

The Long-Term Impact of COVID-19 on Educational Systems in Africa: Perspectives of Education Stakeholders from sub-Saharan Africa

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This paper is one of a series produced through the KIX COVID-19 Observatory. The aim is to provide decision makers, development partners, and education practitioners with well-researched stakeholder perspectives on the long-term impact of the COVID-19 pandemic on educational systems in the Global Partnership for Education (GPE) partner countries in Africa.

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Suggested citation:

ADEA & APHRC. (2023). *The Long-Term Impact of COVID-19 on Educational Systems in Africa: Perspectives of Education Stakeholders from sub-Saharan Africa*. Abidjan, Nairobi: Association for the Development of Education in Africa & African Population and Health Research Center.

Authors' acknowledgements:

This paper was written by Lydia Namatende-Sakwa, Moses Ngware, and Elisheba Kiru from the African Population and Health Research Center (APHRC). We thank our collaborators from the Association for the Development of Education in Africa (ADEA) - led by Albert Nsengiyumva and involving Shem Bodo, Amina Yekhlef, Margaret Kamau, and Mamy Razafimahatratra - for their continued support. Our thanks also go to Serhiy Kovalchuk and Hamidou Boukary of the International Development Research Centre (IDRC) for their support. We also thank other APHRC researchers who supported the preparation of this report at various stages, through brainstorming sessions and/or internal reviews. The authors take sole responsibility for the views expressed in this report.

About the Observatory:

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

The Observatory is monitoring the policy and practice responses to COVID-19 in the educational systems of 40 GPE partner countries in Africa and is collecting emerging research evidence on the topic, developing knowledge products and engaging policymakers and other education stakeholders in the uptake of the recommendations. It focuses on the pandemic's impact on the functioning of education systems and the well-being of learners.

The Observatory is implemented by a consortium consisting of [ADEA](#) and African Union International Center for Girls and Women's Education in Africa ([AU/CIEFFA](#)). Technical support is provided by [APHRC](#) and the [UNESCO Institute for Statistics](#).

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Abbreviations

ADEA	Association for the Development of Education in Africa
APHRC	African Population and Health Research Center
DLS	Distance-learning solutions
GPE	Global Partnership for Education
ICT	Information and communication technology
IDRC	International Development Research Centre
KII	Key informant interview
KIX	Knowledge and Innovation Exchange
MoE	Ministry of Education
OOSCY	Out-of-school children and youth
SDG	Sustainable Development Goal
SGBV	Sexual and gender-based violence
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WASH	Water, sanitation, and hygiene

Executive Summary

Background

Global school closures, deployed to curb the spread of COVID-19, have affected educational systems worldwide, threatening the disruption of the strides made in attainment of quality and equitable education, especially on the African continent. While governments established several interventions to mitigate the short-term consequences of COVID-19, little is known about the long-term impact of COVID-19 on education, particularly from the perspectives of national education stakeholders.

Purpose of the study

The purpose of this study was to provide stakeholders' perspectives on the envisioned long-term impact of COVID-19 on the educational systems in seven countries in sub-Saharan Africa that are part of the Global Partnership for Education (GPE). The study also aimed to identify evidence gaps and support countries need for crises preparedness with the aim of curtailing the anticipated long-term impacts of COVID-19 on education in Africa. This study is part of the series of studies conducted under the [KIX COVID-19 Observatory](#) project.

Research questions

Two research questions guided the study: (1) What are the perspectives of educational stakeholders in the selected GPE partner countries on the long-term impact of COVID-19 on education? (2) What evidence and support do countries need to address identified challenges according to the selected stakeholders?

Methodology

Using a qualitative research approach, we purposively selected 73 stakeholders from seven GPE partner countries in Africa, namely: Burkina Faso, Kenya, Malawi, Mali, Mozambique, Niger, and Nigeria. These stakeholders included 45 senior Ministry of Education (MoE) officials related to programs and planning (including those from MoE agencies) at national and sub-national levels, as well as 28 non-state actor partners that work closely with ministries of education. The data was collected using a desk review and key informant interviews.

Findings

From the education stakeholders' perspectives, the long-term impacts of COVID-19 on education in the respective countries in Africa are projected to manifest in three main ways. First is on learners, which includes learning loss, school dropout, and psychological well-being. Second is the impact on teachers, reflected in teacher truancy and well-being. Third is the impact on the school system, entailing the institutionalization of information and communication technology (ICT); integration of water, sanitation, and hygiene (WASH); as well as school resource constraints. The stakeholders therefore identified evidence needs to address the three areas.

Firstly, the evidence on school dropout, learning loss, and learner well-being will be critical in addressing the long-term impact of COVID-19 on students. Secondly, the evidence on teacher truancy and teacher well-being will be invaluable in addressing the long-term impact on teaching.

Finally, the evidence on school closures as well as distance-learning solutions (DLS) will be useful in addressing the long-term impact of COVID-19 on school operations.

Key support needed by GPE partner countries in Africa include support to mitigate the impact of COVID-19 on school re-entry programs, strengthening guidance and counselling, and supporting vulnerable groups. Further, support will be needed to train teachers on DLS, infrastructure development, creating strong education data systems to inform decisions as well as support for crises preparedness.

Conclusion

From the stakeholder perspectives, we conclude that if GPE partner countries in Africa are proactive in predicting future implications of COVID-19 or similar crises on their educational systems, this has the potential to strengthen resilience and building back better, as well as to minimize possible negative impacts on learners, teachers, and the school system.

Recommendations

Nine key recommendations emerge from this study. They focus on learners (1-3), teachers (4), the school system (5-6), and education systems' evidence and support for future preparedness (7-9):

1. Support school re-entry for OOSCY [out-of-school children and youth] through effective re-entry programs and/or strategies.
2. Institutionalize and/or strengthen guidance and counselling in schools to enhance coping with post-COVID shocks.
3. Support vulnerable groups such as girls and children from disadvantaged situations through prioritizing mitigation measures.
4. Ensure teachers are well equipped with DLS [distance-learning solutions] skills through tailor-made capacity-strengthening programs on digital technology.
5. Enhance/scale up infrastructure expansion on digital technology and WASH [water, sanitation, and hygiene] among school communities.
6. Scale investments in more physical school infrastructure to enhance conducive and safe learning environments for all learners.
7. Research institutions such as APHRC, policy influencers such as ADEA, and funding partners such as IDRC and GPE should join forces with policy actors to co-design education data systems and co-generate evidence on future impacts of COVID-19.
8. Facilitate crisis preparedness through developing policies both at macro (government/ministry) as well as at micro (school) level.
9. Mobilize resources through national governments, GPE, IDRC, World Bank, UNICEF, Education Cannot Wait, and the private sector, among others, to support mitigation measures for future preparedness.

