initiatives, including through the three flagships (gender, teachers, connectivity). We are also witnessing increased inter-sectoral cooperation, strengthening the vital linkages between education, health, nutrition, and social welfare, for example through strengthened collaboration with WFP and WHO. Global coordination must now be geared to building back better and aim to ensure that every child and youth has access to education, whether remotely or in the classroom. In the short term, the starting point is to build upon the lessons learned from the first period of the pandemic and the collaborative approaches geared towards a single common purpose: learning continuity.

We must collectively mobilize over the next 12-18 months around a set of priorities drawing on actions aggregated from this white paper. Commitments made at the extraordinary session of the UNESCO-convened high-level Global Education Meeting in October 2020 must be translated into a small number of priority actions and their financing, implemented through a harmonized global coordination process, must build on joint policy and advocacy actions led during the pandemic.

■ Develop a longer-term vision to renew the narrative on education and development

At the same time, rethinking education and development approaches requires a renewed narrative that responds to this changing reality. This requires going beyond a sole focus on the learning crisis further exacerbated by the COVID-19 disruption. Given the critical role of education, training, and research for the realization of the wider SDG ambition, it is important to keep in view the full scope of the SDG 4 agenda. Similarly, the international and development narrative must go beyond a sole focus on low- and middle-income countries to address universally shared public policy and development challenges across all countries that the pandemic has made starkly clear.

Photo by UN Photo/Martine Perret

We need to address proliferation and fragmentation. In rethinking approaches to education and development in a post-COVID world, it is also necessary to address the proliferation and fragmentation of global education and development efforts. The current governance landscape is characterized by a range of international players providing support to country action through multiple platforms and processes, with sometimes overlapping mandates and interventions. This limits our ability to leverage the full potential of existing political, financial, and technical resources to advance education in the pursuit of collective development goals and commitments. To accelerate national progress, priorities need to be better aligned, duplication of efforts eliminated, and competition for funding reduced.[10]

The SDG Education 2030 Steering Committee plays a central role. While the multi-stakeholder SDG Education 2030 Steering Committee is the legitimate global multi-stakeholder consultation and convening platform to ensure coordination and synergy around SDG 4, it is not sufficiently linked to global financing decisions, nor to existing education sector coordination mechanisms at regional and country levels. The disconnect between the political, technical, and financial components, and between the global and local (regional/country) levels, of these diverse processes and structures need to be addressed in order to ensure more coherent and effective policy guidance, financing flows, and action to support national education development. A new global education coordination mechanism, building on the existing SDG Education 2030 Steering Committee and overseen by UNESCO, could be composed of different pillars: a high-level political body, a data and knowledge hub to feed policy directions, and a finance hub to ensure complementarities and synergies related to funding gaps. The profile and functions of a renewed global education ecosystem needs to be discussed in a consultative manner with all concerned parties in the coming months.

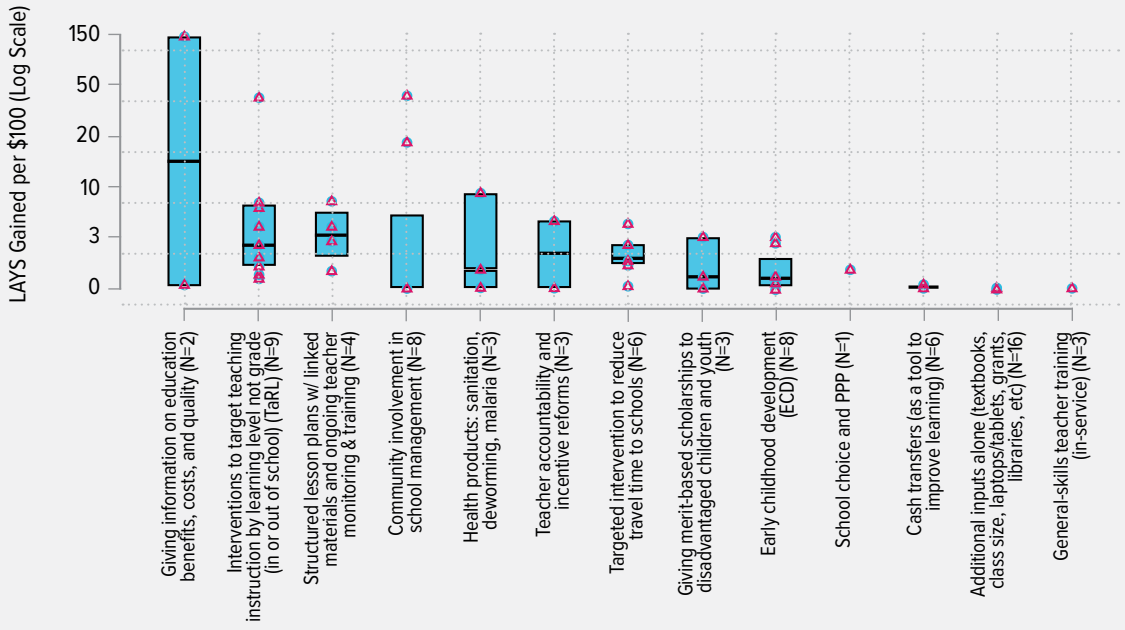
New proposals should be anchored in a set of key principles, namely:

