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TEACHER TRAINING AND SUPPORT IN AFRICA DURING THE COVID-19 PANDEMIC

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- African Population and Health Research Center (APHRC)



Ushirika wa Maendeleo ya Elimu Barani Afrika
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Teacher Training and Support in Africa during the COVID-19 Pandemic

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This report is one of a series produced through the KIX COVID-19 Observatory. The aim is to inform decision-makers, donors and education practitioners with emerging evidence on education policy and practice responses to the pandemic in Africa.

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About the Observatory

The KIX COVID-19 Observatory is supported by the Global Partnership for Education (GPE) Knowledge and Innovation Exchange (KIX), in partnership with the International Development Research Centre. The views expressed herein do not necessarily represent those of GPE, IDRC or its Board of Governors.

The Observatory is monitoring pandemic responses in the education systems of 40 GPE partner countries in Africa and is collecting emerging research evidence on the topic. Emphasis is on the impact of the pandemic on the operation of education systems and the wellbeing of learners.

The Observatory is implemented by a consortium of [ADEA](#) and [AU/CIEFFA](#). [APHRC](#) and the [UNESCO Institute for Statistics](#) provided technical support.

For More Information

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Executive Summary

This report synthesizes available evidence on the policies and practices of 40¹ sub-Saharan African (SSA) partner countries of the Global Partnership for Education (GPE) with respect to teacher training and support during the COVID-19 pandemic. The synthesis was conducted using rapid scoping reviews, evidence mapping, and the team's expert knowledge of health and education issues in Africa. In addition to examining country responses to teacher training and support, this report identifies challenges countries encountered in meeting the needs of teachers during the COVID-19 period, and emerging areas of research focus. A series of recommendations are presented in the final section.

Educational Responses on Teacher Training and Support during COVID-19

The review of policy and practice responses revealed that GPE partner countries centred their teacher training and teacher support on six areas: (i) development and use of distance learning solutions (DLS), (ii) support to school children affected by gender-based violence (GBV) and mental health problems, (iii) supporting vulnerable children, (iv) school reopening preparations, (v) teachers' overall wellbeing, and (vi) teachers' motivation and incentives.

The teacher training encompassed the development and use of distance learning solutions and pedagogical strategies to ensure continuity of learning and deliver catch-up lessons to mitigate learning loss. DLS tools and platforms included Internet-based platforms and applications as well as radio and television. DLS training also included the creation of teaching materials for learners with special needs, such as large print resources for the visually impaired. All 40 GPE partner countries in Africa provided at least one type of training in using DSL tools and approaches. Of these, 21 countries provided training on the development of lesson plans, teaching plans and guides and instructional models through DLS. Eleven countries trained teachers to use these tools to remotely monitor learning and administer adapted learning when schools reopened. Based on a country's capacity to finance professional development activities, the proportion of teachers trained varied. For instance, more than half of all teachers were trained in Lesotho, Rwanda, and Malawi, while less than 2% were trained in the Democratic Republic of Congo (DRC). In at least five GPE countries, private sector partners worked with government to provide teachers with free or subsidized access to the Internet.

The prolonged school closures due to COVID-19 exposed school children, especially girls, to both physical and psychological violence. Teachers therefore needed training on mitigation strategies and ways to support children exposed to the abuse. Ten of the 40 GPE countries offered teacher training on how to identify and mitigate GBV and refer victims to support services. Teachers also received training on support to vulnerable children – including those with disabilities, displaced school children, and those from poor and/or remote backgrounds. Fourteen GPE partner countries trained teachers to support such vulnerable learners, including through the use of interpretive signing, closed captioning, large print documents, and other audio or visual adaptations. Despite the trainings, gaps remain: 41% of teachers in SSA lack the personal assistants needed to support learners with disabilities.

Training to support preparations for school reopening focused on two main areas: pedagogical preparedness measures, such as adapting teaching strategies to help students catch up, and health and sanitation measures to prevent school-based infection. Eleven GPE partner countries report having trained their teachers on measures to cope with learning loss, which include pedagogical strategies such as Teaching at the Right Level and catch-up teaching. Other aspects of training included how to identify and categorize learners into sub-groups depending on their learning needs, teaching literacy and numeracy skills, and using formative assessment to support learning. Prior to

¹ Benin, Burkina Faso, Burundi, Cabo Verde, Cameroon, Central African Republic (CAR), Chad, Comoros, Cote d'Ivoire, Democratic Republic of Congo (DRC), Djibouti, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea Bissau, Kenya, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Republic of Congo, Rwanda, Sao Tome & Principe, Senegal, Sierra Leone, Somalia, South Sudan, Sudan, Tanzania, Togo, Uganda, Zambia, and Zimbabwe

reopening, teachers were also supported and trained on recommended WASH (water, sanitation and hygiene) guidelines, largely through radio, television and Internet, to prevent school-based infections. Twenty-three GPE partner countries in Africa reported an emphasis on WASH responses as schools prepared to reopen. Sanitation and hygiene training in these countries was accompanied by other WASH measures, including intensive disinfection of schools and the provision of personal protective equipment (PPE).

In addition to training, teachers received a range of support to protect their health and wellbeing, and to motivate them during these difficult times. Thirty-nine out of 40 countries prioritized teachers as frontline workers for protective measures including vaccination and provision of PPE. Teachers were also protected by measures that reinforced social distancing, or provided on-site care for pupils and teachers, to limit their exposure to illness. Some countries also offered psychosocial support to teachers and pursued a range of measures to address the stress and burnout associated with their increased workload. Some 18 countries provided some form of incentive to offset teachers' job losses or increase their motivation. These incentives ranged from salary guarantees and other financial incentives, to the provision of airtime credits or Internet bundles to support them in offering distance education.

Challenges to Enhancing Teacher Training and Support

GPE partner countries have faced numerous challenges in trying to improve teaching effectiveness during the COVID-19 period. Teachers faced the loss of employment and salaries during school closures, with female teachers disproportionately affected due to their dual role as professionals and primary caregivers in their households. Those in the private sector, meanwhile, were largely deprived of professional development opportunities during school closures. Almost all countries lacked adequate financial resources to support teacher training, which meant relatively low proportions of teachers were trained in skills essential to supporting distance learning solutions. Though DLS were essential to sustaining learning continuity during COVID-19, they also widened existing disparities. Online training suffered from Internet connectivity problems common in many SSA countries. The lack of infrastructure to support distance learning was most keenly felt by those in rural and remote areas, while many teachers struggled to adapt DLS tools and approaches to meet the needs of students with special needs. Teachers displaced by conflict likewise faced challenges accessing tools for remote training and teaching that required connectivity.

Emerging Evidence

Emerging evidence on teacher training during the pandemic response relates to three main areas: the lack of teacher preparedness for distance education; the challenges to teachers' social and economic wellbeing during COVID-19; and best practices in supporting and monitoring learner progress. Inadequate ICT (information, communication and technology) skills among teachers was the major barrier to their access and use of distance learning solutions. This was common even in countries with considerable connectivity and digital infrastructure. Research on teacher wellbeing during the pandemic shows that many experienced salary cuts, delayed payments and even job losses. This affected their wellbeing and ability to sustain quality teaching. In terms of supporting learner progress, emerging evidence indicates that accelerated learning, focused on foundational skills, along with enhanced teacher skills development, have positive impacts on children's learning in developing countries.

Recommendations

To better support teachers in facing the challenges presented by the pandemic, our recommendations to GPE partner countries and development actors include the following:

1. Invest more resources in teacher training to enhance pandemic-coping mechanisms, reverse learning losses, and build back better in education.

2. Explore public-private partnerships with digital service providers to expand digital access and facilitate DLS use in training and learning.
3. Explore the best ways to train teachers in assessing and providing feedback and guidance to learners during emergencies, using DLS.
4. Prioritize strengthening teachers' capacity, as frontline workers, to respond to the needs of vulnerable school children within their communities.
5. Incentivize teachers by addressing the challenges that hinder their performance – providing adequate teaching resources, PPE, and monetary incentives, and rewarding those who make noteworthy efforts.
6. Institutionalize a system that enhances teachers' wellbeing during emergencies – including through psychosocial supports.

1 Introduction

To ensure learning continuity during COVID-19, education systems in Global Partnership for Education (GPE) partner countries in Africa provided teachers with training and support to help them adjust to the emerging circumstances. Teachers' presence within communities, and their institutional base within an education system, made them easily accessible and suitable as frontline responders. During COVID-19, teachers were among the earliest to reach communities through outreach initiatives that targeted parents' and learners' overall wellbeing. This was done by creating community awareness and helping provide psychosocial support (Mundy & Hares, 2020; Ngwacho, 2020).

When school closure mandates curtailed these efforts, the need for learning continuity required efforts to ensure teachers were prepared to respond remotely. These closures exposed the gaps and dire need for distance learning solutions (DLS) and related digital skills (GPE, 2020a-z; UNESCO, 2020a).

In light of this, countries made noteworthy efforts to ensure that schoolchildren continued learning virtually during the school closure periods, and resumed onsite learning in conducive environments. Their efforts to ensure learning continuity could not succeed without addressing the role and capacity of teachers, and pre-existing teaching barriers. For instance, teachers in sub-Saharan African (SSA) contend with large class sizes, non-participatory education reforms, limited material and financial resources for schools, and inadequate resources for teacher professional development (TPD) initiatives (Akyeampong, 2017; Milondzo & Gumbi, 2011; Barron, Cobo, Munoz-Najar & Ciarrusta, 2021). In fact, evidence shows that a limited emphasis on digital-aided learning in professional development largely contributed to the DLS teaching skills gap witnessed during the pandemic, when teachers most needed these ICT skills (UNESCO, 2020a; Teacher Task Force, 2020).

This synthesis focuses on teacher training and support domains provided during school closure and reopening periods across the 40 GPE partner countries in sub-Saharan Africa. Our review of evidence shows that this training and support focused on six inextricably linked themes (Government of Côte d'Ivoire, 2020; Government of Chad, 2020; Government of Mali, 2020; Government of Mauritania, 2020; GPE, 2020d-m; GPE & Government of Guinea, 2020; GPE & Government of Madagascar, 2020; World Bank, 2020a). Of these six, four relate to teacher training, and another two relate to other areas of teacher support.

Teacher training covered:

1. *Development and use of distance learning tools and approaches.* This included the development of appropriate virtual lessons, lesson guides, teaching plans, and instructional models. It also involved the use of distance learning tools, and catch-up learning.
2. *Mitigation and response strategies for gender-based violence (GBV) and mental health problems.* Related training focused on how to identify school children exposed to violence and make appropriate referrals.
3. *Support to vulnerable school children.* This area of training aimed to minimize the exclusion of vulnerable children as education systems took measures to curb the spread and impact of COVID-19. Training helped teachers to focus on learners with special needs, displaced school children, and children from remote and low-income backgrounds.
4. *Preparations for school reopening.* This area of training aimed to enhance school readiness for reopening after the long closures occasioned by the pandemic, and focused on both general preparedness and water, sanitation and hygiene (WASH).

Other areas of teacher support addressed:

1. *Teachers' overall wellbeing*, with a view to minimizing their risk of infection, and
2. *Motivation and incentives* to ensure their emotional and financial needs are addressed.

This report is one of several outputs of the Knowledge and Innovation Exchange (KIX) COVID-19 [Observatory](#), which aims to provide policymakers in GPE partner countries with actionable evidence to inform their decisions. The Observatory collects, synthesizes, and mobilizes evidence about COVID-19 responses in primary and secondary education systems in GPE partner countries, focusing on both the operations of these systems and the wellbeing of children. Policies and practices related to teacher support in GPE partner countries in Africa are tracked, and continue to be updated, using a live [spreadsheet](#). The Observatory also tracks emerging research on COVID-19 education responses, including on interventions being tested and evaluated.

The authors of this report applied a systematic and exploratory approach to identify, gather, analyze, and synthesize information on policies and practices from multiple sources. We utilized scoping reviews to understand past and emerging policies, practices, and teacher support strategies used by various countries to respond to COVID-19 education-related challenges. The report covers the period from about the first quarter of 2020, when schools initially closed, to the end of July 2021, when most education systems in GPE partner countries had begun returning to normalcy.

Sources of information included planning, policy and programming documents of:

- Ministries of education in GPE partner countries;
- Regional and global organizations, including the African Union, KIX regional hubs in Africa, GPE, the International Development Research Centre (IDRC), United Nations Educational, Scientific and Cultural Organization (UNESCO), UNICEF, United Nations High Commissioner for Refugees (UNHCR), the World Bank, and the World Health Organization (WHO); and
- Researchers and scholars such as those based in universities and research institutions.

2 Teacher Training during School Closure and Reopening

In this section, we synthesize policy and practice responses on teacher training in the four inter-related areas outlined above:

- Development and use of distance learning tools and approaches
- Mitigation and support strategies for GBV and mental health problems
- Support to vulnerable school children
- Preparations for school reopening

Highlights

- **All 40 GPE partner countries provided at least one training in DLS tools and approaches** during school closures, though not all teachers were reached. Proportions of teachers trained ranged from a high of nine out of ten to less than one in ten.
- **10 of the 40 GPE countries offered training on GBV-related issues** including identification, mitigation, and referral mechanisms for learner victims.
- **14 GPE partner countries provided training to address the needs of vulnerable learners**, though this training reached fewer than one-third of teachers in most of these countries.
- To prepare for school reopening, **11 countries offered some form of training in pedagogical approaches** to help students close the “lost learning” gap, while **23 emphasized WASH responses**.