1 Introduction

Global school closures, deployed to curb the spread of COVID-19, affected educational systems worldwide, disrupting over 1.9 billion learners in over 190 countries (UNESCO, 2021). Almost 300 million learners from Africa were forced out of classrooms for over a year (UNICEF, 2022). Indeed, the school closures have had far-reaching implications on education particularly in Africa, especially affecting learning, school retention and enrolment, feeding programs, as well as teacher and student welfare (Batiibwe, 2023; Namatende-Sakwa et al., 2023a). This has threatened the strides made in the attainment of Sustainable Development Goal (SDG) 4, which advocates quality and equitable education (Owusu-Fordjour et al., 2020; Shepherd & Mohohlwane, 2021). It has also slowed down the quest to realize the objectives of the Continental Education Strategy for Africa 2016-2025 (CESA 16-25), including revitalizing the teaching profession to ensure education quality and relevance (linked to SDG 4. c), accelerating processes leading to gender parity and equity (linked to SDG 4.5), launching comprehensive and effective literacy programmes (linked to SDG 4.6) (UNESCO, 2021).

Governments, including those in Global Partnership for Education (GPE) partner countries in Africa, established several interventions, such as Distance Learning Solutions (DLS) and accelerated learning as well as catch-up programs to support the continuity of learning (Ezati & Sikoyo, 2023; Hoadley, 2020; Mugizi & Nagasha, 2023). While such interventions have been essential in mitigating the short-term consequences of the COVID-19 school closures, little is known about the longer-term implications of the pandemic on education, from the perspective of national education stakeholders. A further concern is that the school closures could aggravate inequalities that existed before the pandemic (Conto et al., 2021; Nakijoba et al., 2023). As Datzberger and Parkes (2021) explain, “the true extent of COVID-19 in sub-Saharan Africa still remains un-known, highly debated and significantly under-researched due to the lack of reliable data, resources and capacities” (p. 45). Yet the impact of lockdowns and school closures on education systems are likely to be felt in the long term.

The purpose of this study is therefore to provide the perspectives of education stakeholders from GPE partner countries in Africa on the projected long-term impact of COVID-19 on educational systems in GPE partner countries in Africa. It also included identifying evidence gaps and support that countries need to inform mitigation strategies to support countries in curtailing the anticipated long-term impacts of COVID-19. Indeed, African countries need long-term plans that can inform preparedness for future crises.

1.1. Research questions

Our study sought to address the following questions:

1. What are the perspectives of educational stakeholders in the selected GPE partner countries on the long-term impact of COVID-19 on education in their respective countries in Africa?
2. What are the stakeholders' perspectives as regards evidence and support needed by countries to address the identified long-term impacts of COVID-19 on education in Africa?

In the section that follows, we explain the methodology, highlighting the approaches used to collect and analyze data. Consequently, Section 3 focuses on the main findings and discussion of the results. Finally, Section 4 and Section 5, respectively, provide a conclusion and recommendations.

2 Methodology

This qualitative study used desk review as well as key informant interviews to elicit information about the long-term impact of COVID-19 on education in the selected GPE partner countries in Africa as well as the evidence and support these countries need to mitigate the impact.

2.1. Sampling

Using purposive sampling, we selected seven GPE partner countries in Africa, based on geographical spread, official languages (English, French, and Portuguese), and the presence of educational program and/or policy responses to COVID-19. These countries are Burkina Faso, Kenya, Malawi, Mali, Mozambique, Niger, and Nigeria.

We purposively selected diverse national education stakeholders as key informants as a measure to triangulate the sources of data, including both state and non-state agencies, based on the criteria below:

- state and non-state institutions whose mission is to promote quality and inclusive education (central and regional directorates of the ministries in charge of education, local authorities, Non-Governmental Organizations - NGOs and civil society organizations).
- institutions or organizations that played a specific role during the pandemic in terms of responses developed to ensure school continuity.
- staff of educational institutions at the time of the pandemic.
- senior individuals who played a specific role in either the design or implementation of policies, strategies, or actions to ensure school continuity and learner wellbeing.

Table 1: Distribution of stakeholders by country and sex

Country	Senior Officials ¹		Senior Officials of Non-State Actors ²		Total
	Female	Male	Female	Male	
Burkina Faso	0	4	0	1	5
Kenya	2	7	0	0	9
Malawi	1	4	0	1	6
Mali	3	3	0	0	6
Mozambique	5	5	9	6	25
Niger	1	3	0	2	6
Nigeria	2	5	3	6	16
TOTAL	14	31	12	16	73

¹ e.g., Inspectors of Education, Directors of Planning, Regional Directors of Education, Deputy Directors of Agencies, Directors of Teacher Education

² Directors, Head of Programs, Team Leads, etc., in NGOs, the World Bank, and UNICEF

Table 1 shows the distribution of stakeholders by country and sex, including 45 senior officials in the Ministry of Education (MoE), its agencies at headquarters and regional levels and 28 non-state actors that work closely with ministries of education.

The inter-country difference in the number of key informants was based on access and voluntary participation, which varied across countries. The state and non-state participants corroborated information from each other, confirming the findings on the long-term impact of COVID-19 on education as well as the evidence and support needed to mitigate the impacts.

2.2. Methods of data collection

Desk review

This entailed a review of literature with a bearing on the impact of COVID-19 on education in Africa. The desk review situated the study within the national, regional, and continental dimensions, providing insights into the trends regarding COVID-19 and education.

Key informant interviews

Using key informant interviews (KIIs), we elicited information from the stakeholders in key positions within selected institutions in the seven GPE partner countries in Africa.

2.3. Data analysis approach

The audio information from the key informant interviews was transcribed to produce written transcripts, which were then coded and analyzed thematically. We used variant methods of data collection (desk review and KIIs), as well as diverse education stakeholders (state, non-state and multi-county) (see Table 1). This allowed us to triangulate the information in order to ensure validity and trustworthiness. We also used a thick, rich description of the findings to ensure transparency. In addition, the piloting of each of the consultative instruments coupled with checking written transcripts against audio transcripts ensured reliability and credibility.

2.4. Ethical considerations

Informed consent was obtained from participants, and confidentiality, as explained to them during the consenting process, maintained through the use of pseudonyms. In observing the COVID-19 standard operating procedures, our field teams fulfilled requirements for hand hygiene, physical distancing, and wearing of face masks at the study sites.

2.5. Limitations

The focus on local education stakeholders from seven rather than all the 54 countries in Africa provides a limited perspective, overlooking the nuances from the other countries. Additionally, the experiences of learners as well as parents in Africa, who were also primary stakeholders in education, could have provided a broader understanding of the projected impact of COVID-19 on education, also eliciting even more robust interventions to mitigate the long-term impacts. Finally, the use of a qualitative approach foreclosed the benefits of generating evidence that could be generalised across counties in Africa.