- greater simplification and efficiency;
- better linking of policy steering and finance;
- greater accountability through more robust data and evidence and stronger accountability mechanisms;
- a shared sense of collective responsibility.

Achieving greater equity and effectiveness of international funding

The impact of education funding depends not just on quantity but also on quality of spending. The cost effectiveness of donor-supported interventions varies significantly and new knowledge about what policies and interventions are most impactful is continuously evolving (Figure 12). However, international support for evidence generation and use of evidence on "what works" has been mixed. While there has been a welcome increase in the number of impact evaluations carried out in education, implementation is less well developed. Overall international funding for global public goods has been relatively low (compared to other sectors). In addition, the commitment to using evidence to inform programming and to be held accountable for this has varied across different development partners.

FIGURE 12 **There are vast differences in the cost-effectiveness of education interventions**



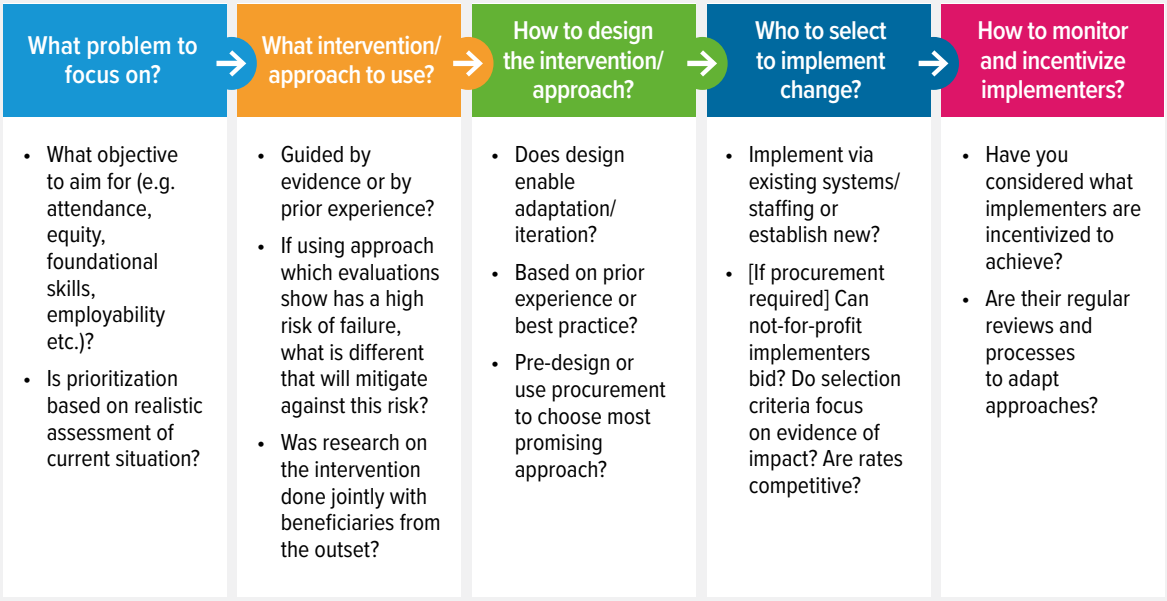
This graph is adapted from Angrist et al. (2020). The authors review 150 studies across 46 countries and express outcomes for policies and interventions in terms of a unified education measure: learning-adjusted years of schooling. A related paper first used the learning-adjusted years of schooling measure at the macro country-level (rather than at the micro level for specific interventions) as described in Filmer et al. (2020).