2.1 Distance Learning Tools and Approaches

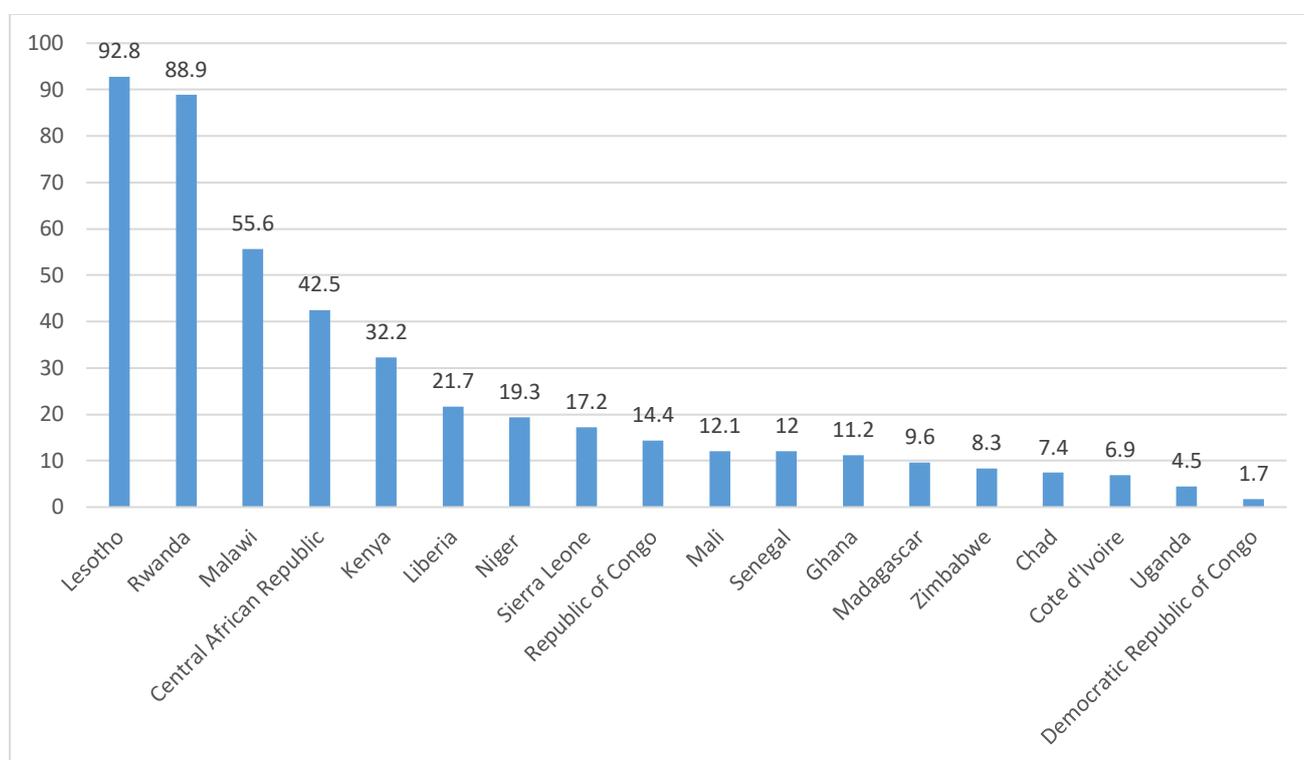
Following school closures, education stakeholders opted for alternative learning approaches to enable the continuity of learning. Among the key initiatives adopted was the use of technology to promote distance learning. As a result, there was a need to build teachers' capacity in the use of these tools and approaches. Governments and development partners (including GPE, the World Bank, and others) supported initiatives aimed at equipping teachers with the knowledge and skills needed to navigate distance learning approaches. At least one teacher training/capacity building activity took place in each of the 40 GPE partner countries during school closures, though not all teachers were reached. For example, all 40 countries reported having trained their teachers on the use of varied distance learning solutions adopted for distance teaching, such as radio, TV, smartphone apps (short message services and WhatsApp), and online platforms (YouTube, Google Classrooms, Zoom etc.). Of these, eleven GPE countries trained their teachers on how to use these tools to monitor distant learning during school closures, and to administer accelerated and/or remedial learning upon school reopening (GPE, 2020a-za).

Twenty-one GPE countries also reported training their teachers in the development of distance learning solutions. Capacity building in this area took place virtually. In addition to helping teachers navigate various education technologies, such as Google Classroom, provided by the government or other education funders, this training covered how to develop appropriate lessons, lesson guides, teaching plans, instructional models and approaches that can be used remotely.

Training was administered by private institutions to some better-resourced schools (mostly private schools), while government agencies trained teachers in state schools and some private schools (Government of Kenya, 2020a; GPE, 2020n). In Burkina Faso and Central African Republic (CAR), governments collaborated with development partners to train teachers in the use of DLS (GPE, 2020n,za; UNHCR, 2020a). In Cabo Verde, Cameroon, Comoros, Kenya, Senegal, Togo, and Zimbabwe, ministries of education, supported by development partners and private ICT companies, trained teachers to use digital learning solutions and to develop innovative materials that could be streamed via platforms such as YouTube through devices such as tablets and smart televisions (GPE, 2020o-u).

Figure 1 shows the total number of primary and secondary school teachers trained in DLS in various GPE partner countries in SSA.

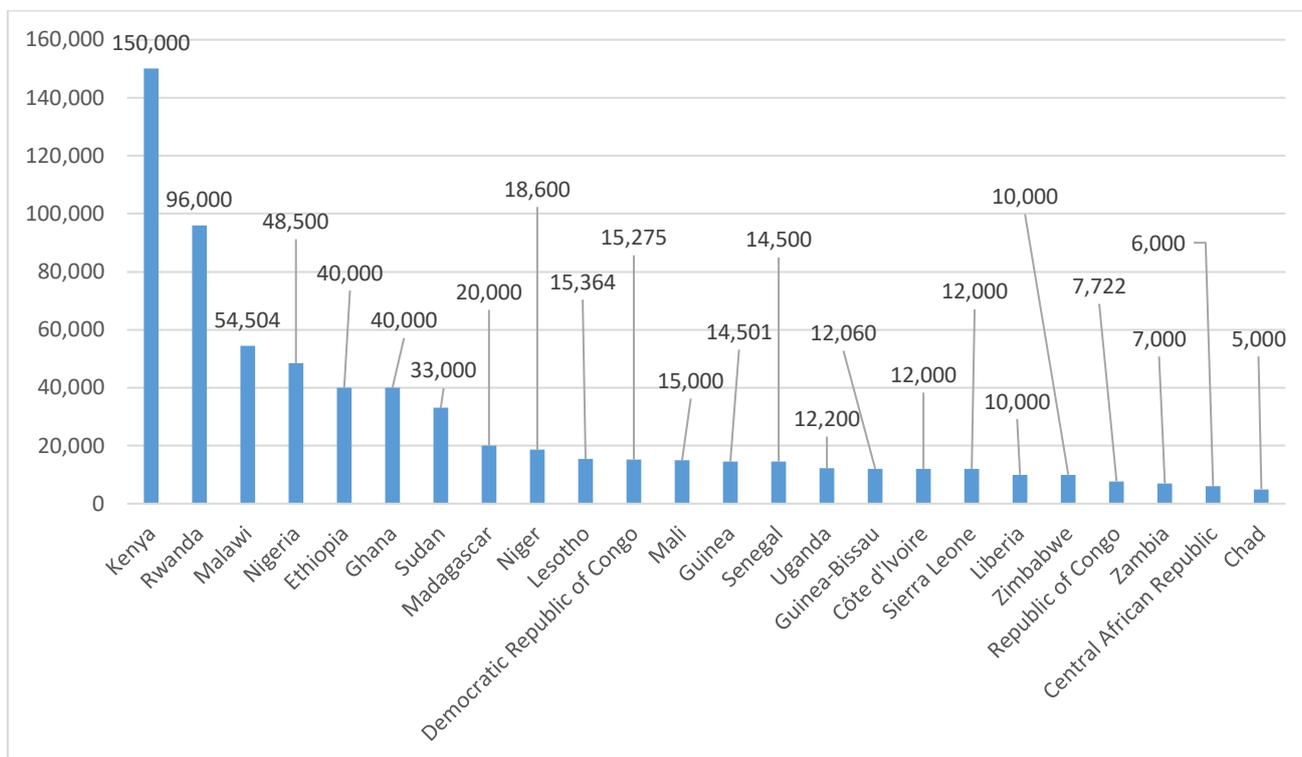
Figure 1: Proportion (%) of teachers trained on the development and use of distance learning tools and approaches by country, 2020²



Source: Authors' computation from various government sources

² Other countries that had high numbers of teachers trained on the development and use of distance learning tools and approaches were Ethiopia (40,000), Guinea (14,501), Guinea Bissau (12,060), Nigeria (48,500), Sudan (33,000), and Zambia (7,000). These countries were not included in Fig. 1 because in-country data on either total primary or secondary teachers, from which proportions are calculated, was not easily accessible. See more details in Appendix 1.

Figure 2: Numbers of teachers trained on the development and use of distance learning tools and approaches by country³, 2020



The high proportions of trained teachers observed for some countries like Lesotho (92.8%), Rwanda (88.9%), Malawi (55.6%), and Central African Republic (42.5%) could be related to the overall low number of primary and secondary school teachers in those countries (see Appendix 1 for the total number of teachers by country). Most countries which had seemingly high numbers of teachers trained, such as Ghana (40,000) and Kenya (150,000), had higher total numbers of teachers (see Appendix 1), but a lower proportion of trained teachers. While total numbers of teachers are not available for Ethiopia and Nigeria, their large overall population sizes would suggest that their respective numbers of teachers trained – 40,000, and 48,500 – likewise represent only a small proportion of teachers.

The high numbers and relatively higher proportion of teachers trained in Kenya (150,000), Rwanda (96,000) and Malawi (54,504) could be due to previous budget allocations for planned and ongoing teacher professional [development](#), including training in [remote](#) learning. COVID-19 financing and professional development responses then added an orientation to DLS in the training programs and brought even more teachers into training. In Kenya, the government’s [digital](#) learning program⁴ had previously set out to train 92,000 early grade teachers on the use of distance learning solutions. With the onset of COVID-19, it built on this initiative, expanding its training to reach 150,000 teachers and head teachers (or their deputies). An additional 100,000 curriculum support officers were also trained (Government of Kenya, 2020a,b). Against this background, the higher numbers in these three countries could be a function of pre-existing training plans, on which COVID-19 teacher training responses were built. Countries reporting lower numbers and proportions of teachers trained may have lacked prior plans for teacher training on DLS.

³ See Appendices 2 and 3 for proportions by region (i.e., KIX Africa 19 & KIX Africa 21) and for detailed numbers of trained teachers.

⁴ Administered by the Ministry of Information Communication and Technology, the Information and Communication Technology Authority, and the Teachers Service Commission.

Below are other remarkable examples of teacher training on the development of distance learning tools and materials:

Ethiopia mobilized some 200 volunteer university professors and secondary and primary school teachers to develop and record subject materials, prepare worksheets, and develop tests and assignments, accompanied by explanations and answers, at a cost of ETB500,000 (equivalent to US\$12,091) (Government of Ethiopia, 2020). In Ethiopia, GPE trained 4000 master trainers and 40,000 teachers at a cost of US\$400,000 and US\$1,000,000 respectively (GPE, 2020v; Government of Ethiopia, 2020).⁵

In **Sierra Leone**, approximately 12,000 teachers were trained in the use of various DLS platforms for teaching and administration to ensure continued learning during the school closure period. The training was administered by the country's Teachers' Service Commission (GPE, 2020w; Government of Sierra Leone, 2020).

Côte d'Ivoire, Kenya, and Rwanda considered digital technology and related IT literacy as key components of contemporary learning media. They embarked on intensive capacity building to enable teachers to deliver lessons using innovative approaches, not bound by physical space (Government of Côte d'Ivoire, 2020; Government of Kenya, 2020a, b; Government of Rwanda, 2020a). This allowed teachers to not only use distance education media, but to be creative in using them to develop and share lessons and teaching materials.

In Africa, the expansion of access to digital solutions has been driven by the private sector. Yet, during the pandemic, this increase in access among the general population has not been uniformly accompanied by an expansion of digital infrastructure, such as electricity and fibreoptic cable. This creates gaps in access to online learning. In countries that have experienced a notable expansion in infrastructure (driven by the private sector), this has largely been confined to urban areas. As a result, Kenya's remote and rural areas, for example, which lack such infrastructure, have enjoyed limited use of DLS (Ngware & Ochieng, 2021). Below are some examples of how the private sector has helped to expand access to digital learning solutions (Chebib, 2020):

- As part of its COVID-19 response, the telecommunications company Orange Liberia granted free access to online educational content via the Orange Campus Africa, thus enabling teachers and students to access educational resources available from providers such as the Khan Academy.
- Bharti Airtel Africa collaborated with UNICEF to provide access to DLS in 13 countries of SSA, and zero-rated select e-learning platforms, allowing learners and teachers to access them at low or no cost.
- In Benin, MTN financed infrastructure for digital classes that trained 100 teachers in digital literacy and benefited 15,000 school children.
- In Kenya, the Instant Network Schools program by Vodafone Foundation and UNHCR responded by training teachers in digital literacy. An initial evaluation shows that, among refugee populations in Kakuma, teachers experienced a 125% increase in ICT literacy and gained confidence, new pedagogical strategies, and access to teaching materials.

⁵ It is not clear whether the 4,000 teachers are part of the 40,000 teachers reported by the Ethiopian government.

These efforts demonstrate the response of the private sector in supporting teachers during the pandemic by removing cost barriers to accessing online educational platforms. However, teachers also need access to digital devices to apply the knowledge and skills learned from their in-service training during school closures. But government provision of digital devices was not common among GPE partner countries in Africa. Only a handful of countries reported providing digital teaching and learning tools such as tablets, computers, laptops and Internet bundles for access to either teachers or learners. These include Cabo Verde, Ghana, Somalia (Somaliland and Puntland), Sudan, and Togo (Government of Ghana, 2020; Government of Somalia, 2020; Government of Sudan, 2020; Government of Togo, 2020; GPE, 2020o). In Sudan, for example, teachers were provided with tablets and smartphones to facilitate their engagement with learners (GPE, 2020x).

Other countries mainly relied on pre-existing digital systems and/or infrastructure, owned largely by the private sector. In Uganda, for example, teachers were granted access to non-Internet related airtime (for radio and television) and telephone credit to facilitate their use of DLS. In this arrangement, head teachers were mandated to encourage teachers to support distance learning initiatives spearheaded by the government (Government of Uganda, 2020).

While private sector responses offer good opportunities for partnership with governments, the costs associated with access to Internet service and educational content providers could limit their use even in areas with good digital service coverage.

2.2 Mitigating Gender-based Violence and Promoting Mental Health

During prolonged school closures, school children – mainly girls and young women – have become more vulnerable to sexual and gender-based violence, such as defilement and other forms of physical, emotional and psychological violence, including online bullying (Ajayi, 2020; Dreeseni et al., 2020; UNICEF, 2020a).

As discussed in the COVID-19 Observatory [paper](#) on the overall wellbeing of school children during the pandemic in Africa, there have been huge increases in GBV in this period: in some parts of Nigeria, Niger and Liberia, for example, the incidence increased by over 50% in Liberia, 60% in Niger, and 149% in Nigeria (ADEA et al., 2021a). The most likely victims of GBV include those whose parents or caregivers are ill, deceased, or otherwise unable to care for them. The perpetrators most often include extended family members, boyfriends, teachers and trusted adults (Save the Children 2020; WHO, 2020a, b).

To better protect children, teachers received training on GBV, including how to identify potential victims and how to respond with psychosocial support in emergencies. Though GBV concerns and mitigation measures are widespread in GPE partner countries, our review shows that 10 of the 40 GPE countries – Including Burundi, Cabo Verde, Chad, Côte d'Ivoire, Guinea Bissau, Lesotho, Malawi, Nigeria, Tanzania (mainland), and Togo – offered teacher-training on GBV-related issues including identification, mitigation, and referral mechanisms of learner victims.

Distance learning solutions were preferred for training in this area. For instance, GBV training content was streamed through media channels such as radio, television, and other platforms. Offline platforms included the use of printed materials on GBV identification and risk mitigation, with communication campaigns and messages targeting both teachers, and parents/guardians (GPE, 2020g). Teachers also received training on how to prevent and mitigate GBV in emergency situations, including how to refer cases to higher institutions for action (GPE, 2020m,o,z; UNICEF, 2020b; 2021a,b).

In Cabo Verde, Cameroon, Central African Republic, Chad, Comoros, Côte d'Ivoire, Democratic Republic of Congo, Guinea Bissau, São Tomé and Príncipe, and Zimbabwe (Beche, 2020; Government of Côte d'Ivoire, 2020; GPE, 2020f, j,k,l,n,o,u), teachers were trained to help students in dealing with the diverse effects of the COVID-19 pandemic, at family, individual or school level. This includes identifying learners who may have experienced violence and providing them with appropriate

referrals and psychosocial support through counselling. Teachers either offer the psychosocial support themselves or refer learners to support centers recommended by the Ministry of Education.