3 Findings

This section illuminates the stakeholders' perspectives regarding the long-term impact of COVID-19 on education as well as the evidence gaps and support needed to mitigate these impacts. While the paper is informed by a diverse group of stakeholders from the seven countries, we represent their perspectives by amplifying the voices of the most explicit and/or “telling” narratives in illustrating the emergent themes. We also recognize that while some issues were magnified across some countries, this does not negate their occurrence in the countries in which they were not highlighted following the stakeholder interviews. Further, it is noteworthy that although the findings reflect both non-state and state actors, they corroborate (rather than contradict) each other's perspectives as regards the long-term impact of COVID-19 on education in Africa, evidence gaps, as well as the support countries need to mitigate the impacts.

3.1. Long-term impact of COVID-19 on education

The envisioned long-term impacts of COVID-19 on education in Africa have been organized into three categories: impacts on learners, impacts on teachers, and impacts on school systems.

Impacts on learners

The stakeholders identified learning loss, school dropout, and learner wellbeing as the envisioned long-term impacts of COVID-19 on learners in Africa.

Learning loss:

The term “learning loss” is commonly used to describe declines in student learning outcomes (Donnelly & Patrinos, 2022). It occurs when educational progress is not comparable to previous years (Pier et al., 2021). While several studies have documented the learning loss due to COVID-19 in Africa (Angrist, 2021; Maree, 2022), the effectiveness of measures such as the use of abridged curricula and arbitrary class promotions in mitigating this learning loss remains a topic of ongoing research. These measures may risk compromising learning outcomes, with implications for future knowledge and competence gaps across all the GPE partner countries:

The curriculum could not be adequately managed by teachers ... failure to cover all issues in the syllabus ... A lot of learning and teaching time was lost. (KII 1, Malawi)

Students ... overstayed in school ... those who are sitting for the national exam now were supposed to have sat last year ... time wastage. (KII 4, Kenya)

In the short term, COVID-19 ... disrupted learning and the school term ... it appears the success rate in the end-of-term exams dropped, the general pass rate of pupils in intermediate classes dropped. (KII 3, Burkina Faso)

Further, the use of abridged curricular materials in which content was condensed to complete it in the shortest time, coupled with the arbitrary promotion of learners to the next class regardless of content mastery, aggravated the learning loss, implying the possibility of competence gaps in future workforce:

Right now, we are trying to rush learners through the syllabus, so their acquisition of competences, skills, and attitude is compromised. (KII 2, Kenya)

I know that they were just promoted, but I know they did not meet the requirements to go to another class ... they're in a class they are not supposed to be in. (KII 7, Nigeria)

The implications of disruptions in learning affected, and will continue to affect, various student populations disproportionately, depending on their resilience and on the effectiveness of any interventions that are put in place. For example, the gaps in learning are likely to disproportionately affect vulnerable students, such as those in internally displaced people (IDP) camps in Northern Nigeria, who had limited access to learning:

[For] those in the IDP camps, we were not able to establish a very functional training system with them [the students] ... we had to package a mobile training just for literacy and numeracy ... just to ensure they are not completely left behind. (KII 4, Nigeria)

Overall, the use of such crash programs, whose purpose was to achieve syllabus coverage, student progression and completion rates has been documented (Ramrathan, 2021). Such strategies, as this study has demonstrated, are likely to compromise learners' acquisition of knowledge, skills, and/or competences, risking a future incompetent workforce. Recent statistical models of learning losses during COVID-19 already predict that learning deficits for a child in grade 3 could lead to lost learning of 2.8 years by grade 10 in countries like Ethiopia, Kenya, Liberia, Tanzania, and Uganda (Angrist et al., 2021). This is corroborated in a longitudinal school survey conducted by the World Bank in partnership with the Government of Malawi, which revealed that following the re-opening of schools, an individual student, on average, scored 40 points less on scaled test-scores than they achieved in previous assessments (Asim et al., 2022). Indeed, studies show that missing school is associated with gaps in foundational skills, including, in terms of literacy and numeracy outcomes (Conto et al., 2021).

School dropout:

The Global Center for Development estimated that the magnitude of out-of-school children and youth (OOSCY) in the aftermath of the pandemic varied between 0.4% in South Africa and 16.9% in Nigeria (Moscoviz & Evans, 2022). This according to the study was a consequence of the exacerbation of teenage pregnancies and sexual and gender-based violence (SGBV), as well as a breakdown in social support structures, including loss of tuition fee sources. In this study, teenage pregnancies, as well SGBV, were more frequently mentioned by stakeholders as the most obvious causes of increased school dropout during the COVID-19 pandemic across all the selected GPE African partner countries:

It impacted the girl child[ren] ... some got married and there were teenage pregnancies. (KII 4, Malawi)

Many girls got married during this period, and today they are out of school taking care of their babies. (KII 3, Mozambique)

We may not have the statistics, but clearly, we lost a number of girls due to pregnancies during those breaks. (KII 5, Malawi)

School dropouts, particularly among pupils from vulnerable groups, the after-effects of gender-based violence, and the reduction in human contacts with a negative effect on social relations. (KII 2, Burkina Faso)

Previous research data suggests that girls in sub-Saharan Africa were particularly vulnerable during school disruptions. The risk of pregnancy doubled among adolescent girls in Kenya for example, where children remained out of school for six months (Zulaika et al., 2022). Similarly, adolescent girls' enrollment was much more affected than that of boys in the north west of Nigeria where child marriage was rampant (Dessy et al., 2021). Further, while girls and boys in Malawi did not have a statistically significant difference in dropout rates, marriage and pregnancy were cited as the main reasons for girls' drop out, whereas financial constraints accounted for boys' (Moscoviz & Evans, 2022).

Several African governments operationalized laws and/or policies to foreground adolescents' rights, particularly teenage and child mothers to enroll and be retained in school (Baafi, 2021; Imbosa et al., 2022; Nakiyingi et al., 2023). In Kenya for example, policies on school re-entry were operationalized in an effort to promote school re-entry for pregnant/parenting girls. Kenya's Ministry of Education in collaboration with the Population Council, implemented a back-to-school campaign: the Track, Trace, Talk, and reTurn (4Ts) initiative (Odwe & Undie, 2022). This entailed tracking down and tracing out-of-school girls at the primary school level; talking to girls and their families about the guidelines to inform them of girls' right to return to school; and ensuring that girls who wanted to, did return to school. This notwithstanding, adolescent parents continue to face stigma and exclusion in addition to the extra financial burden to the household associated with the newborn and childcare demands. The challenges in implementing policies and guidelines on school re-entry despite the constitutional, legal and policy provisions to protect pregnant and parenting-adolescent girls undermine countries' human rights commitments (Letsie, 2021), hindering re-entry as corroborated in this study:

Indeed, the current study illuminates that school re-entry initiatives have been challenged using the argument that teenage/child mothers are not good role models for other schoolgirls:

Though the government has a policy that enables them to come back to school whether they are pregnant or not, sometimes they go to deliver, so automatically this student will not come back to school. (KII 6, Kenya)

This implies a regression in the progress made in increasing access and retention for girls in schools within the African context. It also puts the spotlight on the effectiveness of school re-entry programs in GPE partner countries in Africa.