Photo by Asian Development Bank/Abir Abdullah

We have better information now on which interventions generally work and which are less likely to be effective. There are now a number of interventions which have been proven to result in impact on learning in a cost-effective manner in diverse settings. Examples include provision of quality pre-primary education for marginalized children and differentiated instruction to ensure children receive instruction which is tailored to their level of understanding (Engle et al., 2011; McCoy et al., 2016; Snilstveit et al., 2016). More recently, education research is also paying closer attention to local and contextualized solutions and how those can be optimally scaled in low-performing schools. For example, Data Must Speak positive deviance research aims at leveraging existing education datasets to identify positive deviant practices and behaviors in high-performing schools and learning how to scale them effectively to low-performing schools operating in similar contexts. Identifying positive deviant schools, behaviors, and practices from local settings often has better persuasive power for replicability and low implementation costs as many conditions of the context can be understood and leveraged, enhancing overall cost effectiveness in addition to intervention efficacy (Box 11). New research on the effectiveness of interventions is regularly published, and practitioners and policymakers will need to maintain awareness and knowledge of new findings. There is an increasing body of evidence that suggests that to maximize research use, it is crucial to co-create research design alongside beneficiaries from the outset, in particular governments and other implementation actors. Comparison features like the use of learning-adjusted years of schooling, as led by the World Bank, can assist in assessing these interventions. Nevertheless, there is still a need for more research evidence, particularly on the central issues of how to improve teaching quality at scale and how to adapt education systems so they incentivize and drive improvements in learning outcomes.

At the same time, rigorous impact evaluations have also identified approaches which have a high rate of failure and can be deprioritized. For example, EdTech interventions to deliver personalized learning directly to students and interventions based on the provision of technology or materials *alone* have generally not improved learning outcomes in developing countries (Global Education Evidence Advisory Panel, forthcoming; Snilstveit et al., 2016). Similarly, vocational training interventions as a means to improve employability have a relatively poor record of success and, at secondary school level, may be less cost-effective than standard academic education (Betcherman et al., 2004; Kluve et al., 2019; McKenzie, 2017; Tripney & Hombrados, 2013). As with effective interventions, our knowledge of ineffective interventions is always growing and will continue to evolve, but we have enough awareness of what likely will not work now to consider carefully if interventions with weak evidence of impact should be replicated. The low likelihood of success based on the evidence for these types of interventions does not mean that they should never be considered. However, to ensure value for money, it would be prudent for governments, and their development partners when collaborating, to set a high bar for evidence if one of these interventions is proposed. This will help ensure that interventions with a low likelihood of success based on the evidence are only implemented if there is a plausible reason to expect a better outcome than has typically been found.

FIGURE 13 **Decisions to make in the implementation of education interventions**



Implementation can be as important as selection of interventions. As shown in Figure 13, ensuring that an intervention with evidence of impact is selected is only one part of a multi-phase process towards ensuring impact. System-wide progress cannot be achieved through narrow — even effective — interventions alone but will be advanced through a coherent system in which all stakeholders are accountable for progress on learning. Progress requires building and securing stakeholder buy-in from the research phase and appropriately managing the system, which is a primarily government led and initiated area of change. For this reason, lessons from evidence show that when an intervention is being co-created and co-implemented with the government from the outset and if the innovation is proven to be cost-effective, the chances of successful scale-up is greater. Improved sector planning which incorporates political realities and system capacities can support this. Only 57 percent of education sector plans were assessed as achievable in a past review, signaling room for improvement for many governments in their post-pandemic strategic planning and in identifying and addressing implementation challenges (GPE, 2018). While there has been an overall improvement in weight given to the achievability of plans, it is still not uncommon for education sector plans to promote strategies which are not fully implementable or aligned with the political reality and are more aspirational than actionable (Universalia, 2020).