Kenya offers a blended support system: in institutions where some teachers had previous training in guidance and counselling from the Teachers Service Commission, these teachers provide face-to-face psychosocial counselling to identify learners at risk. Schools that lack teachers trained in guidance and counselling have offered online support through a toll-free service (GPE, 2020r). In Ghana, teachers were equipped with skills and related resources to provide learners with psychosocial support through various channels, including television, radio, WhatsApp, and other online and mobile platforms (Government of Ghana, 2020). Other countries that adopted similar channels to those used in Ghana include Malawi (Government of Malawi, 2020a), Mozambique, Rwanda and Zambia (GPE, 2020za).

The following are examples of training and support provided to teachers to help them protect children and promote their mental health:

Lesotho provided 15,364 teachers with information on GBV risk mitigation, including a step-wise approach to preventing sexual exploitation and abuse, safe referral practices, and child safeguarding during school closures. The training was conducted via four series of mobile phone messaging to targeted teachers. At a cost of US\$0.08 per message for every teacher (GPE, 2020z), a total of US\$4,916 was used for this purpose.

Teachers in **Uganda** and **Zambia** were trained on how to identify learners who were experiencing various challenges due to COVID-19. They were then expected to offer such learners appropriate psychosocial support through phone and text during their routine student monitoring activities (Government of Uganda, 2020; Government of Zambia, 2020).

2.3 Supporting Vulnerable Children

In this synthesis, vulnerable children include those with special needs, displaced school children, those living in rural, remote settings, and those from low-income backgrounds.

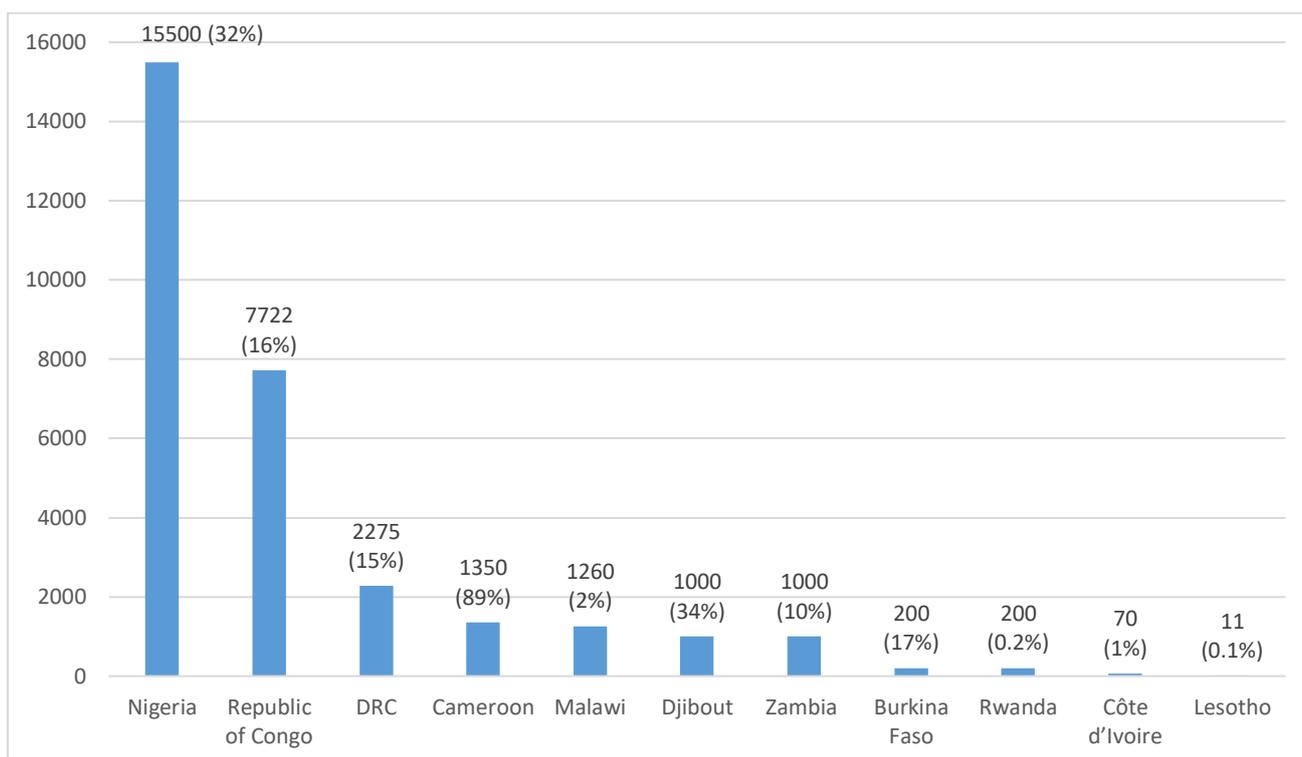
The need for teacher training and support to vulnerable school children became more apparent during school closures and reopenings. The pandemic exacerbated exclusion in learning for these children, with estimates indicating that nearly 40% of least developed and lower-middle-income nations are unable to support learning for vulnerable children. This includes learner populations in rural and remote areas and those living with disabilities (UNESCO, 2020b). In SSA, teachers feel that they are not adequately supported with essential learning resources to attend to school children with special needs (World Bank, 2020b,c). For example, 41% reported that the lack of personal assistants was a barrier in their efforts to support learners with disabilities (Ngware & Ochieng', 2020; World Bank, 2020c).

Notwithstanding these limitations, 14 GPE partner countries (see Figure 3) provided teacher training to address the learning needs of vulnerable school children. This covered various approaches such as the use of interpretative signing, closed captioning, large print documents, and other sound or visual adaptations, among others (Government of Côte d'Ivoire, 2020; Government of Rwanda, 2020b; Government of Zambia, 2020; GPE, 2020b,e,k,u,z,za; GPE & Government of Guinea, 2020; UNICEF, 2020a,b; UNESCO, 2020a,b). In the Republic of Congo, for example, all teachers trained on the development and use of DLS also received training on how to support learners with special needs, especially through the development of visual learning materials. In Malawi, 500 were trained on braille usage, 600 on sign language, and 160 on the maintenance of assistive devices

(Government of Malawi, 2020a, b). Burkina Faso, Cameroon, Côte d'Ivoire, Djibouti, Guinea, Kenya, Lesotho, Nigeria, and Rwanda trained special needs education teachers on how to develop and disseminate accessible materials (including large font sizes and other adaptations) for use by learners living with disabilities. The Democratic Republic of Congo (DRC), the Republic of Congo, Sierra Leone, and Zambia trained teachers on how to promote the safety and psychosocial wellbeing of learners with special needs.

Figure 3 highlights the number and proportion (in brackets) of teachers trained to address the learning needs of vulnerable school children in 11 of the 14 countries which provided training in this area.

Figure 3: Number and proportion (%) of teachers trained to address the learning needs of vulnerable schoolchildren⁶



Sources: ActionAid (2021); Government of Côte d'Ivoire (2020); Government of Malawi (2020b); Government of Zambia (2020); GPE (2020k, 2020p, 2020zb & 2020zc); World Bank (2020c)

In addition to training, teachers were provided materials to facilitate effective teaching of special needs learners, and psychosocial support to these students. In Cameroon, for example, teachers received kits with assistive learning devices and protocols/ guidance for providing psychosocial support during the pandemic (GPE, 2020p; Education International, 2020a,b). Guinea Bissau, São Tomé and Príncipe, the Gambia, and Kenya also provided teachers with special needs assistive devices such as braille and large print materials (Government of Gambia, 2020; Government of Kenya, 2020a,b; GPE, 2020f,j). In South Sudan, the government gave schools capitation grants to enable teachers to develop and manage teaching resources for students living with disabilities (GPE, 2020z). For instance, those with visual impairments have received learning resources that include access to braille devices; lessons delivered through adapted distance devices, such as tablets equipped with sign language features; and large print materials, among others.

⁶ Bars in the chart are based on total numbers. Guinea, Sierra Leone, and Kenya also provided training in addressing the needs of vulnerable learners, but the numbers of teachers in these three countries are unavailable.

The Nigerian government trained a segment of their teachers on how to develop and deliver education materials suited to the situations and needs of migrant and refugee children, and other marginalized learners. These teachers were trained on how to develop and deliver gender responsive education materials that are inclusive in approach to benefit marginalized populations such as migrant families, children from refugee communities, *Almajiris*, children living in abject poverty, girls, and children with special needs. ICT-enabled education resources were provided to these teachers and learners through the Mobile Classroom App, thanks to a partnership between the Nigerian Government and School Gate (Government of Nigeria, 2020a; GPE, 2020c,z).

In **the Gambia**, the government and its education development partners enhanced teachers' capacity to use learning resources provided to support visually impaired learners. These resources included braille and related materials, and access to printing services to produce large-print materials. Teachers were mobilized and trained in using assistive learning devices, and deployed to help vulnerable learners keep pace with other students (Government of Gambia, 2020).

In **Nigeria**, the government enhanced inclusive learning by adopting no-cost access to learning materials shared via Internet platforms. A partnership was developed with providers of the Mobile Classroom App – an online platform that gives students access to varied educational materials and video-based lessons for different subjects and levels. This strategy somewhat enabled access across the board, but economic challenges that limited the use of digital learning resources at the household level hindered access to lessons and learning materials provided through the App (World Bank, 2020b,c). Teachers and other key education stakeholders were tasked with developing and adapting distance learning approaches suitable for independent and community- or family-assisted learning for students with special needs (Government of Nigeria, 2020b).

In **Sierra Leone**, a range of strategies was designed and adopted to enhance access to all learners, including vulnerable learners. This entailed teachers developing or redesigning workbooks for home learning that were context-specific and suited for different learner groups' immediate environment. The training was provided through print materials and radio lessons. Phone tutorials were provided after every radio show to students' groups, while students and parents had access to hotlines to engage with teachers and other educators, both for follow-up and to make learning practical for students in remote, rural, or marginalized areas (World Bank, 2020b). The Sierra Leone Teachers Service Commission mandated teachers to take part in training on how to conduct their teaching to meet the needs of all students (Bernal & Wurie, 2021).

In some countries experiencing conflict or other complex emergencies, teachers themselves were among those displaced. Burkina Faso, Chad, Mali, Niger, Nigeria, Cameroon, and Central African Republic reported a combined total of 2,510 teachers who were displaced by conflicts in the region during the COVID-19 period and accommodated in refugee or displacement camps (UNHCR, 2021; UNHCR, 2020b). All of these teachers were trained on how to administer education and psychosocial support to children in emergencies, while 2,144 of them also received financial support to cushion them from the adverse effects of COVID-19 (UNHRC, 2021).

In addition, teachers in different displacement camps in Benin, Burkina Faso, Central Africa Republic, Chad, Gambia, Ghana, Mali, Niger, and Nigeria received a total of 20,000 school kits to support the provision of quality education to the most vulnerable children in these settings. These interventions

targeting displaced teachers benefited over 200,000 learners in all (145,000 refugees, 42,000 children from host communities, and 14,000 internally displaced learners) drawn from twelve countries. Learning at all levels (pre-primary, primary, secondary, and tertiary) was thus able to continue during the school closure period (UNHCR, 2021).

Even with these noteworthy efforts, displaced teachers in conflict regions constantly contend with security-related problems, such as threats, kidnapping, and even killing, just for being teachers working in camps or settlements (UNHCR, 2020b,c; Norwegian Refugee Council, 2020). This calls for a concerted effort among key education and security stakeholders to ensure that the safety of refugee and community teachers in conflict situations is guaranteed and sustained.

2.4 Preparing for School Reopening

Two main areas of response emerged from the synthesized literature on teacher training related to preparations for school reopening: pedagogical preparedness measures, such as adapting teaching strategies to help students catch up, and health and sanitation measures to prevent school-based infection.

Pedagogical Preparedness

There were notable in-country general practices and policies that set the stage for school reopening, and which continued after reopening. These involved preparatory measures intended to ensure uninterrupted learning. Eleven countries (Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Djibouti, Ethiopia, Senegal, Sierra Leone, South Sudan, Tanzania, and Uganda) offered some form of teacher training and support in preparation for school reopening.

To bridge possible learning gaps, teachers were trained on applying pedagogical strategies like Teaching at the Right Level (TaRL) and remedial teaching. These strategies involve diagnosing and identifying students left behind in learning during school closures, and providing them with learning content geared to their level of understanding. They were also trained in categorizing learners into sub-groups depending on their learning needs, strengths, and weaknesses, instead of simply according to their grade or age (this is a key approach in TaRL). This diagnosis helps determine which learners should receive the remedial or catch-up lessons, as well as the contents of such lessons. Other training activities included how to teach basic skills of literacy, numeracy, and hygiene, and formative assessment during learning, which focuses on measuring the achievement of lesson objectives.

A few notable in-country examples include the following:

In **Sierra Leone**, the Ministry of Basic and Senior Secondary Education (MBSSE) trained approximately 984 trainers of trainers (ToTs) in preparation for school reopening. The ToTs were trained on the application of the School Guidance and Safety Protocols designed by the MBSSE. These ToTs in turn would train over 23,000 primary and secondary school teachers countrywide on how to implement these protocols – mainly focused on health and hygiene related practices – when schools reopen. In addition, the country's Teachers Service Commission and the MBSSE used the opportunity to build teachers' capacity in providing catch-up and remedial classes using distance teaching through media such as radio (UNICEF, 2020b).

In **Cameroon**, the preparations undertaken prior to schools' reopening included teacher training on remedial learning using distance learning approaches to make up for learning hours lost during the school closures. Practices in this context include continued use of distance learning

technologies like radio, television, and the Internet. Physical learning materials were also provided to learners at schools to help them read ahead and close the gaps associated with lost learning time. Teachers were also prepared to maintain appropriate psycho-pedagogical support to learners when classes resume. This entailed capacity building on psychosocial support for peers and students reporting with mental health issues (GPE, 2020p). Educators also received training in COVID-19 prevention prior to school reopening, and how to monitor staff and students' health status (GPE, 2020p).

Given that accelerated learning has proven effective in bridging the learning gaps occasioned by past periods of school disruption (such as with the Ebola epidemic in Sierra Leone), Ethiopia developed and distributed accelerated lesson guidelines and trained primary and secondary teachers in their use (GPE, 2020q,w). The curriculum was structured to implement accelerated learning in the early months of school reopening. Teachers were trained and mandated to ensure that all learners benefit, especially those from poor, remote, and marginalized populations (including girls and learners living with disabilities), with remedial lessons tailored to suit both fast and slow learners. Guidelines and lesson plans for accelerated and remedial lessons were centrally developed, adapted and distributed to public primary and secondary schools by Regional Education Bureaus. (GPE, 2020q,w).

Water, Sanitation and Hygiene (WASH) Training

WASH activities were an integral part of GPE partner countries' school reopening plans and have been ongoing to ensure staff and student health after reopening. Prior to reopening, teachers were supported and trained on recommended WASH guidelines, largely through radio, television and Internet (GPE, 2020p). For instance, in Burkina Faso, Chad and Mali, these trainings came in the form of community- focused campaigns and advertisements (on the Internet, radio, and television), with both audio and visual training components. This training equipped teachers to take a consistent and structured approach to monitoring awareness and observance of WASH guidelines in schools (UNHCR, 2020a,b).

Twenty-three countries (about 58% of GPE partner countries in Africa) reported an emphasis on providing adequate and quality WASH responses as schools prepared to reopen.⁷ In Cameroon, teachers received monthly training on how to reduce the incidence of COVID-19 transmission through platforms including radio, Internet and television (GPE, 2020p; Education International, 2020b). In Ethiopia, Madagascar, and Mali, teachers were trained first in WASH-related measures, then transferred this knowledge to their students, making it a chain of learning and capacity building not constrained to teachers (Government of Ethiopia, 2020; GPE & Government of Madagascar, 2020; GPE, 2020h).