Interestingly, the COVID-19 period is associated with economic lockdowns and low firm productivity. Under such conditions, one would expect few job creation opportunities. However, the magnitude of the school dropout highlighted across the GPE partner countries in Africa was aggravated by the prevalence of students who opted out of school for seemingly lucrative businesses taken up during the pandemic, reversing gains made on reductions in child labour. Availability of income-earning opportunities may have arisen due to out-migration of households to areas where households could survive during lockdowns, hence creating some supply gaps once lockdowns were lifted:

Some students also found new ventures, particularly young boys who discovered that they could make money outside school. They found it difficult coming back to school. (KII 2, Kenya)

You see girls on the streets hawking up to this moment. Some of them have not gone back to school. (KII 10, Nigeria)

Getting children back to school was an issue because they discovered they can sell soda and make money. (KII 3, Kenya)

In addition to teenage pregnancy and child labour, school dropout is a function of household economic status. School dropout rates were also attributed to the loss of parents' capacity to pay tuition fees, given massive job losses during the pandemic:

Some of the children from marginalized areas and informal settlements suffered after their parents or guardians lost their jobs. Consequently, some of them will not be able to get education. (KII 2, Kenya)

The figures dropped because many parents lost jobs. When people lost jobs, businesses closed. It also affected us economically because parents could not pay school fees. There was a lot of defaulting in terms of fees payment. (KII 4, Malawi)

Prolonged absence from school, or temporary dropout, may lead to permanent school dropout, with dire future consequences, such as delinquency and unemployment, unless mitigating measures are put in place later.

Further still, the absence of school meals during the COVID-19 period was seen as a factor in the magnitude of school dropout after the COVID-19 school closures (Aborode et al., 2021; Spaul & van der Berg, 2020). Parent/caregiver concern about school return was exacerbated by economic hardship and related issues of food insecurity and hunger. Indeed, as evidence indicates, school feeding has been slow to recover to pre-pandemic levels. In South Africa for example, the National School Nutrition Programme (NSNP) 2020/21 target was to provide meals to 21,000 schools, reaching roughly 82% of the school population. However, the suspension of the NSNP for four months, affected the return to school for the most vulnerable learners (Moseley & Battersby, 2020). This has implications for continuity of schooling for the already vulnerable student populations whom as this study shows depend on such meals:

Do you know some children finished school simply because there's lunch in school? Some were out of school, and it was devastating because there was no food. (KII 3, Kenya)

Overall, the magnitude of school dropout encountered in the GPE country partners in Africa, during the pandemic—attributed to pregnancy, lack of ability to pay tuition, absence of school feeding programs, and the diversion to seemingly lucrative business—has been documented (Bellizi et al., 2020; Corlatean 2020; Nakiyingi et al., 2023). The value attached to education has been compromised and will likely derail strides in addressing school dropout in Africa (Shepherd & Mohohlwane, 2021). Also, school dropout is likely to impact the competence of the workforce, with potential consequences for socioeconomic growth and development (Wodon, 2020).

Learner well-being:

Concerns about the impacts on the mental health of learners in Africa are largely based on reflections on prevalent realities rather than on empirical data (Pillay, 2023; Spaul & Van der Berg, 2020). Opong Asante et al. (2021) for example, problematize the paucity of data on learners' mental health, pointing out nonetheless that most adolescents in sub-Saharan Africa do not receive professional mental health care and treatment. They explain for example, that only 2.8% of the mentally unwell in Ghana and 10% in Uganda had access to professional care before the pandemic. Moreover, the school closures coupled with the lock-down policies foreclosed possibilities of safety presented by schools as places of refuge for young people prone to SGBV. These realities which suggest that COVID-19 related restrictions threaten learners' mental health are corroborated across all the selected GPE partner countries, with stakeholders attributing projected mental health concerns to tensions at home; financial constraints; SGBV; substance abuse; isolation and loneliness; confinement, which challenged access to health care; safety and security; and COVID-19-related deaths. Indeed, the lockdowns created social and emotional tensions in social settings, including homes. Such tensions have relational and psychosocial implications for the future as captured by the respondents:

Our learners went through a lot—some of them went through depression because they didn't understand what was taking place. They could see their parents go down, lose their livelihoods ... there was an increase in poverty. (KII 7, Kenya)

There was a spike in domestic violence, and mothers were not the only victims. Children became victims as well. You know, the family income dropped due to lack of economic activity, and children became victims when there was not enough food in the house and so on. And those who were actually affected the most were migrant populations who are far away from the social support safety nets of the extended family. (KII 11, Nigeria)

Because men were locked at home, women were being abused ... Aggression became a problem ... so, issues of girls' rape became common. (KII 1, Nigeria)

And by the time schools resumed, the issues of sexual addiction, drug addiction, you know, we were seeing the consequences now. (KII 11, Nigeria)

An idle mind is the devil's workshop. A lot of things came into their mind, some indulged in smoking ... even stealing. (KII 2, Nigeria)

You know, when we meet, we share bodies [physical contact]. We share our problems. We interact ... But COVID-19 stopped all of this. So, we had a lot of cases of depression ... not able to [have] fellowship with friends and family. (KII 4, Nigeria)

These pervasive psychosocial issues, coupled with the innumerable losses of lives during the pandemic, heightened anxiety among learners across all selected GPE partner countries in Africa:

Loss of lives was experienced ... that is both for learners and teachers. We lost a number of teachers. We also had reported cases of loss of learners. (KII 7, Kenya)

Because everyone was living under threat, it was not certain whether one was going to see the next day ... Everyone asked themselves, "Am I not going to be the next one?" (KII 3, Malawi)

Learners within IDP camps, for example, suffered even more, given the pre-existing predisposal to rebel attacks for some, which increased thereby raising their already compromised security and safety. Such disproportional effects have the potential to widen existing gaps when it comes to access to quality schooling in the future. Similarly, children with special needs suffered excessively, as their needs were largely disregarded during the pandemic, implying poor educational outcomes in future due to diminished opportunities:

IDP camps were also suffering a lot of attacks [during the pandemic], especially in Southern Kaduna. (KII 4, Nigeria)

There was a group of learners that nobody talked about during COVID-19 ... children in special schools, schools for the blind ... who have a speech impediment ... They suffered the most ... Nobody talked about children with attention deficit disorder ... children with learning disorders ... speech impediments, audio-visual impediments ... children using wheelchairs ... even the children living with albinism. (KII 5, Nigeria)

Further, lockdowns in the home exposed some students to prolonged screen time, making them prone to individualistic behaviour, and risking attention loss, which can affect learning outcomes in future. The isolation in the homes also exposed learners to vices such as drugs increasing the likelihood of delinquent behaviour:

Children are increasingly having short attention span; thus they cannot follow...without audio-visual support. (KII 6, Nigeria)

People are suffering from psychosocial effects of children staying at home just glued to screens ... this is where the mental health issues will come in. Children will become more individualistic in the future, and this will pose a big social problem. (KII 6, Nigeria)

There was no proper care ... which led them [students] to so many vices like drugs ... The likelihood of these children committing crime ... as a result of this lockdown, [remains real]. (KII 7, Nigeria)

Overall, the impacts of COVID-19 on learners in the seven countries are complex and interwoven, and they include learning loss, school dropout, and decreased wellbeing. Dropping out of school not only denied learners educational chances, but also set them up for serious learning loss. The negative effects of this learning loss on learners' wellbeing included frustration and low self-esteem. Additionally, the difficulties linked to school dropout and learning loss may reinforce one another, resulting in a vicious cycle that worsens the impacts on learners as a whole. Therefore, it is essential to handle these problems holistically, taking into consideration their links and the combined consequences they may have on learners. These findings, which corroborate previous research on the psychosocial effects of COVID-19 (Oppong Asante et al., 2021), have implications for learners' mental health, especially for learners with special needs. The findings also have implications for schools' capacity to provide mental health care for both learners and teachers. Moreover, there remains limited research on the impact of COVID-19 on mental health in sub-Saharan Africa

(Workneh et al., 2021). Yet, scholars predict an immense impact on mental health due to the region's weak health care systems (Semo & Frissa, 2020). Indeed, Tran et al. (2020) underscore the need for research from Africa, which remains under-researched, to provide evidence to guide mental health interventions in the region (Jaguga & Kwobah, 2020).

Impact on teachers

The stakeholders identified teacher attrition as well as teacher well-being as the envisioned long-term impacts of COVID-19 on teachers in Africa.

Teacher attrition:

The shortage of teachers and/or teacher attrition upon the reopening of schools in the aftermath of the COVID-19 school closures was reported in some GPE partner countries in Africa, particularly Burkina Faso, Kenya, Malawi, Mali, and Mozambique. Indeed, data from sub-Saharan Africa in particular showed that schools had chronic shortages of teachers, with 70% for primary education and 90% for secondary education (Lorente et al., 2020). Such shortages as the findings highlight, foreshadow gaps in teaching and learning, given the possibilities of teachers' absenteeism, further compromising learning outcomes. Factors associated with teacher shortage included teachers' welfare, and socioeconomic challenges. In some countries, such as Malawi, private schools did not pay their teachers, throwing them into a financial crisis. Consequently, teacher welfare affected attrition, especially in private schools throughout the GPE partner countries in Africa, given the lack of financial support during the pandemic:

Private schools depend on tuition fees ... in the absence of fees, our operations were affected. Life was tough for teachers because banks were not able to offer overdrafts. There was a lot of suffering. Those with bungalows were not able to service them. (KII 4, Malawi)

If this trend remains unchecked, it will be detrimental and could exacerbate the learning gap. In Kenya, for example, the shortage was attributed to the delay in completion rates of pre-service teachers, which stemmed from the closure of institutions of learning:

The teacher training programs delayed and some of them came to a halt. This disruption created shortage of teachers ... we could not oversee training of new teachers. (KII 2, Kenya)

After a long 'break' without teaching, teachers' professional behaviour may have eroded, as seen in some teachers after the school reopening:

Laziness developed among teachers. They never taught the way they did before COVID-19. We did not come to work with full throttle as we always do. People came to work reluctantly. (KII 3, Malawi)

Now many of them do not show up in schools. (KII 02, Mozambique)

Several teachers resorted to other economic activities, which for some proved too lucrative for them to return to teaching; this implies future recruitment of less experienced teachers to close the teaching gaps:

During the period when schools were closed, teachers went to pursue other economic activities and moved to other localities. Some teachers did not return to their schools because of the economic opportunities that made them earn more than they would from teaching. This created an imbalance in the education system. (KII 3, Mali)

Overall, teachers' welfare during the pandemic was largely affected by inadequate socio-economic support or a lack of support, especially in low-cost private schools, which serve the majority of learners in African countries' poor urban contexts (Alam & Tiwari, 2021; Datzberger & Parkes, 2021). Nakijoba et al.'s (2022) study of the Uganda context shows the dire vulnerability of teachers in private schools, who lost income for close to two years during the COVID-19 school closures. Many teachers sought employment elsewhere and refused to return to the classroom when the schools reopened. Research demonstrated that teacher well-being was greatly impacted by the pandemic due to its devastating effect at a personal as well as a professional level, thus compromising the future quality of education (Crompton et al., 2023; Kwatubana & Molaodi, 2021). This has implications for student well-being and academic achievement, which have a correlation with teachers' well-being and work satisfaction (Spilt et al., 2011). It also has implications for the aspirations of future educators and can have adverse consequences for the teaching profession as well as the entire educational system (Carver-Thomas & Darling-Hammond, 2017). Indeed, as UNESCO-UIS (2016) asserts, by 2030, close to 69 million teachers worldwide will be needed to replace those who leave the workforce for various reasons. The greatest teacher shortages, according to this report, are projected to be from sub-Saharan Africa, which is likely to need a total of around 17 million teachers to attain universal primary and secondary education by 2030. This situation is likely to be exacerbated in the aftermath of the COVID-19 school closures.

Teacher well-being:

Concerns particularly about the mental health of teachers were highlighted across all the selected GPE partner countries. This was attributed to tensions in the home, financial constraints, as well as COVID-19-related deaths. This is captured in the stakeholder voices below:

Mental health ... Some of our teachers went through so much at home. I think we have so much going on with the family setup. (KII 1, Kenya)

Loss of lives was experienced ... that is, both for learners and teachers. We lost a number of teachers. We also had reported cases of loss of learners. (KII 7, Kenya)

Because everyone was living under threat, it was not certain whether one was going to see the next day ... Everyone asked themselves, "Am I not going to be the next one?" (KII 3, Malawi)

Further still, distress on the part of the teachers was aggravated after the reopening of schools, which obligated them to support students who had also experienced trauma:

After reopening, there were certain challenges the learners went through, and they would come and share with the teachers, who would actually feel so weighed down by this. (KII 1, Kenya)

The imperative for teachers to support learners through psychosocial distress was seemingly based on the school administration's assumption that teachers are competent in this regard. This has implications for teacher capacity to support the potentially growing mental health issues in schools.

Overall, the psychosocial effects of COVID-19 on education, as highlighted in this study, have been documented in previous research within Africa (Oppong et al., 2021; Workneh et al., 2021). The future impact of COVID-19 on the mental health of teachers and students, which is projected to disproportionately affect learners with special needs, has implications for school capacity to provide mental health care for both students and teachers, with a particular focus on vulnerable learners. Indeed, scholars have emphasized the need for research from Africa to guide mental health interventions in the region, given predictions for an escalation in mental health issues coupled with weak health care systems (Jaguga & Kwobah, 2020; Semo & Frissa, 2020; Tran et al., 2020).