The education sector will need to increase knowledge on "implementation science" and "scaling science" to ensure the rich knowledge base on what interventions work to generate learning is translated into global progress on SDG 4. Governments and development partners are aware of a range of causes for weak implementation and failed scaling, but gaps nonetheless persist. Poor information, varied capacity between different stakeholders across levels, political resistance, a lack of training or buy-in from various actors, or a lack of accountability hamstring progress. Reforms and tasks are often fragmented across varied departments within an education sector, which makes it hard to understand who is accountable (World Bank, 2018a). Yet the systematic study of

the factors leading to successful implementation of education programs is still nascent (Albers & Pattuwage, 2017). Governments seeking support on how to resolve these issues are turning to solutions and resources beyond the education sector, including private sector consulting firms and experts (Williams, forthcoming). The evidence for approaches such as deliverology, which aim to implement change at scale, remains weak, but demand is growing nonetheless (Gold, 2017). This suggests that leaders are hungry for more expertise on how to make rapid progress on their policy goals and that these needs may not be fully met by the existing support provided by education sector experts and partners. Governments can seek to meet this gap by investing in their local ecosystems of researchers and experts, but development partners can also provide support by meeting this gap in expertise and demand for technical assistance to better assist governments to operationalize their education reforms and implement and scale more effectively.

Box 11: Supporting data-driven decision-making in Nepal

UNICEF has been supporting the government of Nepal on evidence-informed policymaking through the Data Must Speak program since 2015 (Jarousse et al., 2019). Data Must Speak has supported Nepal to develop an equity index which identifies disparities amongst districts. This allows the government to target resource support to under-resourced schools and to identify and analyze the causes of disparities for the poorest-performing schools. The development of this index was part of the sector plan and incentivized through a disbursement-linked indicator in the plan, which was also financially and strategically supported by GPE and other donors. The program has also improved the quality and availability of EMIS data and has been flexibly adapted to support a move to decentralization.

Systematic appraisal of evidence in the planning and implementation of development interventions is critical. It can be quite difficult to examine an intervention delivered in a specific context and determine whether it has been informed by the evidence unless you are an expert in both the evidence base and the context in question. This can limit the ability to hold implementers to account for using evidence. However, there is evidence that the extent to which policymakers *are transparent* about how they have drawn on evidence at the planning stage is a good proxy indicator for how evidence informed an intervention will be (Rutter & Gold, 2015). In other words, where implementers have set out a clear description of how they gathered evidence, assessed it for quality and synthesized it, the intervention itself is far more likely to be well informed by available evidence. Assuming that this relationship is causal, a relatively simple approach that governments or development partners can use to improve the effectiveness of their programming is to set out clearly how they will gather, appraise, and use evidence in their design processes. Engagements through platforms like the Global Education Evidence Advisory Panel, an independent body convened jointly by the FCDO and the World Bank and hosted by the Building Evidence in Education group (BE2) can also support ongoing efforts of policymakers in low- and middle-income countries to make evidence-based decisions and build their own expertise.

Development partners could consider how well their own incentive structures are aligned with effectiveness. There are criticisms that the incentive structures within some international development organizations could be better aligned with the aim of achieving impacts on learning. Development partners are sometimes perceived to be more focused on dispersal of funds than on

providing high-quality evidence-informed project design and oversight (Congressional Research Service, 2020; Bhattacharya et al., 2018). There are also concerns about the increasing emphasis that some bilateral donors are placing on national interest and how that will affect education programs which deliver for the most marginalized (Gulrajani, 2018; Gulrajani & Calleja, 2019; Laifer & Kitchen, 2017). As is true for country governments, even when development partners are focused on achieving impact, there can be a political drive to prioritize easier to achieve and communicate access outcomes rather than much more complex issue of learning (DFID, 2018b).

Photo by Dominic Chavez/World Bank

Innovative financing has the potential to help actors maintain a focus on impact and effectiveness. Performance-based financing mechanisms— where compensation is partially or fully contingent on results achieved—can support alignment of actors around a common learning agenda through the creation of incentives and accountability structures. Outcomes funds and impact bonds are being increasingly contracted in developing country contexts, and institutions such as the World Bank, USAID, and the FCDO are increasingly using results-based contracts in their programs. These experiences have informed the development of the Education Outcomes Fund (EOF), which pools financing from aid agencies, philanthropic donors, foundations, and governments, and partners with government to deploy those resources toward pay-for-success education programs. Investors or providers implementing the interventions are paid in proportion to their performance against the target outcome metrics, such as improved learning.

Financing needs to be matched to need. Even the most effective interventions with strong scientific proof and well-designed implementation plans will not be impactful on gaps in learning if financing is not matched with geographic areas of need. At present, international education aid distribution across countries is not sufficiently equitable. Aid is not prioritized to the countries with the greatest learning needs. For example, recent analysis of nine African countries shows a large mismatch between the number of children in need and the distribution of international education aid across countries (Mingat, 2019). Particularly in the pandemic and post-pandemic environment where demand and need for education financing is and will be high, equitable spending will be as important as effective spending to ensure impact.