Training in these countries was accompanied by other WASH measures, including intensive disinfection of schools and providing personal protective equipment (PPE) to both teachers and students, among other WASH-related training and resources to prevent the spread of COVID-19 among the school stakeholders.

⁷ The countries that enforced WASH include Benin (ADEA et al., 2021b), Burkina Faso (GPE, 2020za), Burundi, Central African Republic (GPE, 2020n), Cameroon (GPE, 2020p), Chad (GPE, 2020m), Democratic Republic of Congo, Côte d'Ivoire, Guinea (GPE & Government of Guinea, 2020), Guinea Bissau (GPE, 2020j), Lesotho, Liberia, Madagascar, Malawi, Mali, Niger, Nigeria, Republic of Congo, Sierra Leone, Somalia, Sudan, Zambia, and Zimbabwe (ADEA et al., 2021b).

3 Other Areas of Teacher Support during School Closure and Reopening Periods

In this section, we look beyond training to other kinds of support provided to teachers during pandemic-related closures and reopenings. We synthesize policies and practices that helped to:

- strengthen teachers’ overall wellbeing, including addressing those with underlying health conditions; and
- motivate and incentivize sustained teachers’ performance under difficult circumstances.

Highlights

- **39 out of 40 GPE partner countries in Africa prioritized the protection of teachers as frontline workers.**
- **Some 18 countries provided some form of incentive to offset teachers’ job losses or increase their motivation**

Table 1: Type of teacher support and number of countries providing each type

Support provided to teachers	Number of countries	Description
Support to overall wellbeing, including protection to those with underlying health conditions	39	<p>Prioritization for vaccination and protection as frontline workers</p> <p>Hygiene kits, PPE, and other resources provided at school level to improve WASH</p> <p>Support with virtual interactions and access to Internet while working from home</p>
Motivation	12	Monetary and non-monetary incentives to support teachers (e.g., smartphones, increased income, allowances, Internet, airtime, access to radio/TV)

3.1 Support to Teachers’ Overall Health and Wellbeing

The outbreak of COVID-19, followed by school closures, continues to affect the physical, economic and socio-emotional health of teachers, whose families were also affected by the strain of the pandemic, just as were the families of their students. Evidence indicates that teachers’ performance is at its peak when their morale is at its highest. This occurs when their overall wellbeing – physical, mental/psychological, and economical – is addressed (ADEA et al., 2020b). The absence of teacher wellbeing, which can manifest as intense work strain, psychosocial pressure, teacher absenteeism, increased burnout, or resignations, ultimately translates into negative education outcomes among learners (UNESCO, 2020c). Psychosocial and material support for teachers is thus important to reduce negative teaching attitudes and outcomes.

To avert or mitigate these adverse impacts on their health and wellbeing, most GPE countries provided additional layers of support to teachers, largely psychosocial support through counselling to help them cope with effects of the pandemic. Sudan, South Sudan, Tanzania and Uganda offered such support to teachers along with referrals for teachers’ case management. Cameroon, Central

African Republic, Chad, Comoros, Côte d'Ivoire, Djibouti, Guinea, Guinea Bissau, Mali, Mauritania, Rwanda, São Tomé and Príncipe, Zambia and Zimbabwe offered psychosocial support or counselling to teachers to help them cope and to help their peers cope with effects of the pandemic. Rwanda also offered teachers airtime to pursue counselling or psychosocial support whenever they needed it.

Our synthesis of supportive policies and practices reveals that, in most GPE partner countries, teachers were treated as frontline workers and given priority access to COVID-19 prevention support. Some of these response measures are especially critical to teachers with underlying health conditions that make them more susceptible to COVID-19. Thirty-nine countries supported teachers' health and wellbeing, including 33 that offered them priority for vaccination and other protection measures, and six that supported teachers' wellbeing mainly through psychosocial guidance and counselling. In Ethiopia, Guinea, Guinea Bissau, Lesotho, Liberia, Madagascar, Republic of Congo, and São Tomé and Príncipe, teachers were offered WASH and PPE resources to protect them from contracting COVID-19, which posed a greater risk to those with underlying health conditions (Government of Ethiopia, 2020; GPE, 2020e,f, y,z & za; GPE & Government of Madagascar, 2020; Government of Liberia, 2020).

Teachers were also protected by measures that reinforced social distancing, or provided on-site care for pupils and teachers, to limit their exposure to illness during the pandemic. For example:

Cabo Verde's key education stakeholders developed a learning design in which distance education complements face-to-face learning during school closures and when schools reopened, to help curb teacher infections and create a safe learning environment (Education International, 2020a; GPE, 2020o).

Cameroon, Eritrea, the Gambia, Nigeria, Senegal and Zimbabwe utilized distance communication channels to reach out to teachers during training sessions (GPE, 2020c,p,q,u & za; Government of Nigeria, 2020a,b; Government of Gambia, 2020; UNICEF, 2020a,b). The goal was to prevent all teachers – with or without underlying conditions – from contracting COVID-19 and safeguard their wellbeing.

In **Rwanda**, in addition to adopting audio and visual distance support solutions to limit physical contact, upon school reopening, the government equipped schools with nursing facilities for short-term care of teachers and students who fall ill for any reason. Teachers/matrons also receive first aid treatment for any health concern at the schools' nursing bays (GPE, 2020b; Government of Rwanda, 2020b).

In **Ethiopia**, teachers were supported in conducting safe home visits and remote monitoring of student progress. Free or facilitated transportation was provided to all teachers willing to do home visits, and free SMS were provided to engage remotely with parents in monitoring their children's learning experiences (Government of Ethiopia, 2020).

In **Nigeria**, to reduce teacher-to-teacher transmission of COVID-19, the government and its education development partners dispensed distance learning solutions to facilitate teaching from home and reduce the sharing of teaching resources. (Government of Nigeria, 2020b).

As an additional measure to safeguard the wellbeing of both teachers and students and prevent the spread of COVID-19 during and after school reopenings, there were calls to prioritize vaccination of teachers. Some countries, including Côte d'Ivoire, Kenya, Malawi, Rwanda, and Uganda prioritized their teachers in the first stage of the vaccination drive, while Central African Republic, Ethiopia, Republic of Congo, South Sudan and Sudan were among those who included teachers in priority group two (UNESCO, 2021a,b). This measure was intended to safeguard the wellbeing of teachers as frontline workers (ADEA et al., 2021a; UNESCO, 2021c).

Some countries also made adjustments to manage teachers' workloads, given the added burden of responding to COVID-19. In Benin, in a bid to manage extra teaching assignments necessitated by social distancing and classroom spacing guidelines, the government made efforts to recruit more teachers for the classrooms added upon reopening (World Bank, 2020a,b). In Uganda, university graduates were recruited to supplement teaching in schools through a pilot fellowship initiative led by Building Tomorrow (an international social enterprise). It aimed to increase re-enrolment and bring every child up to their respective grade levels in numeracy and literacy skills (Building Tomorrow, 2020).

3.2 Teacher Motivation and Incentives

In-country education responses to the COVID-19 pandemic also addressed teacher motivation and overall economic wellbeing. Teachers lost teaching time due to school closures, which had repercussions on their income, especially for those in the private sector who rely on non-governmental funding. A range of incentives were provided to encourage teachers to persevere despite the challenging teaching environment.

Some 18 countries provided some form of incentive to offset teachers' losses or increase their motivation. These measures included provision of financial incentives. Of the 18 countries, only Somalia (Somaliland and Puntland) and South Sudan reported offering financial incentives to teachers. Somalia provided US\$100 monthly incentive to cushion teachers who lost their jobs due to COVID-19, and to those volunteering to support distant learning. South Sudan also offered their teachers financial incentives to continue providing educational services to learners during the school closure periods. The amount of the financial incentive given to each teacher was not disclosed.

Other incentives were given to facilitate the shift to remote teaching. These include provision of airtime/credit to teachers to access psychosocial support (Rwanda); re-employment of teachers in grant-supported schools after school reopening (Malawi); provision of free Internet connectivity to schools and by extension to teachers to facilitate teaching (The Gambia); and provision of free SMS channels to enable teachers and parents to interact regarding the wellbeing and progress of learners at home (Ethiopia).

In Côte d'Ivoire, key GPE partner countries' education stakeholders developed an incentive policy to engage previously unemployed teachers who volunteered to offer teaching services in response to the emergency (Government of Côte d'Ivoire, 2020). The incentive was monetary in nature and created an emergency fund to pay additional teachers who volunteered to support teaching during emergencies. This policy aimed at incentivizing existing and volunteer or prospective teachers to offer their services during the pandemic.

Below are other examples of incentives provided to support teacher motivation and wellbeing:

In **Burkina Faso** and the **Central African Republic**, governments and in-country development partners offered reimbursement fees or remuneration to teachers and supervisors who took part

in the production and dissemination of distance learning content through radio broadcast and other channels (GPE, 2020n; UNICEF, 2020b; UNHCR, 2020a,b).

In **Mauritania, Niger, Nigeria, and Togo**, guaranteed and consistent payment of teachers' salaries despite school closures was an incentive to keep teachers teaching (GPE, 2020d,g,i,q,za; Government of Mauritania, 2020; Government of Nigeria, 2020a,b; Government of Togo, 2020a). Moreover, in **Mauritania**, teachers who participated in distance teaching were also paid overtime salaries (Government of Mauritania, 2020; GPE, 2020i).

In **South Sudan** and **Somalia**, teachers received financial support to maintain their livelihoods during the pandemic. In Somalia (including Somaliland and Puntland) for instance, each teacher received US\$100 per month to help cushion them from the adverse economic effects of COVID-19 (GPE, 2020z; Government of Somalia, 2020). Moreover, 1,500 schools received a capitation grant to support their operations, including supports to teacher wellbeing (Government of Somalia, 2020).

To blunt the economic impacts of the pandemic on practicing teachers, **Malawi's** school return policies saw teachers in grant-aided schools returned to the schools they had taught in prior to school closure. This was to avert further financial loss being incurred by these teachers, who otherwise may have been rendered jobless during the school closures (GPE, 2020a).

4 Challenges in Teacher Training and Support during the Pandemic

This synthesis revealed challenges in teacher training and the provision of additional supports needed to help teachers adapt to and cope with new teaching approaches and norms. Overall, these challenges related to the loss of employment, which was more widespread among women teachers; a lack of earmarked funding for teacher training; and a host of gaps and inequalities that accompanied the transition to distance education and training, which deepened the gaps faced by vulnerable learners and those in areas lacking adequate infrastructure to support digital connections.

Highlights

- **Private school teachers** were less likely to have their salaries continued during school closures and **had less access to professional development**.
- **Female teachers**, especially those with children at home, **faced greater workloads and job losses** due to the burden of care.
- A **lack of dedicated funding for training** meant that many teachers were ill-prepared to support students through school closures and reopenings.
- Teachers and learners **in rural and remote areas** were particularly challenged by **inadequate Internet access and infrastructure to support DLS training** and learning.
- Efforts to use **DLS can perpetuate learning inequalities** by disproportionately benefitting those from privileged households.
- **For displaced teachers, training modules must be adapted to insecure conditions**, including through offline resources.

4.1 Loss of Employment among Teachers

Teachers lost employment and the opportunity to participate in professional development activities during COVID-19 (Kossi, 2020). For instance, private teachers in Togo did not receive their salaries when schools were closed, despite government's assurances of support, and could not participate in TPD activities (Government of Togo, 2020b). Private school teachers in Democratic Republic of Congo, Kenya, Niger and Senegal (Teachers Taskforce, 2020) also went without pay and were not eligible for TPD activities. This exclusion from professional development activities contributed to education system unpreparedness for learning continuity and catch up when schools reopened. Teacher training opportunities are likewise often only available to teachers on the government payroll, leaving out teachers in the private sector and excluding those not in employment from accessing such opportunities. This is the case in Burkina Faso, DRC, Gambia, Guinea, Kenya, Niger, Senegal, and Togo (Aslam et al., 2020; Educational International, 2020a, b; Teachers Taskforce, 2020). This exclusive situation seems to have been exacerbated by COVID-19.

4.2 Disproportionate Impacts on Female Teachers

COVID-19 led to massive job losses in female-dominated sectors such as education, tourism, health, and public service (UN, 2020). In Kenya, for instance, job losses in the education sector resulted from private schools' inability to pay teachers (particularly at the primary school level) due to their disrupted financial streams (Teachers Taskforce, 2020). This was one area that contributed to the reported 60% job loss among women in Kenya during the COVID-19 period (UN Women, 2020). Female teachers in Burkina Faso, Chad, Mali, Niger, Nigeria, Cameroon, and Central African Republic were largely

disadvantaged compared to their male counterparts in terms of job losses (Government of Somalia, 2020; Government of Nigeria, 2020a, b; UNHCR, 2021; UNHCR, 2020b,d).

Many female teachers are also mothers who, as in many other households, carry out a larger share of household chores, which in turn limits time available for TPD activities. Female teachers who are mothers were found to be busier than their male counterparts, as they were expected to attend to their children at home while also tracking and teaching learners online, which negatively affected their home caregiving (Sawchuck & Samuels, 2020; Strauss, 2020; Jones & Kessler, 2020). In some instances, school closures also led to teacher separations, affecting their mental health and productivity. These compounding factors adversely affected women teachers more than male teachers, especially in conflict zones, leading to voluntary and involuntary job losses. Countries that reported female teachers' job losses for one or more of these factors included Burkina Faso, Democratic Republic of Congo, Mali, Mozambique, Nigeria, and Somalia (Bissoonauth, 2020; Lorente et al., 2020; Teacher TaskForce, 2020; Walters & Bam, 2021).

4.3 Lack of Dedicated Financing for Teacher Training

While skills development for teachers is an essential component of effective pandemic response, in most countries, the budget allocation for TPD activities during COVID-19 was not specific: it was lumped in with other education responses. Funding for teacher training thus competed with other priority sectors such as public health.

Even where financial allocations for teacher training were available, only a fraction of teachers in each country was trained on DLS use (see Figure 1). The lack of adequate funding for training means that many teachers were likely ill-prepared to support students through school closures and reopenings. Only three countries (Lesotho, Rwanda, and Malawi) had over 50% of their teachers trained, while thirteen⁸ trained between 1.7% and 42.5% of their teachers (refer to Figure 1). This was a function of the financial resources at the disposal of implementing agencies in the respective countries.

4.4 Inadequate Capacity to Use DLS

Virtual teacher training activities require use of digital technology and skills, and an understanding of how students use DLS for both learning and feedback. However, it was evident that teachers lacked the digital/technical skills needed to measure and use the results (Conto et al., 2020). Teachers had difficulty using DLS during their training and in later practical use. Evidence suggests that, in Africa, DLS training shortcomings stem in part from teachers' and learners' limited Internet access and access to digital education technologies and devices such as computers and smartphones. Even where teachers had access to such devices, the same was not guaranteed for their learners, thus hampering the practicality of digital learning (UNESCO-IS, 2020a; UNESCO, 2018; Lorente et al., 2020).

Teachers from remote areas that are poorly served by ICT infrastructure needed face-to-face training. Given pandemic restrictions on physical gathering, these teachers were inadequately prepared, including in the development and use of DLS. While the restrictions were meant to protect the population, they stifled efforts aimed at advancing learning.