Impact on school systems

The stakeholders identified the institutionalization of information and communication technologies (ICTs); the digital divide; remote learning; the integration of water, sanitation, and hygiene (WASH); as well as resource constraints as the envisioned long-term impacts of COVID-19 on the operation of schools in Africa.

Institutionalizing of ICTs:

The institutionalization of ICTs in education, as taken up across all the selected GPE partner countries in Africa, was reflected through ICT integration into both teaching and education administration. . Indeed, during the pandemic, stakeholders quickly realized the critical role ICT could play in learning continuity through supporting teaching and learning as well as administrative tasks. This has provided possibilities for digital literacies; remote learning programs, such as support to home schooling; and partnerships between governments and international development organizations to improve access to online resources through investments in technology. Consequently, the pervasive integration of ICTs—such as the use of Zoom videoconferencing tools, Google tools, and low-tech tools such as radio in education during the pandemic across the GPE partner countries in Africa—is likely to continue into the future:

It also gave us opportunities as a commission to start embracing technology ... we moved away from a lot of paperwork. (KII 1, Kenya)

We learnt from that the need to digitalize lessons. So, digitalization of the curriculum is something that we are doing in the short and long term. (KII 1, Malawi)

Further, the shift from dominantly traditional face-to-face learning to distance-learning solutions (DLS) demonstrated what it takes to integrate ICT in education and opportunities that come with DLS-based teaching and learning approaches, thereby creating possibilities for diverse modes of teaching across the selected GPE partner countries in Africa:

The face-to-face method of teaching ... had to change ... teachers had to resort to other modes of teaching: synchronous and asynchronous. (KII 2, Kenya)

Consequently, this created opportunities to enhance digital literacy through training teachers to use technologies such as Zoom and Google tools to conduct online lessons in all the selected GPE partner countries. The skills learned continue to be used for future crisis preparedness and/or programming:

Had COVID-19 not struck, teachers would still be in their comfort zones ... digital devices in learning would not be their priority. That changed dramatically ... the commission trained 116,000 teachers on remote-learning methodologies. (KII 2, Kenya)

Furthermore, various education stakeholders particularly from Kenya, Nigeria, Mali, and Malawi, highlighted the advancement in communication, access to training possibilities, and effectiveness in service delivery:

There is a database of telephone numbers of every teacher in Kenya, and we have an email for every teacher ... Just write them an email directly ... there were a lot of online programs to train teachers ... We are almost paperless ... due to COVID ... everything we do, we can do it online. When a teacher is posted to school ... immediately it reaches Nairobi, and they can be paid [their] salary instantly. So, now in the first month of reporting, a teacher has earned, unlike before, when they would spend up to three months [waiting to be paid]. (KII 1, Kenya)

Governments and international development organizations have partnered to improve access to online resources through investments in technology. Before COVID-19 struck, investments in ICT in many GPE partner countries in Africa focused more on promoting business transactions and, to some extent, accessing government services. As mentioned earlier, with the onset of COVID-19, ICT became the go-to option for the education sector; the benefits of such an investment will be felt in the coming years. Partnerships to improve access to the Internet were especially seen in Kenya and Nigeria:

There's more investment in technology ... the government through the Department of ICT is rolling out a lot of connectivity ... We have partners taking [the] Internet to schools. (KII 1, Kenya)

Overall, the integration of ICT through its uptake for teaching and administration, as demonstrated across the GPE partner countries in this study, has been documented in the literature (Anane et al., 2023; Mugizi & Nagasha, 2023; Namatende-Sakwa et al., 2023b). This notwithstanding, UNESCO (2020) highlights the paucity of data specifically from sub-Saharan Africa, on ICT use in primary and secondary schools, illuminating that 89% of students do not have access to computers at home and 82% do not have access to the Internet. Additionally, UNESCO estimates that 56 million students in this region live in areas with limited access to mobile networks (Montoya & Barbosa, 2020). Moreover, as Montoya and Barbosa noted, teachers in this region received minimal training in ICT (64% in primary education and 50% in secondary education). Indeed, the Global Education Monitoring Report [45] showed that there was a huge gap between low- and high-income countries in terms of familiarity with digital skills and the use of ICTs. This has implications for exacerbating pre-existing inequalities between learners from high versus low socioeconomic backgrounds, given the digital divide or inequitable access to ICTs (Conto et al., 2021), described later in this paper. The findings also have implications for pre-service teacher education as well as in-service teacher training, as platforms in which ICTs can be integrated and leveraged to bolster digital literacy, in order to sustain the momentum and optimize the possible gains in using ICTs in education.

The digital divide:

With the increase in the use of ICT during the pandemic, the digital divide, defined as “a social inequality between individuals regarding access to ICT, frequency of use of technology, and the ability to use ICT for different purposes” (Ercikan et al., 2018, p. 4), was aggravated. This was the case especially for learners from a low socioeconomic class and was further heightened for those with special needs, given poor connectivity and a shortage of electricity among these populations in addition to the limited access to digital devices, across all the selected GPE partner countries in Africa. Learners with disabilities as well as those of low socioeconomic status were excluded from access and use of technology to support DLS during the pandemic. This was attributed to the lack of resources to access digital devices:

When you talk about use of digital devices in learning ... most of those vulnerable populations could not afford them. This posed a big challenge to the digital teaching and learning during the COVID-19 pandemic ... We must find a way of making these devices available to all learners regardless of their socioeconomic background. (KII 2, Kenya)

Learning was effective for learners who had access to digital technology, like those from rich and middle- income houses ... we are still a long way from providing equality learning using education technology or digital networks. (KII 4, Malawi)

Accessing digital devices and services comes with costs and opportunities. For instance, one must own a smartphone or computer to easily access the Internet especially during COVID-19; a household needs to be within a digital infrastructure or network to access the services. The disparity in access to digital devices and infrastructure is implicated in the widening of pre-existing equity gaps, therefore disturbing progress towards quality education for all.

Also, readily available disability-specific digital devices are hard to find. The disregard for the learning needs of learners with special needs was heightened for particular groups, such as students with mental disabilities in Kenya:

For the mentally challenged, it was very hard for teachers or for the schools to organize how to help them when schools are closed. But for those who maybe have a hearing impairment, they [some] have hearing devices and they can participate in learning. (KII 4, Kenya)

This foreshadows an extended digital divide within the spectrum of students with special needs, further compromising strides towards achieving inclusive and quality education for all learners.

Despite the challenges in accessing digital devices, there were some innovations at the community level that could be replicated elsewhere or in the future. For example, some improvisations were made for students of low socioeconomic status, who gathered to learn collectively using shared devices:

You see students from low economic settings normally do not have access to devices ... I remember some organizations, especially Compassion International, converged students in a common venue where lessons were projected on a large screen, and they would all watch. (KII 2, Kenya)

This collective use of available digital devices, if taken up in compliance with social distancing measures, promises to improve access to Internet-based services at low cost among hard-to-reach population, in order to facilitate continuity of learning.