☑ Actions to use resources better by improving evidence generation, coordination, alignment, and effectiveness

IMMEDIATE ACTIONS

- National governments with support from development partners to **improve donor coordination at a country level** with the aim of reducing administrative burden and transaction costs for countries, enabling alignment with country priorities. This could include exploring the use of pooled funding mechanisms at country level.
- Development partners and humanitarian partners to commit to **improve coordination around education in crisis at country level** through multisectoral coordination through UN structures and conventions, close coordination of LEGs and Education Clusters from the outset of a response, and better harmonization and sequencing of efforts including around budgets, resources, etc.
- UNESCO to **convene a working group to lead a consultation on a global education coordination mechanism.**
- Development partners to **commit to more evidence-informed practice by including a full and transparent appraisal of evidence considered in planning documents for projects**, investing in evidence-based policies, practices, and interventions and limiting investment in projects which have generally not achieved their expected impact except where there is strong evidence that they will succeed where others have failed.

MID- TO LONGER-TERM ACTIONS

- National governments, with support from development partners to **develop capacity in effective evidence generation, implementation, and evidence-informed policy making**. Donors to invest in global public goods that can support and leverage reforms at country level. Donors to continue to explore, pilot, and evaluate the most effective ways to maximize impact including through results-based approaches where financing is linked to outcomes.

Youth Call to Action

We believe that education is the core foundation that provides opportunities for young people to thrive and maximize their potential. Every child should have the same quality of education, and the same opportunity to thrive in their personal and professional lives in spite of their background. Education should equip young people with the necessary tools, both hard and soft, to be able to navigate the ever-changing world that we live in. Our education should reflect the diversity of thought, world views, and perspectives that is displayed in the real world. It should aim not to solely teach children to memorize facts, but also to teach them critical thinking, understanding, compassion, and problem-solving. It should help students find what they're good at and pursue it, creating a holistic process unique to every student. Our education should shift in purpose, from competency and competitiveness in the marketplace to co-existence and sustainable living. Sustainability should be a transverse, universal concept embedded in all curriculum. Education should be the center of every government's focus, including budgetary allocation, as without it, the futures of young people around the world are at stake. We also believe that education should foster democratic student government in all education systems and at school, regional, national, continental, and global levels that enables all students to have a voice in education decision-making, advocate for themselves, and have the capacity to collectively implement their visions to improve their school communities.

We believe this because for too long formal education spaces have contained and marginalized the voice of young people, especially the voices of youth in poor and vulnerable communities. For too long, education has not been given the attention it deserves by our governments. Our current education systems are outdated, and do not adequately prepare us for the different challenges in the 21st century. Despite being end users, students have been largely pushed to the margins and have had to conduct advocacy from the outside looking in instead of having a seat at the decision-making table. In many cases, students have to resort to physical demonstrations like protests to make their voices heard, often at risk of injury, persecution, and death. Meanwhile, without student perspectives, education policy is less informed and less capable of improving the student experience.

We believe that if we are successful in educational reform, we will see a difference in the accessibility of education, the quality of education, representation in decision-making on education, the opportunities available to young people, and the overall state of the world. Rethinking our education will ensure a better quality of life for all, delivering the future that we want. A future where there is gender equality, concern for community and environment, racial and ethnic equality, equal opportunities, peace, and political stability.

Just imagine with us what this future could be...

This statement was developed by the Save Our Future Youth Caucus—a group of twenty-five youth activists from across the globe representing a variety of sectors including social justice, health, gender equality, climate change, and sustainability. The statement also summarizes the main findings from a youth survey conducted online with responses from 200 youth around the world. This statement also formed the basis for the youth-led creation of an innovative digital excursion–the Save Our Future Escape Room. Explore this interactive experience and see how inter-generational collaboration and young innovators can help #SaveOurFuture: http://bit.ly/SOFEscapeRoom

DEFINITIONS

We have used the definitions as shown below:

21st century skills: Used to describe abilities and attributes that can be taught or learned in order to enhance ways of thinking, learning, working, and living in the world. (Vivekanandan, 2020 – adapted from Binkley et al., 2020). These include creativity, innovation, critical thinking/problem-solving/decision-making, learning to learn/metacognition, communication, collaboration (teamwork), information literacy, ICT literacy, citizenship (local and global), life and career skills, and personal and social responsibility (including cultural awareness and competence).