4.5 Unequal Access to Professional Development

During COVID-19, access to TPD programs was unequal between teachers in rural and urban areas. During school closures, some TPD activities used distance learning solutions that relied on Internet connectivity, which is limited in some rural and remote areas. This is the case in Ethiopia, where teachers in rural areas have limited access to high-speed bandwidth and digital devices required for

⁸ Central African Republic, Kenya, Liberia, Niger, Sierra Leone, Republic of Congo, Mali, Senegal, Ghana, Madagascar, Zimbabwe, Chad, Côte d'Ivoire, Uganda, and the Democratic Republic of Congo

distance learning (Belay, 2020). Teachers in rural Ethiopia thus benefited less than their urban counterparts, who enjoyed faster connectivity. Most rural learners were more reliant on radio than digital devices such as smart televisions and smartphones. But not all households in rural areas have functional and accessible radios (Government of Ethiopia, 2020). These inequities in ICT access remain a common concern across many SSA countries during the pandemic (Hailu, 2020; IESALC, 2020; World Bank, 2020b,c).

4.6 Inadequate Access to Resources for Students with Disabilities

Distance learning solutions available to rural teachers lacked assistive learning features needed for teaching children with disabilities (Human Rights Watch, 2020a). This was just one indication of the inadequate capacity to support teachers to effectively reach vulnerable school children. For example, in the Central African Republic and rural Zambia, teachers sent lessons through social media, but these were not accessible to children living with disabilities, those from poor households, and other vulnerable categories of learners. Other countries that experienced problems with teacher training activities for learners with special needs include Gambia, Guinea Bissau, Kenya, and São Tomé and Príncipe (Government of Gambia, 2020; Government of Kenya, 2020a, b; GPE, 2020f, j). This illustrates wider disparities in access to education for vulnerable learners across most GPE partner countries, especially among those from poor households and those living with special needs (GPE, 2020a-z). It suggests that efforts to use DLS to promote equal learning opportunities can end up perpetuating learning inequalities by disproportionately benefitting those from privileged households.

4.7 Teacher Displacement

Teachers were not immune to conflict and displacement. Teacher training initiatives related to COVID-19 were disrupted in GPE partner countries experiencing new or ongoing conflicts – such as Burkina Faso, Central African Republic, Democratic Republic of Congo, Mali, Somalia, and South Sudan (UNESCO-IS, 2020a,b). Even when opportunities for teacher training were targeted to those in conflict-affected regions, the inherent security risks of accessing community centers with digital devices that can be used for training purposes prevented some teachers from pursuing such opportunities. It is important, therefore, that teacher development and training modules be devised in ways that can be adapted to conditions in these insecure areas, including operating offline for those without Internet connections.

5 Emerging Research

This section presents a brief synthesis of emerging research related to teacher training and support in the context of COVID-19, mostly conducted by GPE, UNICEF and international NGOs. The emerging research focuses on three areas: teachers' development and use of distance learning tools; support provided for teachers' wellbeing; and strategies for supporting and monitoring student progress in home learning, and in catch-up or accelerated learning programs. The resulting evidence points to ways in which to support teachers so they can best contribute to their education systems' efforts to build back better.

Table 2: Focal areas for emerging research on teacher training and support

Research Focus	Details
Teacher preparedness for distance education	ICT skill sets and capacity building Connectivity and infrastructure Access to ICT infrastructure
Teachers' wellbeing during COVID-19	Psychosocial support Teacher salary payments
Supporting and monitoring learner progress	Increased or accelerated learning time Coverage of more curriculum areas Home learning

5.1 Teacher Preparedness for Distance Education

Across the globe, COVID-19 revealed high levels of unpreparedness among teachers for incorporating DLS. Evidence indicates that only 64% and 50% of primary and secondary teachers, respectively, have received the minimum training in basic digital literacy in sub-Saharan African countries (International Task Force on Teachers for Education 2030, 2020). Surprisingly, even in countries with considerable connectivity and infrastructure, most educators did not have prerequisite ICT skills, implying that they will have difficulties in their own ICT skills development on quality teaching (UNESCO, 2020a). The COVID-19 pandemic has shown that both pre-service and in-service teachers need capacity building on ICTs and education-related technology applications for their own professional development, and for effective teaching using these technologies (UN DESA, 2020).

Investment in ICT infrastructure and access has gained significant attention in Africa owing to the position ICT yields in advancing the continent's development (OECD/ACET, 2020). Africa is a potential beneficiary of ICT, stemming from its growing working age population, which is expected to increase by over 40% from 2018 to 2030 (OECD/ACET, 2020). Against this background, it is evident that ICT-related infrastructure is critical in Africa, where it offers opportunities for "leapfrog" advances in different sectors such as education, health, and labor force development, among others (Calderón et al., 2018). In Africa, DLS has transformed access to education and related materials, especially by increasing the dissemination of education resources. Despite the adoption and adaptation of different digital solutions for teaching and learning, GPE partner countries still need significant ICT investments to enhance universal access to DLS and related infrastructure (AUC/OECD, 2019; OECD, forthcoming). As it stands, nearly 300 million African people live more than 50 kilometers from the closest cable broadband or fibreoptic network (ITU/UNESCO, 2019a). It is estimated that about US\$100 billion is still needed to establish some 250,000 kilometers of fibre across the continent to

enable better access to ICT and, consequently strengthen DLS (ITU/UNESCO, 2019b). This highlights the ICT gap that, if not addressed, will undermine the continent's education and development agenda.

5.2 Teachers' Social and Economic Wellbeing during COVID-19

With the onset of the pandemic, research shows that teachers, as frontline workers, are at higher risk of contracting COVID-19. This was particularly so when teachers resumed in-person teaching upon schools' reopening. Along with the risk of contracting the virus, female teachers faced added familial responsibilities, even more so for those who are the sole household heads (UN DESA, 2020). As a result, a few countries in SSA integrated psychological and social support units in their manuals, contingency plans, teacher guides and addressed this within their associations, with NGOs providing support to governments to facilitate support initiatives.

Loss of salaries has been a key challenge faced by some teachers and their families. This affects both teachers' wellbeing and their ability to offer quality teaching. Salary cuts, delayed payments, and even job losses further complicated teachers' ability to cope with increased demands associated with family and work. While available research indicates that only a few countries failed to pay government-employed teachers during the pandemic (UNESCO & ILO, 2020), salary delays were more pronounced. Teachers serving in private schools and/or on temporary contracts were the most affected by job loss, since contracts were mostly not renewed (Education International, 2020). In SSA countries, the lack of fee payments by parents/guardians drained schools' financial resources, which left them unable to pay contract teachers. In a survey of 93 teachers' unions from 67 countries (including some in SSA), about two-thirds of respondents indicated that educators in private schools were severely affected, with temporary and contract teachers and support staff adversely affected (Education International Research, 2020). Equally, non-state teachers working with vulnerable children, who mostly fall outside the mainstream school system, were adversely affected by the job and salary losses due to school closures (Doorly, 2020). Some teachers who were adversely affected by the pandemic were forced to look for alternative sources of livelihoods (UN DESA, 2020).

5.3 Supporting and Monitoring Learner Progress

School closures led to a loss of learning time. After reopening, teachers had to make up for this lost time and content. This demanded pedagogical strategies that would allow content coverage and learning within a shorter period. In some countries, teachers received learning and monitoring resources to better support home learning (Government of Kenya, 2020c; Koomar, 2020; Government of Nigeria, 2020; GPE, 2020f). Prolonged school closures are associated with learning loss, especially for children already furthest behind and/or those from low-income families. Emerging evidence indicates that accelerated learning focused on foundational skills, together with enhanced teacher skills development, has positive impacts on children's learning in developing countries (Carvalho et al., 2020; Conto et al. 2020; Fitzpatrick, Korin & Riggall, 2020; Jackson, 2019; Lynd, 2005; Oddy, 2021). This involves simplifying the planned curriculum, focusing on basic literacy and numeracy skills, and providing teacher-led learning camps for remedial tuition – as were offered in Liberia and Côte d'Ivoire. Currently, GPE countries are assessing learning with a view to quantifying the loss of learning, and what measures and strategies are needed for recovery (UNICEF, 2020c; Government of Ethiopia, 2020; World Bank, 2020d).

6 Conclusions and Recommendations

Recommendations in brief

1. Invest more resources in teacher training to enhance pandemic-coping mechanisms, reverse learning losses, and build back better in education.
2. Explore public-private partnerships with digital service providers to expand digital access and facilitate DLS use in training and learning.
3. Explore the best ways to train teachers in assessing and providing feedback and guidance to learners during emergencies, using DLS.
4. Prioritize strengthening teachers' capacity, as frontline workers, to respond to the needs of vulnerable school children within their communities.
5. Incentivize teachers by addressing the challenges that hinder their performance – providing adequate teaching resources, PPE, and monetary incentives, and rewarding those who make noteworthy efforts.
6. Institutionalize a system that enhances teachers' wellbeing during emergencies – Including through psychosocial supports.

This synthesis has presented findings on teacher training and support responses adopted by GPE partner countries, focused on six inter-related themes. Training responses strengthened teachers' capacity to adapt to DLS; mitigate GBV and psychosocial problems among school children; enhance inclusivity by ensuring education responses reached the most vulnerable school children; and prepare for school reopening. Additional supports were provided to address teachers' physical health and wellbeing, and incentivize and motivate their sustained efforts during the pandemic.

Both distance and in-person training methods were used. These delivery approaches evolved with changes in the context, with distance learning methods being utilized more during lock downs, and in-person delivery being more common after school reopenings and in areas where virtual interactions were less practical.

The training and support offered was facilitated through government partnerships with global education development partners, including the Global Partnership for Education, the World Bank, Education Cannot Wait, and in-country private sector partners. These partnerships were critical, especially in the provision of digital devices and related access, reaching teachers in remote areas, and closing financing gaps in TPD activities. There is, however, need for more investment in digital infrastructure (e.g. electricity and Internet connectivity) particularly in poor, remote and marginalized areas of the continent (ITU/UNESCO, 2019a,b).

Our review highlighted the varied levels of priority accorded to teacher training and support across GPE partner countries in Africa. In some countries, teacher training and support was deemed essential, as captured by the proportion of teachers targeted for training during the COVID-19 period when schools were closed. For instance, emphasis on teacher training and support was evident in Lesotho (92.8%), Rwanda (88.9%), Malawi (55.6%), Central African Republic (42.5%), and Kenya (33.2%), while there was less emphasis in Cote d'Ivoire (6.9%), Uganda (4.2%), and Democratic Republic of Congo (1.7%). The focus on teacher training and support implies that some GPE partner countries placed a lot of importance on teachers in their plans to strengthen education systems during and after the pandemic. Despite the challenges, their responses demonstrate the critical role played by teachers in mitigating the adverse effects of the pandemic on the education system.

GPE partner countries faced numerous challenges providing teacher training and support, from their inability to adequately reach targeted teachers to factors that hindered teachers from executing their duties despite the training and support provided to them. Some pre-existing challenges, such as inadequate funding for professional development, were underscored by the pandemic. Other challenges, such as teachers' loss of employment, reflect the broader economic challenges experienced by national governments across sectors, as lock downs and other pandemic control measures reduced incomes and spending among their populations. The pandemic also highlighted pre-existing gaps and inequities in the digital connectivity needed to support remote learning. Training was hampered by, and insufficient to overcome, these gaps, which hurt not only teachers but learners. For the most vulnerable student groups, including those with special needs or those displaced by conflict or disaster, DLS were not always suited to their needs or accessible.

Though research on teacher training and support during COVID-19 period is nascent, our synthesis identified a focus on three inter-related areas: (i) Evidence on teacher preparedness for distance education shows that less than two-thirds of primary and just half of secondary school teachers in SSA have received training on basic digital literacy. This implies a huge gap in the deployment of distance learning solutions when in-person teaching is not possible. (ii) Emerging research on teachers' wellbeing shows job and income losses were deeper among private school and contract teachers, with those in state schools experiencing some salary delays but fewer job losses. Female teachers were more adversely affected by the increased burden of domestic responsibilities during school closures (Dogra & Kaushal, 2021). (iii) The loss of learning during school closures required teachers to apply new pedagogical strategies to help learners recover ground. As countries look for ways to enhance learning recovery, evidence suggests that accelerated learning, focused on foundational skills, can have positive impacts on children's learning.

Based on our synthesis of evidence, we make the following recommendations for GPE partner countries in SSA:

1. There is a need to invest more resources in teacher training to enhance pandemic-coping mechanisms, reverse learning losses, and build back better in the education system. Teacher needs vary from country-to-country, with some countries experiencing dire professional development needs that stem from pre-existing training gaps. Enhancing teacher training will require new sources of funding.
2. As some GPE partner countries are already doing, others could explore public-private partnership arrangements with digital service providers with a view to providing low- or no-cost access to Internet bundles. In addition, key education stakeholders could leverage such partnerships to expand relevant infrastructure that could enhance bandwidth and coverage, especially for remote, poor, and marginalized contexts. These measures could enhance the use of digital educational materials, and improve Internet connectivity to rural and remote schools. GPE countries could also leverage the G4/G5-enabled smartphone penetration in SSA to disseminate educational materials. Smartphone adoption in SSA is gaining traction, with coverage reaching the 50% mark in 2020, up from 45% in 2019 (GSMA, 2020; Mccrocklin, 2019). Flexible financing models, such as offered by a partnership between Google and Safaricom, are allowing buyers to make payments in small daily instalments that are easier for low-income users to make. Through such initiatives, it is expected that some 678 million people will be smartphone users in SSA by 2025 (GSMA, 2020).
3. Countries should explore the best mechanisms and approaches for training teachers on how to assess and provide feedback and guidance to learners during emergencies using distance learning tools and approaches. One way to strengthen student assessment and guidance is to build in elements of learning continuity in both pre- and in-service professional development/training programs.
4. Education programs too often address equity and inclusivity concerns at the tail-end of their responses. In the context of COVID-19 and other potential threats to learning continuity, governments should prioritize strengthening teachers' capacity, as frontline workers, to

respond to the needs of vulnerable school children within their communities. Professional development should address the learning needs and contexts of various groups of vulnerable children, such as those with special needs, displaced children, or those experiencing gender-based violence, to equip teachers to provide tailored pedagogy and psychosocial support to enhance their resilience.

5. There is insufficient in-country motivation to incentivize teachers during COVID-19 to deliver high quality, relevant and up-to-date instruction. Education stakeholders responsible for teachers' wellbeing should make every effort to incentivize them by alleviating challenges that hinder their effective performance. This includes providing adequate teaching resources (including digital devices, bundles, and credit/airtime), PPE, and monetary incentives, and recognizing and promoting teachers who have shown exemplary effort in supporting and protecting school children.
6. It is also important that education stakeholders institutionalize a system that supports teachers' wellbeing during emergencies. Beyond the integrated psychosocial support guidelines provided in some SSA countries during COVID-19, teachers themselves need psychosocial support to cope with new situations, even as they address the counselling needs of their learners (see for example INEE, 2020). Without psychosocial support, teachers are likely to suffer from intense work strain, compounded by psychosocial pressure, that can result in absenteeism, burnout, or resignations, as highlighted by UNESCO (2020b).