In most GPE partner countries in Africa, Internet services are mainly private investments that are expected to provide financial returns to investors. The investors provide such services to areas with potential demand (ability to pay). Poor network connectivity and the high cost of Internet bundles remains problematic across the GPE partner countries in Africa and is likely to compromise quality learning:

We tried as much as possible to do things online. Which of course had a lot of challenges in terms of consistency, especially when it comes to networks. It was quite costly ... in a very strenuous economy. (KII 5, Kenya)

Other publicly provided services, such as power supply to boot electronic devices, are inadequate. The poor Internet connectivity was especially aggravated for students of low socioeconomic class, including those in IDP camps - for example, in Nigeria - who did not have access to reliable electricity to charge their devices even when data was available:

You will have given assignment or some lessons ... they [students] will tell you that, sorry, we got your data but there was no light since Monday ... no light to charge phone. (KII 4, Nigeria)

Moreover, the investments in technology were exclusionary in some cases, such as in the case of Kenya, in which training manuals to support DLS included limited content addressing special needs, with implications for equity in education.

Although in the manual we managed to dedicate a chapter to students with special needs, the section was not comprehensive enough to deal with all forms of disabilities. (KII 2, Kenya)

Remote learning:

The proliferation of remote learning programs gained prominence, with the primary objective of providing instructional support in the time of crisis. It involved the use of remote teaching that would otherwise be delivered face-to-face or as blended instruction (Mugizi & Nagasha, 2023; Nhongo & Tshotsho, 2021). Given the World Health Organization's prediction that COVID-19 and its effects would persist for a long period, the Organization for Economic Co-operation and Development (OECD) issued a framework in the year 2020, in order to guide continuation of learning during school closures. The OECD framework suggested online learning, television, and radio broadcast, as well as learning packages in print or electronic format as modalities for continued learning. Access to these modes of learning varied, with children in rural and peri-urban areas in Uganda for example, using mainly print materials, while those in urban areas used print, television, and radio lessons, and to a limited extent, online materials (Ezati & Sikoyo, 2023). It is within this framework that home-schooling initiatives gained visibility, including within IDP camps and orphanages in countries like Nigeria during school closures as illuminated in the study.

While COVID is still hanging on, we started the project with UNICEF ... we started this home learning for them ... we have volunteers who support children in their home. (KII 1, Nigeria)

Overall, the transition to DLS during the pandemic exposed and exacerbated the pre-existing digital divide between students with access to technology and those without (Chisango & Marongwe, 2021; Turianskyi, 2020). This has implications when it comes to accentuating pre-existing inequalities, particularly in terms of learning outcomes, between learners from high versus low socioeconomic backgrounds, further aggravated for learners with special needs.

Integrating WASH:

Water, sanitation, and hygiene (WASH) fundamentally impacts basic rights to health and well-being (Grossi et al., 2016). Indeed, the WHO/UNICEF Joint Monitoring Program (JMP) for WASH and the COVID-19 pandemic emphasize WASH—which includes safe drinking water, facilities for hand washing, and toilets—as critical, especially for millions of schoolchildren. In order to support educational institutions during school reopening phases, the World Health Organization released a checklist of protective measures, which included the provision of WASH as essential in ensuring COVID-19 prevention in schools (Benzia et al., 2020). Several ministries of education within African countries adapted these regulations on WASH as a prerequisite for the re-opening of schools (Groenewald et al., 2023; Namatende-Sakwa et al., 2023; Spaul & van der Berg, 2020; Wodon, 2020). The high contagiousness and rapid spread of the COVID-19 heightened the need for adequate WASH services to curb the potential risks of spreading COVID-19 or other infections in the school environment (Lotfi et al., 2020; Rothan & Byrareddy, 2020).

Consequently, the integration of WASH practices in schools was foregrounded in the aftermath of the COVID-19 school closures across all the GPE partner countries in Africa. While it is likely to continue in the future, given its positioning as a measure in checking for compliance to school quality and safety (or what some development partners, such as UNICEF, refer to as “child-friendly” schools), low cost schools continue to struggle and improvise due to the lack of adequate funds to develop the infrastructure associated with hygiene and sanitation.

School-based WASH programs existed before the onset of COVID-19, given their importance in improving hygiene and therefore health outcomes. They are associated with improved school attendance due to their effects on reducing common illnesses. Also, the school communities realized the power of hand washing in reducing infectious disease transmissions, as seen in the case of reduced COVID-19 virus transmission. Not all schools, however, had adequate WASH facilities, but this is expected to change in future given the documented successes. The integration of WASH practices into schools specifically entailed the establishment of hand-washing facilities associated with hygiene; this will continue, into the future, in terms of maintenance and/or establishment of the facilities, especially in schools where they are not available:

It improved the hygiene level of schools, especially when it comes to washing hands. There were some schools in the village where hand washing was not taken seriously, but it became a norm. Tanks were provided and children enjoyed washing hands. (KII 3, Kenya)

We got funding for water points, boreholes ... funding for accessing water. There are places which did not have access to water, but now even the villagers are benefitting ... there were places where the [borehole] drilling truck could not reach a school due to the poor road. The villagers had to work on the road construction. (KII 2, Malawi)

Indeed, the presence of WASH facilities has been used as a measure of compliance with school quality and safety in countries like Kenya. It is included in the school budget in some schools in Nigeria:

We could go to schools to evaluate if they have followed protocols to ensure learners' safety. (KII 3, Kenya)

[For] every training program, sanitizer is budgeted for, buckets are also budgeted for ... it has affected, to some extent, the way we do our budgets. (KII 1, Nigeria)

The establishment of WASH facilities comes with a cost and therefore a budget (as seen in responses from Malawi and Nigeria). Schools with underdeveloped WASH infrastructure could be experiencing budgetary deficits, financial constraints, or lack of prioritization of WASH activities. In particular, low cost schools will continue to struggle, given the inadequate funds to develop the infrastructure associated with hygiene and sanitation, especially in Burkina Faso, Mozambique, and Nigeria:

The construction of toilets and water sources was very difficult and slow due to lack of resources ... Even if we were using all funds to build new infrastructures to expand the access to all children, it wouldn't be enough to respond to the real needs in the country. (KII 1, Mozambique)

It was very, very expensive, most especially [for] the private schools ... to acquire also the devices, to buy buckets, to ensure that soap was everywhere, to pay for fumigation: to get all these things, it was quite expensive ... And not all schools could afford that. In fact, the schools that could not [measure] up were closed down. (KII 2, Nigeria)