Development partners: Collective term referring to all partners which seek to support development. This may include bilateral donors, civil society organizations, multilateral development banks, multilateral organizations, philanthropic donors, private foundations, and private sector organizations.

EdTech: Technologies that are used in education— in ministries, schools, communities, and homes. This includes use of both digital technologies and processes, as well as non-digital technologies such as radio and television.

Education workforce: Used to describe teachers and all people who work directly to support the provision of education to students in education systems. This includes people working across all functions relevant for providing education: leadership and management, teaching and learning, student welfare, operations, and administration. The education workforce includes both compensated and volunteer roles and even communities and families when directly involved in formal education processes with schools.

Foundational learning: Often considered to encompass basic literacy and numeracy, we also include foundational socio-emotional skills among the essential foundations which children need to thrive and learn effectively as they move through the school system.

Marginalized children: This paper refers broadly to marginalized children, which is inclusive of but not intended to be limited to children in poverty, children with disabilities, refugee, migrant, and displaced children, children associated with armed forces or groups, children from ethnic and linguistic minority groups, children out of school prior to COVID-19, and girls. We acknowledge that these identifying factors often intersect to create compounding circumstances of marginalization.

Progressive universalism: Progressive universalism means expanding provision of quality education for everyone while prioritizing the needs of the most marginalized. It provides a guiding principle to inform spending decisions, recognizing the scarcity of public funding. When balancing spending across different levels of education and population groups, decision-makers should prioritize the poor and early years where social returns are highest and minimize household spending on basic education by the poor.

Socio-emotional skills: Socio-emotional skills are the abilities to regulate one's thoughts, emotions, and behavior. The skills are commonly classified into five dimensions: openness to experience (open-mindedness); conscientiousness (task performance); emotional stability (emotional regulation); extraversion (engaging with others); and agreeableness (collaboration) (OECD, 2017).

School/schooling: This term refers to educational provision from pre-primary to the end of upper secondary school.

We/our: Throughout the text the terms "we" and "our" refers to the group of organizations who have issued and/or endorsed this white paper.

ACRONYMS

We have used the acronyms as shown below:

ADB: Asian Development Bank

BMGF: Bill and Melinda Gates Foundation

COVID-19: coronavirus disease

COVAX: Conveners of the COVID-19 Vaccine Global Access

CSOs: civil society organizations

CCLPs: Community Cluster Learning Pods

DMS: Data Must Speak

DFID: Department for International Development (used to refer to prior programming/funding before transition to FCDO)

ECW: Education Cannot Wait

EDT: Education Development Trust

EGMA: Early Grade Mathematics Assessment

EMIS: education management information system

EdTech: education technology

FCDO: Foreign, Commonwealth, & Development Office (formerly DFID)

FLC: Foundational Learning Compact

GAVI: Global Alliance for Vaccines and Immunisation

GPE: Global Partnership for Education

HC: humanitarian coordinators

IDPs: internally displaced persons

IFFEd: International Finance Facility for Education

IFRC: International Federation of Red Cross and Red Crescent Societies

ILO: International Labour Organization

INEE: Inter-agency Network for Education in Emergencies

ITU: International Telecommunication Union

IMF: International Monetary Fund

LIC: low-income countries

LMIC: lower-middle-income countries

LEGs: Local Education Groups

SDGs: UN Sustainable Development Goals

SMCs: school management committees

ODA: official development assistance

OER: open educational resources

OCHA: United Nations Office for the Coordination of Humanitarian Affairs

RC: resident coordinators

TaRL: Teaching at the Right Level

T-TEL: Transforming Teacher Education and Learning

TPD: teacher professional development

TVET: Technical and Vocational Education and Training

UNICEF: United Nations Children's Fund

UNESCO: United Nations Educational, Scientific and Cultural Organization

UNFPA: United Nations Population Fund

UNHCR: United Nations Refugee Agency

UNDP: United Nations Development Programme

USAID: United States Agency for International Development

USFs: Universal Service Funds

UNRWA: United Nations Relief and Works Agency for Palestine Refugees in the Near East

PAL: People's Action for Learning Network

WASH: water, sanitation, and hygiene

WHO: World Health Organization

WFP: World Food Programme

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