References

- ActionAid (2021). The bedrock of inclusion: why investing in the education workforce is critical to the delivery of SDG4. Retrieved from https://actionaid.org/sites/default/files/publications/Malawi%20study_summary%20report.pdf
- ADEA, AU/CIEFFA & APHRC (2021a). The Well-Being Of School Children In Africa During The Covid-19 Pandemic. Retrieved from https://www.adeanet.org/sites/default/files/school_children_well-being_kix_observatory.pdf
- ADEA, AU/CIEFFA & APHRC. (2021b). School Reopening in Africa during the COVID-19 Pandemic. Retrieved from https://www.adeanet.org/sites/default/files/school_reopening_kix_observatory.pdf
- ADEA, AU/CIEFFA & IDRC. (2021c). Teaching and Learner Well-Being during the COVID-19 Pandemic. Retrieved from <https://files.eric.ed.gov/fulltext/ED611804.pdf>
- African Union Commission and Organisation for Economic Co-operation and Development (AUC/OECD) (2019). Africa's Development Dynamics 2019: Achieving Productive Transformation. Retrieved from <https://dx.doi.org/10.1787/c1cd7de0-en>
- Akyeampong, K. (2017). Teacher educators' practice and vision of good teaching in teacher education reform context in Ghana. *Educational researcher*, 46(4), 194-203.
- Ajayi, I. A. (2020). The potential impact of COVID-19 on teenage pregnancy in Kenya. Retrieved from <https://aphrc.org/blogarticle/the-potential-impacts-of-covid-19-on-teenage-pregnancy-in-kenya/>
- Aslam, M., Downing, P., Gupta, R., Rawal, S., Rose, P., Stewart, K. (2021). Adapting Interventions to Strengthen Teaching Quality during the Covid-19 Pandemic: Experience of the Girls' Education Challenge in Afghanistan, Ghana and Sierra Leone. *The Education and Development Forum*. Retrieved from <https://www.ukfiet.org/2021/adapting-interventions-to-strengthen-teaching-quality-during-the-covid-19-pandemic-experience-of-the-girls-education-challenge-in-afghanistan-ghana-and-sierra-leone/>
- Barron, M., Cobo, C., Munoz-Najar, A., & Ciarrusta, I. S. (2021). The changing role of teachers and technologies amidst the COVID 19 pandemic: key findings from a cross-country study. *World Bank*. Retrieved from <https://blogs.worldbank.org/education/changing-role-teachers-and-technologies-amidst-covid-19-pandemic-key-findings-cross>
- Beche, E. (2020). Cameroonian responses to COVID-19 in the education sector: Exposing an inadequate education system. *International Review of Education*, 66(5), 755-775.
- Belay, D. G. (2020). COVID-19, Distance Learning and Educational Inequality in Rural Ethiopia. *Pedagogical Research*, 5(4), em0082. <https://doi.org/10.29333/pr/9133>
- Bernal, M. G., & Wurie, M. (2021). Like a Phoenix: Sierra Leone's journey to build back better after crisis strikes. *World Bank*. Retrieved from <https://blogs.worldbank.org/africacan/phoenix-sierra-leones-journey-build-back-better-after-crisis-strikes>
- Bissoonauth, R. (2020). Addressing the impact of COVID-19 on girls and women's education in Africa. *African Union International Center for Girls and Women's Education in Africa (CIEFFA)*. Retrieved from <https://www.globalpartnership.org/blog/addressing-impact-covid-19-girls-and-womens-education-africa>
- Building Tomorrow (2020). The Thriving Schools Program. Retrieved from <https://www.buildingtomorrow.org/programs/thrivingschools>

- Calderón, C., Cantú, C., & Chuhan-Pole, P. (2018). Infrastructure Development in Sub-Saharan Africa: A Scorecard. Washington, DC: World Bank. Retrieved from <https://openknowledge.worldbank.org/bitstream/handle/10986/29770/Infrastructure-development-in-Sub-Saharan-Africa-a-scorecard.pdf?sequence=5>
- Carvalho, S., Rossiter, J., Angrist, N., Hares, S., & Silverman, R. (2020). Planning for School Reopening and Recovery After COVID-19: An Evidence Kit for Policymakers. Center for Global Development. Retrieved from <https://www.cgdev.org/sites/default/files/planning-school-reopening-and-recovery-after-covid-19.pdf>
- Chebib, K. (2020). Education For All in the Time of COVID-19: How EdTech can be Part of the Solution. GSM Association. Retrieved from <https://www.gsma.com/mobilefordevelopment/wp-content/uploads/2020/09/EdTech-Final-WEB.pdf>
- Conto, C. A., Akseer, S., Dreesen, T., Kamei, A., Mizunoya, S., & Rigole, A. (2020). COVID-19: Effects of School Closures on Foundational Skills and Promising Practices for Monitoring and Mitigating Learning Loss. UNICEF. Retrieved from https://www.unicef-irc.org/publications/pdf/COVID-19_Effects_of_School_Closures_on_Foundational_Skills_and_Promising_Practices_for_Monitoring_and_Mitigating_Learning_Loss.pdf
- Dogra, P., & Kaushal, A. (2021). Underlying the triple burden effects on women educationists due to COVID-19. Education and Information Technologies. <https://doi.org/10.1007/s10639-021-10645-6>
- Doorly, A. (2020). Why non-state education requires support in the current pandemic. Global Schools Forum. Retrieved from <https://gemreportunesco.wordpress.com/2020/05/13/why-non-state-education-requires-support-in-the-current-pandemic/>
- Dreeseni, T., Akseeri, S., Brossardi, M., Dewanii, P., Giraldoii, J., Kameii, A., Mizunoyaiiii, S., & Ortizi, J.S. (2020). Promising practices for equitable remote learning: Emerging lessons from COVID-19 education responses in 127 countries. UNICEF. Retrieved from <https://www.unicef-irc.org/publications/pdf/IRB%202020-10%20CL.pdf>
- EdTech Hub & eLearning Africa (2020). The Effect of Covid-19 on Education in Africa and its Implications for the Use of Technology: A Survey of the Experience and Opinions of Educators and Technology Specialists. Retrieved from https://www.elearning-africa.com/ressources/pdfs/surveys/The_effect_of_Covid-19_on_Education_in_Africa.pdf
- Education International (2020a). Cape Verde: No to COVID-19 and gender-based violence in schools! Retrieved from <https://www.ei-ie.org/en/detail/17122/cape-verde-no-to-covid-19-and-gender-based-violence-in-schools>
- Education International (2020b). Cameroon: teachers must get more support in developing their skills to help them deliver quality distance education. Retrieved from <https://www.ei-ie.org/en/detail/16752/cameroon-teachers-must-get-more-support-in-developing-their-skills-to-help-them-deliver-quality-distance-education>
- Education International Research (2020). Covid-19 and Education: How Education Unions are Responding Survey Report. Retrieved from https://issuu.com/educationinternational/docs/2020_covid19_survey_report_eng_final
- Fitzpatrick, R., Korin, A., & Riggall, A. (2020). An international review of plans and actions for school reopening. Education Development Trust. Retrieved from <https://www.educationdevelopmenttrust.com/EducationDevelopmentTrust/files/51/51e70a0c-43d9-4c2d-a1aa-45613469a73d.pdf>
- Girls Education South Sudan (2020). GESS to Support Distance Learning as Schools across South Sudan Close in Response to Covid-19 Outbreak. Retrieved from <https://girlseducationsouthsudan.org/covid19gessresponse/>

- Global Partnership for Education (GPE) (2021). An inclusive response to COVID-19: Education for children with disabilities. Retrieved from <https://www.globalpartnership.org/blog/inclusive-response-covid-19-education-children-disabilities>
- GPE (2020a). Malawi Covid-19 Education Sector Response. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2008%20COVID-19%20AFF%20Request%20Malawi%20-%20Verified.pdf>
- GPE (2020b). Rwanda Covid-19 Education Response (GPE) (P174046). Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-07-COVID-19%20AFF-Request%20Rwanda%20-%20Verified.pdf>
- GPE (2020c). Programme d'Appui au Développement de l'Éducation du Sénégal: Riposte et Résilience face au COVID-19 (PADES_RR). Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-07-COVID-19%20AFF-Request%20Senegal.pdf>
- GPE (2020d). Implementation Support Program of the Niger Response Plan for the COVID-19 education. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2008%20COVID-19%20AFF%20Request%20Niger%20-%20Verified.pdf>
- GPE (2020e). Continuité pédagogique et résilience du système éducatif au Congolais face au COVID-19. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-07-Requete-financement-accelere-covid-19-document-programme-republique-congo.pdf>
- GPE (2020f). Remote learning: Educational response for Covid-19. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-07-02-application-program-document-covid-19-accelerated-funding-sao-tome-and-principe.pdf>
- GPE (2020g). COVID-19 Education Response Project for Togo. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-06-requete-financement-accelere-covid-19-document-programme-togo.pdf>
- GPE (2020h). Project to improve the quality and results of education for all in Mali (MIQRA). Retrieved from <https://www.globalpartnership.org/fr/content/requete-de-financement-accelere-covid-19-et-document-de-programme-mali-2020>
- GPE (2020i). Mauritania: Learning Continuity and Resilience Building of Basic Education Project. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-10-application-program-document-covid-19-accelerated-funding-mauritania.pdf>
- GPE (2020j). Guinea-Bissau Covid-19 Education Sector Response. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2008%20COVID-19%20AFF%20Request%20Guinea-Bissau%20-%20Verified.pdf>
- GPE (2020k). Providing alternative solutions to continue learning in a safe and protective environment for 13.9 million children and adolescents aged 3-17 affected by COVID-19 in the Democratic Republic of Congo. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2007%20COVID-19%20AFF%20Request%20DRC%20.pdf>
- GPE (2020l). Prevention and mitigation of the impacts of COVID-19 on education in the Comoros (2Pi2C). Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-11-requete-financement-covid-19-document-programme-union-comores.pdf>
- GPE (2020m). CHAD COVID-19 Education Emergency Response GPE Project. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-09-application-program-document-covid-19-accelerated-funding-chad.pdf>

- GPE (2020n). Central African Republic: COVID-19 Response. Retrieved from <https://www.globalpartnership.org/where-we-work/central-african-republic>
- GPE (2020o). Cabo Verde: COVID-19 Response. Retrieved from <https://www.globalpartnership.org/where-we-work/cabo-verde>
- GPE (2020p). Emergency Response Project against Covid-19 in Basic Education in Cameroon: Ensuring the continuity of basic education (preschool, primary and 1st cycle of general secondary education) for students of the public affected by the COVID crisis-19 in a sanitary, safe and protective environment. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-07-requete-financement-accelere-covid-19-document-programme-cameroun-mai.pdf>
- GPE (2020q). Prevention and mitigation of the impacts of COVID-19 on education in the Comoros (2Pi2C). Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-11-requete-financement-covid-19-document-programme-union-comores.pdf>
- GPE (2020r). Kenya GPE COVID-19 Learning Continuity in Basic Education Project. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2008%20COVID-19%20AFF%20Request%20Kenya%20-%20Verified.pdf>
- GPE (2020s). Programme d'Appui au Développement de l'Education du Sénégal: Riposte et Résilience face au COVID-19 (PADES_RR). Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-07-COVID-19%20AFF-Request%20Senegal.pdf>
- GPE (2020t). COVID-19 Education Response Project. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-06-requete-financement-accelere-covid-19-document-programme-togo.pdf>
- GPE (2020u). Zimbabwe COVID-19 Accelerated Funding to Support the Education Sector. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2007%20COVID-19%20AFF%20Request%20Zimbabwe%20-%20Verified.pdf>
- GPE (2020v). Ethiopia COVID-19 Response Project (P174206). Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2008%20COVID-19%20AFF%20Request%20Ethiopia%20-%20Verified.pdf>
- GPE (2020w). Sierra Leone Covid-19 Education Emergency Response. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-06-10-application-and-program-document-covid-19-accelerated-funding-sierra-leone-may-2020.pdf>
- GPE (2020x). Sudan COVID-19 Response Project (P174220). Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2008%20COVID-19%20AFF%20Request%20Sudan%20-%20Verified.pdf>
- GPE (2020y). Lesotho COVID-19 Education Sector Response. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020-06-application-and-program-document-for-covid-19-accelerated-funding-for-lesotho-may-2020.pdf>
- GPE (2020z). Burkina Faso: COVID-19 Education Response. Retrieved from <https://www.globalpartnership.org/where-we-work/burkina-faso>
- GPE (2020za). Global Partnership for Education provides \$68 million in grants for education response to COVID-19 (coronavirus). Retrieved from <https://www.globalpartnership.org/news/global-partnership-education-provides-68-million-grants-education-response-covid-19>

- GPE (2020zb). Continuing Learning through alternate home-based platforms. GPE. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2007%20COVID-19%20AFF%20Request%20Nigeria%20-%20Verified.pdf>
- GPE (2020zc). Djibouti: Education Emergency Response to COVID19 (P174128). GPE. <https://www.globalpartnership.org/sites/default/files/document/file/2020%2009%20COVID-19%20AFF%20Request%20Djibouti%20-%20Verified.pdf>
- GPE & Government of Guinea (2020). Continuité d'apprentissage post-COVID-19 en Guinée. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2009%20COVID-19%20AFF%20Request%20Guinea%20-%20Verified.pdf>
- GPE & Government of Madagascar (2020). Education Sector Response to COVID-19 for Madagascar. Retrieved from <https://www.globalpartnership.org/sites/default/files/document/file/2020%2009%20COVID-19%20AFF%20Request%20Madagascar%20-%20Verified.pdf>
- Global System for Mobile Communications Association (GSMA) (2020). The mobile economy Sub-Saharan Africa 2020. GSMA. Retrieved from https://www.gsma.com/mobileeconomy/wp-content/uploads/2020/09/GSMA_MobileEconomy2020_SSA_Eng.pdf
- Government of Chad (2020). National Response Plan for the Education Sector to the Epidemic of Covid-19 in Chad (PRNSE C19). Retrieved from http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/chad_plan_sectoriel_de_education_en_reponse_au_covid_19_28_avril_2020.pdf
- Government of Côte d'Ivoire (2020). Plan de réponse du secteur éducation-formation contre le Covid-19. Côte Retrieved from <https://planipolis.iiep.unesco.org/en/2020/plan-de-r%C3%A9ponse-du-secteur-%C3%A9ducation-formation-contre-le-covid-19-6990>
- Government of Ethiopia (2020). Concept Note for Education Sector COVID 19-Preparedness and Response Plan. Retrieved from http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/ethiopia_concept_note_for_education_sector_covid_19-preparedness_and_response_plan.pdf
- Government of Gambia (2020). Education Sector Coronavirus (COVID-19) Response Plan. Retrieved from http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/gambia_education_sector_covid-19_strategy.pdf
- Government of Ghana (2020). Covid-19 Coordinated Education Response Plan for Ghana. Retrieved from <https://ges.gov.gh/2020/04/29/covid-19-coordinated-education-response-plan-for-ghana/>
- Government of Kenya (2020a). Kenya Basic Education Covid-19 Emergency Response Plan. Retrieved from https://www.education.go.ke/images/Kenya_basic_Education_COVID-19_Emergency_Response_Plan-compressed.pdf
- Government of Kenya (2020b). Guidelines on Health and Safety Protocols for Reopening of Basic Education Institutions amid COVID-19 Pandemic. Retrieved from https://www.education.go.ke/images/MINISTRY_OF_EDUCATION_-_COVID-19_GUIDELINES_15TH_SEPT_2020.pdf
- Government of Kenya (2020c). Kenya GPE Covid-19 Learning Continuity in Basic Education (P174059): Stakeholder Engagement Plan (SEP). Retrieved from <http://documents1.worldbank.org/curated/en/446931592941221907/pdf/Stakeholder-Engagement-Plan-SEP-KENYA-GPE-COVID-19-LEARNING-CONTINUITY-IN-BASIC-EDUCATION-PROJECT-P174059.pdf>

- Government of Liberia (2020). Liberia COVID-19 Education Emergency Response Plan. Retrieved from http://moe-liberia.org/wp-content/uploads/2020/05/Liberia-COVID-19-Education-Response-Plan_24-May_2020.pdf
- Government of Malawi (2020a). Ministry of Education's COVID-19 Response Plan. Retrieved from <https://www.education.gov.mw/index.php/resources/covid-19/file/28-national-covid-19-preparedness-and-response-plan>
- Government of Malawi (2020b). National Education Sector Investment Plan 2020 – 2030. Retrieved from https://planipolis.iiep.unesco.org/sites/default/files/ressources/malawi_nesip_2020-2030.pdf
- Government of Mali (2020). Strategy to Combat the COVID-19 Pandemic in Schools. Retrieved from http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/mali_strategie_covid_education_11052020.pdf
- Government of Mauritania (2020). Plan de riposte de l'éducation en réponse à la pandémie du Covid-19. Retrieved from <https://www.education.gov.mr/IMG/pdf/planripostecovid19.pdf>
- Government of Nigeria (2020a). Learning in a pandemic: Nigeria's response to teaching and learning during the COVID-19 pandemic. Retrieved from https://education.gov.ng/wp-content/uploads/2020/08/Learning-in-a-Pandemic-Report_TEP-NESG_2020.pdf
- Government of Nigeria (2020b). Nigeria Education Sector COVID-19 Response Strategy in North East. Retrieved from https://www.humanitarianresponse.info/sites/default/files/documents/files/nigeria_education_sector_covid-19_response_strategy_north_east_20200415.pdf
- Government of Rwanda (2020a). Towards Achieving Adequate School Infrastructure and Equipment. Retrieved from https://www.mineduc.gov.rw/updates/news-details?tx_news_pi1%5Baction%5D=detail&tx_news_pi1%5Bcontroller%5D=News&tx_news_pi1%5Bnews%5D=9752&cHash=7afbe9d42a2216ed8ac2c4a199e2c6ec
- Government of Rwanda (2020b). Keeping the Doors Open for Learning: Response Plan of Ministry of Education to the COVID-19 Outbreak. Retrieved from https://www.mineduc.gov.rw/fileadmin/user_upload/Mineduc/Publications/REPORTS/Education_Sector_COVID_Plan_Rwanda.pdf
- Government of Somalia (2020). Somalia Education Sector Covid-19 Response Plan. Retrieved from http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/somalia-education-sector_covid-19_response-plan_final_2020-04-22.pdf
- Government of Togo (2020a). Atténuation des effets de la pandémie du Covid-19 sur le système éducatif Togolais. Retrieved from http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/togo_plan_dattenuation_effet_covid-19.pdf.
- Government of Togo (2020b). Education: No one will be forgotten. Retrieved from <https://www.republicoftogo.com/Toutes-les-rubriques/Education/Personne-ne-sera-oublie>
- Government of Uganda (2020). Preparedness and Response Plan for COVID-19. Retrieved from <http://www.education.go.ug/wp-content/uploads/2020/05/Preparedness-and-Response-Plan-for-COVID19-MAY-2020.pdf>
- Government of Zambia (2020). Education Contingency Plan for Novel Coronavirus (COVID-19). Retrieved from <http://planipolis.iiep.unesco.org/sites/planipolis/files/ressources/moge-novel-coronavirus-covid-19-response-and-recovery-plan-2020-final.pdf>
- Hailu, B. H. (2020). Education Response to COVID-19: How Can Basic Education be Implemented in Ethiopia? Retrieved from <https://riseprogramme.org/blog/COVID-19-ETH-Basic-Education>

- Human Rights Watch (2020a). Impact of Covid-19 on Children's Education in Africa: Submission to the African Committee of Experts on the Rights and Welfare of the Child (35th Ordinary Session). Retrieved from https://www.hrw.org/sites/default/files/media_2020/08/Discussion%20Paper%20-%20Covid%20for%20ACERWC.pdf
- Human Rights Watch (2020b). Their War against Education: Armed Group Attacks on Teachers, Students, and Schools in Burkina Faso. Retrieved from <https://www.hrw.org/report/2020/05/26/their-war-against-education/armed-group-attacks-teachers-students-and-schools>
- Inter-Agency Network for Education in Emergencies (INEE) (2020). Supporting teachers in crisis contexts during COVID-19. Retrieved from <https://inee.org/system/files/resources/COVID-19%20Webinar%20Series%20-%20Webinar%205.pdf>
- International Labor Organization (ILO) (2021). Skills development in the time of COVID-19: Taking stock of the initial responses in technical and vocational education and training. Retrieved from https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---ifp_skills/documents/publication/wcms_766557.pdf
- International Task Force on Teachers for Education 2030 (2020). COVID-19: A Global Crisis for Teaching and Learning. Retrieved from <https://teachertaskforce.org/knowledge-hub/covid-19-global-crisis-teaching-and-learning>
- International Telecommunication Union and United Nations Educational, Scientific and Cultural Organization (ITU/UNESCO) (2019a). Connecting Africa through Broadband: A Strategy for Doubling Connectivity by 2021 and Reaching Universal Access by 2030. Retrieved from <https://www.broadbandcommission.org/Documents/workinggroups/DigitalMoonshotforAfricaReport.pdf>.
- ITU/UNESCO (2019b). The State of Broadband: Broadband as a Foundation for Sustainable Development. Retrieved from https://www.itu.int/dms_pub/itu-s/opb/pol/S-POL-BROADBAND.20-2019-PDF-E.pdf
- Jacksin, T. (2019). This Ethiopian startup is using data-driven tech to train better teachers. Disrupt Africa. Retrieved from <https://disrupt-africa.com/2019/07/04/this-ethiopian-startup-is-using-data-driven-tech-to-train-better-teachers/>
- Jones, A.L., & Kessler, M.A. (2020). Teachers' Emotion and Identity Work during a Pandemic. *Front. Educ.* <https://doi.org/10.3389/educ.2020.583775>
- Koomar, S. (2020). Using EdTech to Support Effective Data Monitoring: A Curated Resource List. EdTech Hub. Retrieved from <https://docs.edtechhub.org/lib/FS4CMYUB/download/Rcv8J6A7/Koomar%20and%20Blest%20-%202020%20-%20Using%20EdTech%20to%20Support%20Effective%20Data%20Monitoring.pdf>
- Kossi, T. (2020). Covid-19: the clouded horizon for teachers in the private sector in Togo. APA-Lomé (Togo). Retrieved from <http://apanews.net/mobile/uneInterieure.php?id=4939057>
- Lorente, L. M. L., Arrabal, A. A., & Pulido-Montes, C. (2020). The Right to Education and ICT during COVID-19: An International Perspective. *Sustainability*, 12(21), 9091; <https://doi.org/10.3390/su12219091>
- Lynd, M. (2005). Fast-Track Teacher Training: Models for Consideration for Southern Sudan. American Institutes of Research. Retrieved from https://people.umass.edu/educ870/teacher_education/Documents/Lynd%20-%20Fast-track%20Southern%20Sudan.pdf
- Mccrocklin, S. (2019). Smartphone and Mobile Internet Penetration in Africa and Globally. GeoPoll. Retrieved from <https://www.geopoll.com/blog/smartphone-mobile-internet-penetration-africa/>

- Milondzo, K. S., & Gumbi, D. (2011). Teacher education and training for Africa in the twenty-first century: What form should it take? *Educational Research and Reviews*, 6(1), 1-16.
- Mundy, K., & Hares, S. (2020). Managing education systems during COVID-19: An open letter to a minister of education. Center for Global Development (blog). Retrieved from <https://www.cgdev.org/blog/managing-education-systems-during-covid-19-open-letter-minister-education>.
- Ngwacho, A. G. (2020). COVID-19 pandemic impact on Kenyan education sector: Learner challenges and mitigations. *Journal of Research Innovation and Implications in Education*, 4(2), 128-139.
- Ngware, M., & Ochieng, V. (2021). Keeping class in session: A case study of EdTech and the COVID-19 response in Kenya. APHRC. Retrieved from <https://aphrc.org/publication/keeping-class-in-session-a-case-study-of-edtech-and-the-covid-19-response-in-kenya/>
- Ngware, M., & Ochieng, V. (2020). EdTech and the COVID-19 response in Kenya. Case study. EdTech Hub. Retrieved from <https://edtechhub.org>
- Norwegian Refugee Council (2020). Covid-19 and conflict forced over 12 million children from school across Africa's Central Sahel region. Retrieved from <https://www.nrc.no/news/2020/october/12-million-children-forced-from-school-in-sahel/>
- Oddy, J. (2021). Lessons Learned and Best Practices In Harmonising Accelerated Education Programming In Kenya, Uganda And Somalia. The Education and Development Forum. Retrieved from <https://www.ukfiet.org/2021/lessons-learned-and-best-practices-in-harmonising-accelerated-education-programming-in-kenya-uganda-and-somalia/>
- Organisation for Economic Co-operation and Development and African Center for Economic Transformation (OECD/ACET) (2020), *Quality Infrastructure in 21st Century Africa: Prioritising, Accelerating and Scaling up in the Context of Pida (2021-30)*. Paris: OECD/ACET.
- OECD (2020). *Compendium of Policy Good Practices for Quality Infrastructure Investment*. Retrieved from <https://www.oecd.org/finance/oecd-compendium-of-policy-good-practices-for-quality-infrastructure-investment.htm>
- Save the Children (2020). *Beyond the Shadow Pandemic: Protecting a Generation of Girls from Gender-Based Violence through COVID-19 to Recovery*. Retrieved from <https://www.savethechildren.org/content/dam/usa/reports/health/beyond-the-shadow-pandemic.pdf>
- Sawchuck, S., and Samuels, C. A. (2020). Where Are They? Students go missing in Shift to Remote Classes. *Education Week*. Retrieved from <https://www.edweek.org/ew/articles/2020/04/10/where-are-they-studentsgo-missing-in.html>.
- Sim, S., Carvalho, S. F., & Gera, R. (2020). Learning equity during the coronavirus: Experiences from Africa. World Bank. Retrieved from <https://blogs.worldbank.org/education/learning-equity-during-coronavirus-experiences-africa>
- Sperling, G. B., & Winthrop, R. (2015). *What works in girls' education: Evidence for the world's best investment*. Brookings Institution Press. Retrieved from <https://www.brookings.edu/wp-content/uploads/2016/07/What-Works-in-Girls-Educationlowres.pdf>
- Strauss, V. (2020). A Veteran Teacher Has 'a Mini Covid-19 Educator Meltdown'— and Realizes Less is more with Online Learning. *Washington Post*. Retrieved from <https://www.washingtonpost.com/education/2020/04/08/veteran-teacherhas-mini-covid-19-educator-meltdown-realizes-that-less-is-more-withonline-learning/>

- Taddese, A. (2020). EdTech in Ghana: A Rapid Scan. (EdTech Hub Country Scan). DOI: 10.5281/zenodo.3830951. Retrieved from <https://docs.edtechhub.org/lib/4TKSDH2I/download/TUM48CS3/Abeba%20Taddese%20-%202020%20-%20EdTech%20in%20Ghana%20A%20Rapid%20Scan.pdf>.
- Taylor, N., & Robinson, N. (2019). Secondary Education in Sub-Saharan Africa Teacher Preparation and Support: Literature Review. MasterCard Foundation. Retrieved from <https://mastercardfdn.org/wp-content/uploads/2019/07/SEA-Teacher-Preparation-and-Support-Literature-Review.pdf>
- Teachers Taskforce (2020). How the COVID-19 pandemic is affecting contract teachers in sub-Saharan Africa. Retrieved from <https://teachertaskforce.org/blog/how-covid-19-pandemic-affecting-contract-teachers-sub-saharan-africa>
- Tilasto (2021). Total primary teachers. Retrieved from <https://www.tilasto.com/en/topic/education-and-science/primary-teachers/teachers-primary-total/ethiopia>
- United Nations (UN) (2020). Policy Brief: The Impact of COVID-19 on Women. Retrieved from <https://www.un.org/sexualviolenceinconflict/wp-content/uploads/2020/06/report/policy-brief-the-impact-of-covid-19-on-women/policy-brief-the-impact-of-covid-19-on-women-en-1.pdf>
- United Nations Department of Economic and Social Affairs (UNDESA) (2020). Policy Brief: Education during COVID-19 and beyond. Retrieved from https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/08/sg_policy_brief_covid-19_and_education_august_2020.pdf
- United Nations Development Program (UNDP) (2020). Rapid Assessment: The Socio-economic Impacts of COVID-19 In Eritrea: Preliminary Findings. Retrieved from <https://www.undp.org/content/dam/rba/docs/COVID-19-CO-Response/UNDP-rba-COVID-assessment-Eritrea.pdf>
- United Nations Educational, Scientific and Cultural Organization (UNESCO) (2021a). Global monitoring of school closures. Retrieved from <https://en.unesco.org/covid19/educationresponse#durationschoolclosures>
- UNESCO (2021b). Where are teachers being prioritized in COVID-19 vaccination efforts? Retrieved from <https://en.unesco.org/news/where-are-teachers-being-prioritized-covid-19-vaccination-efforts>
- UNESCO (2021c). UNESCO urges all countries to prioritize teachers in national COVID-19 vaccine rollout plans to ensure education can continue safely and schools remain open. Retrieved from <https://en.unesco.org/covid19/educationresponse/teacher-vaccination>
- UNESCO (2020a). COVID-19 response—remote learning strategy: Remote learning strategy as a key element in ensuring continued learning. Retrieved from <https://en.unesco.org/sites/default/files/unesco-covid-19-response-toolkit-remote-learning-strategy.pdf>
- UNESCO (2020b). Global Education Monitoring Report: Inclusion and Education - All Means All. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000373718>
- UNESCO (2020c). From Sub-Regional to a Continental Response Strategy in Support of More Resilient and Responsive Education Systems in Africa COVID-19 (C-19). Retrieved from https://en.unesco.org/sites/default/files/covid_19_emergency_response_plan_-_all_sectors-final-05apr2020.pdf
- UNESCO (2018). Improving the Quality of Teacher Education in Sub-Saharan Africa: Lessons Learned from a UNESCO-China Funds-in-Trust Project. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000260604>

- UNESCO & ILO (2020). Supporting teachers in back-to-school efforts: guidance for policy-makers. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000373479>
- UNESCO-Institute for Statistics (UNESCO-IS) (2021). Number of teachers by teaching level of education. Retrieved from <http://data.uis.unesco.org/>
- UNESCO-IS (2020a). Practical Guide to Implement Surveys on ICT Use in Primary and Secondary Schools. Sao Paulo: Regional Center for Studies on the Development of the Information Society (Cetic.br)
- UNESCO-IS (2020b). Education in Africa. Retrieved from <http://uis.unesco.org/en/topic/education-africa>
- UNESCO International Institute for Higher Education in Latin America and the Caribbean (IESALC) (2020). IESALC Report Analyzes the Impacts of #Covid19 and Offers Recommendations to Governments and Institutions of Higher Education. Retrieved from <https://www.iesalc.unesco.org/en/2020/04/13/iesalc-calls-on-states-to-ensure-the-right-to-higher-education-and-equal-opportunities-in-the-face-of-covid-19/>
- UNICEF (2020a). Education in the post-COVID world: a youth vision. Retrieved from <https://www.unicef.org/kenya/stories/Education-in-the-post-COVID-world-a-youth-vision>
- UNICEF (2020b). UNICEF Sierra Leone COVID-19 Situation Report #10: Situation in Numbers. Retrieved from <https://www.unicef.org/media/85466/file/Sierra-Leone-COVID19-SitRep-31-October-2020.pdf>
- UNICEF (2020c). Eritrea Country Office Humanitarian: Situation Report No. 14. Retrieved from <https://reliefweb.int/sites/reliefweb.int/files/resources/UNICEF%20Eritrea%20Humanitarian%20Situation%20Report%20No.%2014%20-%20End%20of%20the%20Year%202020.pdf>
- United Nations High Commissioner for Refugees (UNHCR) (2021). Regional Overview and Education Trends: total number of refugees and IDPs. Retrieved from <https://data2.unhcr.org/en/documents/download/88014>.
- UNHCR (2020a). COVID-19: Preparing for the reopening of schools. Retrieved from <https://reliefweb.int/sites/reliefweb.int/files/resources/76242.pdf>
- UNHCR (2020b). Refugee teachers in West Africa champion education despite challenges. Retrieved from <https://www.unhcr.org/afr/news/stories/2020/10/5f7adbc64/refugee-teachers-in-west-africa-champion-education-despite-challenges.html>
- UNHCR (2020c). Education – Region Overview: East and Horn of Africa, and the Great Lakes Region. Retrieved from https://reliefweb.int/sites/reliefweb.int/files/resources/EHAGL%20Regional%20Education%20update%20Jul-Sep%202020_0.pdf
- UNHCR (2020d). Supporting Continued Access to Education during COVID-19: Emerging Promising Practices. Retrieved from <https://www.unhcr.org/5ea7eb134.pdf>
- UN Women (2020). The Private Sector's Role in Mitigating the Impact of COVID-19 on Vulnerable Women and Girls in Nigeria. Retrieved from <https://www.weps.org/resource/private-sectors-role-mitigating-impact-covid-19-vulnerable-women-and-girls-nigeria>
- Walters, C., & Bam, A. (2021). Working from home makes women's academic guilt worse. University World News-Africa Edition. Retrieved from <https://www.universityworldnews.com/post.php?story=20211013120035194>
- World Bank (2021). Remote Learning during COVID-19: Lessons from Today, Principles for Tomorrow. Retrieved from <https://documents1.worldbank.org/curated/en/160271637074230077/pdf/Remote-Learning-During-COVID-19-Lessons-from-Today-Principles-for-Tomorrow.pdf>

- World Bank (2020a). Benin COVID-19 Education Response GPE Project (P174186). Retrieved from <http://documents1.worldbank.org/curated/en/963591595604193391/pdf/Project-Information-Document-Benin-COVID-19-Education-Response-GPE-Project-P174186.pdf>.
- World Bank (2020b). Pivoting to Leveraging Lessons from the COVID-19 Crisis for Learners with Disabilities. Retrieved from <https://thedocs.worldbank.org/en/doc/147471595907235497-0090022020/original/IEIssuesPaperDisabilityInclusiveEducationFINALACCESSIBLE.pdf>
- World Bank (2020c). Djibouti: Education Emergency Response to COVID-19. Retrieved from <https://ewdata.rightsindevelopment.org/files/documents/28/WB-P174128.pdf>
- World Bank (2020d). The World Bank's Education Response to COVID-19. Retrieved from <http://pubdocs.worldbank.org/en/487971608326640355/External-WB-EDU-Response-to-COVID-Dec15FINAL.pdf>
- World Health Organization (WHO) (2020a). Disability and Health. Retrieved from <https://www.who.int/en/news-room/fact-sheets/detail/disability-and-health>
- WHO (2020b). Violence against Children. Retrieved from <https://www.who.int/news-room/fact-sheets/detail/violence-against-children>

Appendix 1: Total Number of Teachers (Primary and Secondary) in GPE Partner Countries

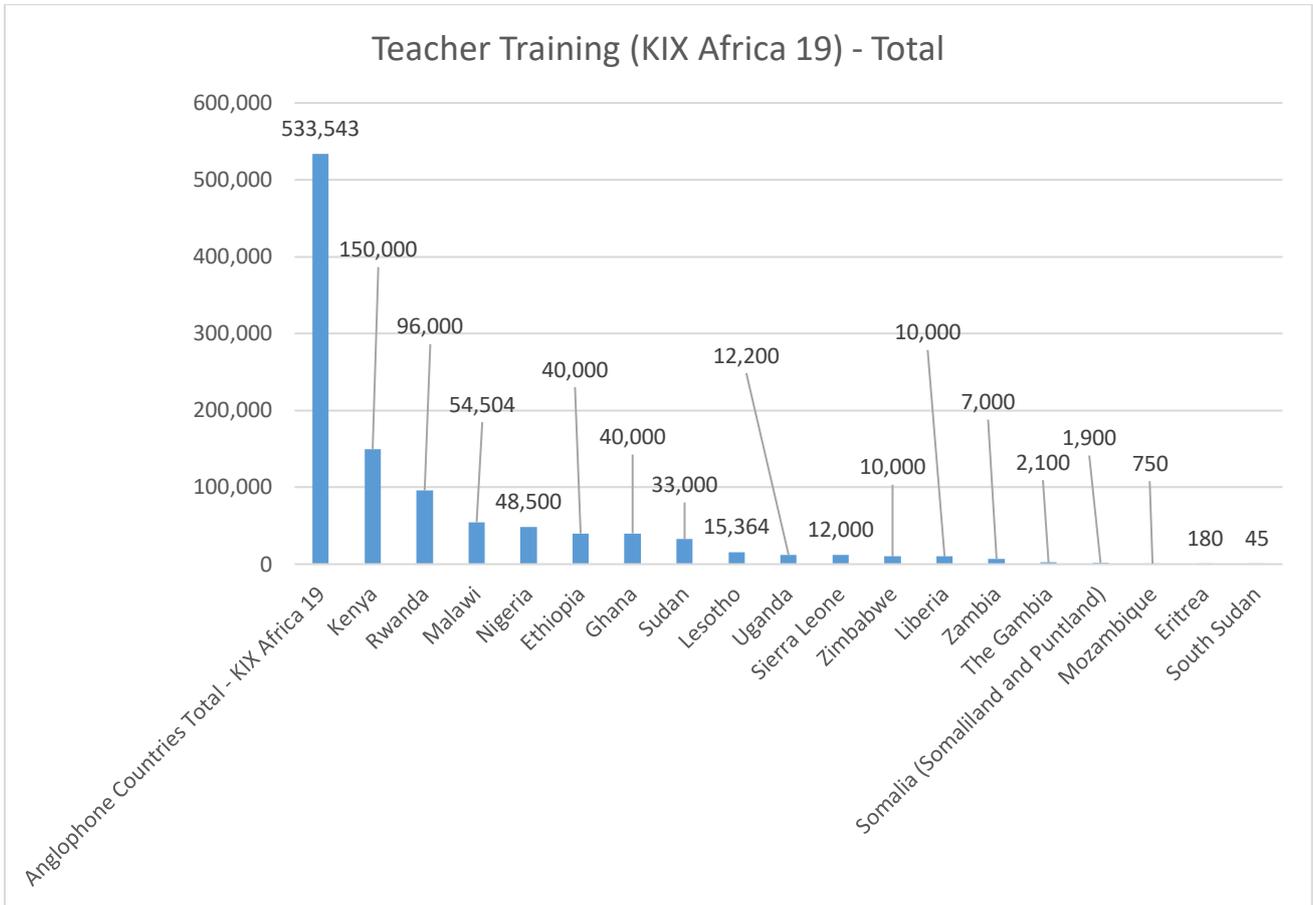
Anglophone Countries				
Country Name	Year(s)	Number & Level		Total
Eritrea	2018	9,028	Primary	16,464
	2018	7,436	Secondary	
Ethiopia	2011 **	259,636 **	Primary **	259,636 (excluding secondary teachers)
Gambia	2019	10,101	Primary	18,210
	2019	8,109	Secondary	
Ghana	2019	168,546	Primary	356,460
	2019	187,914	Secondary	
Kenya	2015	266,511	Primary	465,263
	2015	198,752	Secondary	
Lesotho	2017	11,167	Primary	16,553
	2017	5,386	Secondary	
Liberia	2017	28,468	Primary	45,980
	2017	17,512	Secondary	
Malawi	2019	83,431	Primary	97,959
	2019	14,528	Secondary	
Mozambique	2019	121,488	Primary	154,769
	2017	33,281	Secondary	
Nigeria	2010 **	574,078 **	Primary **	574,078 (excluding secondary teachers)
Rwanda	2019	43,878	Primary	74,293
	2019	30,415	Secondary	
Sierra Leone	2019	47,738	Primary	69,867
	2016	22,129	Secondary	
Somalia	2007 **	12,870 **	Primary **	12,870 (excluding secondary teachers)
Sudan	**	**	**	**
	**	**	**	
South Sudan	2015	27,248	Primary	33,222
	2015	5,974	Secondary	
Tanzania (Mainland)	2019	196,238	Primary	302,040
	2019	105,802	Secondary	
Uganda	2017	207,238	Primary	271,195
	2017	63,957	Secondary	
Zambia	2017 **	78,099 **	Primary **	78,099 (excluding secondary teachers)
Zimbabwe	2019	73,148	Primary	121,112
	2019	47,964	Secondary	

Francophone Countries				
Country Name	Year(s)	Number & Level		Total
Burkina Faso	2019	82,083	Primary	142,483
	2019	60,400	Secondary	
Burundi	2019	51,545	Primary	77,255
	2019	25,710	Secondary	
Cabo Verde	2018	3,043	Primary	6,503
	2018	3,460	Secondary	
Cameroon	2016	96,546	Primary	211,147
	2016	114,601	Secondary	
Central African Republic	2017	9,756	Primary	14,113
	2017	4,357	Secondary	
Chad	2019	44,691	Primary	67,618
	2019	22,927	Secondary	
Comoros	2018	4,428	Primary	13,298
	2018	8,870	Secondary	
Côte d'Ivoire	2019	96,255	Primary	173,433
	2019	77,178	Secondary	
Democratic Republic of Congo	2018	544,039	Primary	922,313
	2018	378,274	Secondary	
Djibouti	2019	2,310	Primary	4,751
	2019	2,441	Secondary	
Guinea	2016	37,680	Primary	37,680 (excluding secondary teachers)
	**	**	**	
Guinea Bissau	**	**	**	
	**	**	**	
Madagascar	2019	126,649	Primary	209,093
	2019	82,444	Secondary	
Mali	2018	65,485	Primary	123,849
	2018	58,364	Secondary	
Mauritania	2019	16,630	Primary	25,659
	2019	9,029	Secondary	
Niger	2019	67,285	Primary	96,510
	2019	29,225	Secondary	
Republic of Congo	2018	27,845	Primary	53,692
	2018	25,847	Secondary	
Sao Tome & Principe	2017	1,193	Primary	2,129
	2017	936	Secondary	
Senegal	2015	64,577	Primary	120,363
	2015	55,786	Secondary	
Togo	2020	41,685	Primary	72,179
	2020	30,494	Secondary	

Data Sources: UNESCO Institute for Statistics (2021), and Tilasto (2021).

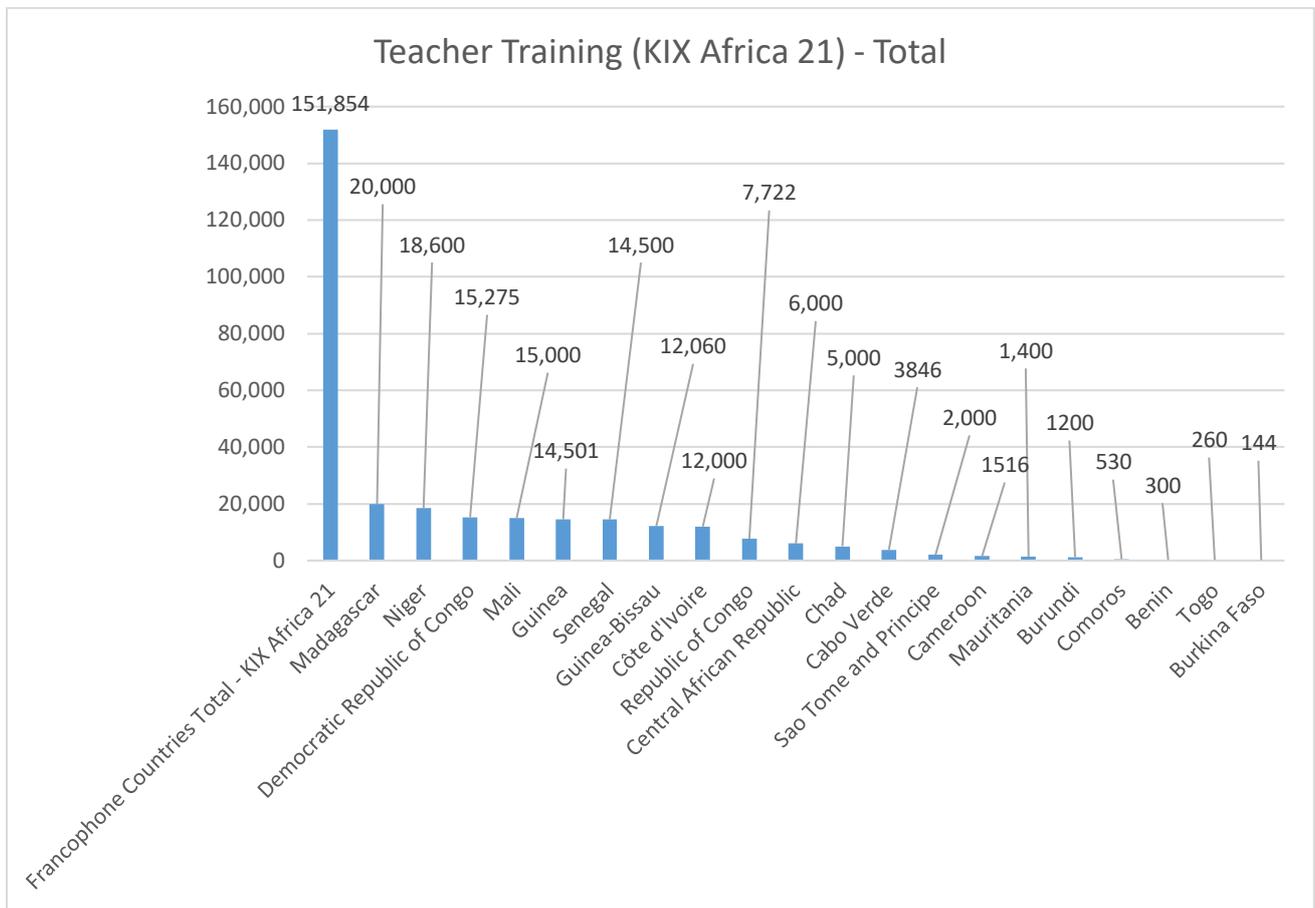
Notes: ** Missing data/information

Appendix 2: Trained teachers in KIX Africa 19⁹



⁹ Teacher training numbers in Tanzania were unavailable, hence it is excluded from the list.

Appendix 3: Trained teachers in KIX Africa 21¹⁰



¹⁰ Teacher training numbers in Djibouti were unavailable, hence it is excluded from the list.