Despite the budgetary constraints in some schools and other contexts, some improvising was done in places of water scarcity, such as the IDP camps in Nigeria, where students were advised to use ash to clean their hands. This and similar practices may become the norm in contexts with inadequate water supply: the aim is to sanitize the hands using locally available substances. Their effectiveness remains in doubt but can be investigated:

We also taught them [students] how to use ashes to wash their hands after leaving toilets. And we also train them on how to keep their toilet very clean ... One of the things we integrated into our work is WASH—water, sanitation, and hygiene. (KII 1, Nigeria)

Overall, the integration of WASH into schooling within the GPE partner countries in this study corroborates research across Africa, where the presence of WASH, perceived as one of the primary prerequisites in the eligibility for school reopening, remains an indicator of school safety (Groenewald et al., 2023; Spaull & van der Berg, 2020; Wodon, 2020). Indeed, SDG 6 highlights the importance of achieving universal and equitable access to safe drinking water and sanitation for all by 2030 (Toleubekov et al., 2022). This has implications particularly for rural schools and low-resourced communities, where pre-existing infrastructural disadvantages related to running water and proper sanitation compromise learners' health and safety.

School resource constraints:

Unlike government schools, which received some cushioning (such as teachers' salaries and capitation grants) from the financial shocks of COVID-19, private schools in GPE partner countries in Africa were disproportionately affected, specifically in Burkina Faso, Kenya, Malawi, Mali, and Mozambique. This compromised quality staffing, which in turn impacted infrastructural growth, as well as student and teacher welfare and learning outcomes:

You know private schools depend on tuition fees ... in the absence of fees, our operations were affected ... The public schools' teachers were still being paid, but for us in private schools it was really difficult ... schools which used rented premises had problems. They had no money for salaries and other expenses. It was really difficult. (KII 4, Malawi)

Private schools fill an important school supply gap but, unlike government schools, their income revenue comes from charging user fees. For those private schools serving low-income households, the economic lockdowns made it difficult for parents to pay for teacher upkeep or salaries during school closures as well as immediately after school reopening. Despite the reopening of schools, private schools remain at risk, given the financial shocks from which some have not recovered, and which are likely to continue for a while:

Some schools closed ... some are still in debt ... some schools have not yet recovered ... the numbers have greatly reduced, and some of these schools are struggling to recover. (KII 4, Malawi)

Well-trained and experienced teachers are critical in the provision of quality education, but they are expensive for any school with unstable revenue streams. Given the financial constraints, the recruitment of highly qualified and experienced teachers remains problematic for low cost private schools. This concern, which is likely to persist, threatens students' learning outcomes as well as teachers' welfare:

Due to school closures, parents could not come to pay school fees. School owners were forced to relieve the teachers of their services ... or replace them with low-paid teachers ... private schools were badly hit ... this will affect the quality of instruction. (KII 4, Malawi)

Before the onset of COVID-19, some schools had costed School Development Plans that defined their development path. COVID-19 disrupted the implementation of those plans - something that affects the realization of school goals in various fronts. For instance, the stalled infrastructure development as well as recruitment of teachers in schools was attributed to the reallocation of resources to address COVID-19, implying the stalled implementation of school plans:

Money [that was] supposed to be channelled to academics ... like [the] constructing of classes and employing more teachers ... was spent in [the] health sector ... to mediate the effect of COVID-19. (KII 4, Kenya)

Our budget was disturbed ... We were supposed to manage it [COVID-19] by ourselves, yet some of the medicines were very expensive ... if we were to let the students buy it themselves, they were not going to afford [it] ... we had to spend on medicines. (KII 3, Malawi)

Overall, the COVID-19 pandemic has had a profound impact on the operation of schools across the GPE partner countries in Africa. The institutionalization of ICTs has emerged as a critical factor, enabling continuity of education during school closures, and is likely to shape the future of education in these countries. However, the digital divide, particularly among learners from low socioeconomic backgrounds and those with special needs, poses a significant challenge to equitable access to digital education. The integration of WASH practices in schools has been highlighted as a crucial aspect of ensuring health and safety in the school environment, particularly in the context of the pandemic. Further, resource constraints, especially in private schools, have been exacerbated by the pandemic, affecting staffing, infrastructure development, and overall quality of education. This risk aggravating the learning crisis mentioned earlier, which is likely to disproportionately affect the quality of education in the most hard-hit private schools, with the possibility of shutting down and teacher attrition. Indeed, as studies show, education sectors in sub-Saharan Africa were already heavily underfunded before the pandemic (Namatende-Sakwa et al., 2023a). Yet, experts predict that COVID-19-related recessions are likely to further suppress donor spending, frustrating education (Lewin, 2020).

3.2. Evidence needs

This section identifies evidence gaps by drawing on the perspectives of stakeholders from selected GPE partner countries in Africa to project the support needed to mitigate the long-term impacts of COVID-19 on education in Africa. Specifically, the evidence needs were categorized into three. First was the need for evidence regarding learners, particularly as regards school dropout, learning loss, and learner well-being. The second was the need for evidence on teachers, including teacher attrition and teacher well-being. Finally, was the need for evidence on school systems with a focus on school closures, distance learning solutions as well as integrating WASH into schools.

Addressing the impact of COVID-19 on learners in Africa

The stakeholders illuminated the need for evidence on school dropout, learning loss, and learner well-being to address the projected impact of COVID-19 on learners in Africa.

Learning loss:

This was identified as an issue in all the countries surveyed, illuminating the need for evidence regarding the magnitude of learning loss through eliciting evidence on performance before and after COVID-19 school closures:

We can also do an analysis on the school results before and after COVID: that is to say, the promotion rates and the success rates in school exams after the COVID period and before, being able to see what the impact of that has been, then see how to rectify it. (KII 1, Burkina Faso)

There is no data on how much time was lost, and that information is necessary to quantify the learning loss. Moreover, the Ministry of Education should collect accurate data ... Inaccurate statistics may hide the impact of COVID-19, and the Ministry could make wrong plans. (KII 5, Kenya)

In other words, there is a need for evidence on learning lost, which from our analysis can include an investigation into accelerated learning programs as well as arbitrary promotions to the next class or grade: Who were these students? How many were they? How are they coping? What is their current

learning level? What are the learning gaps? How can they be plugged? What are the lessons? Once countries know this, they can tailor their responses, including instructional delivery approaches to meet learner needs and plug learning gaps.

School dropout:

One of the most visible long-term impacts of COVID-19 is school dropout, leading to more out-of-school children and youth (OOSCY). Indeed, the magnitude of school dropout threatens to reverse gains made on access to schooling and increased school enrolments in the last two decades, especially for vulnerable groups. Various databases, such as the UNESCO Institute for Statistics databases on education indicators, track school dropout and children who are out of school. In addressing school dropout, stakeholders explained the need for evidence on the numbers and demographic characteristics of OOSCY, causes, challenges envisioned, as well as support needed toward re-entry into schools. Indeed, according to the stakeholders from all the selected countries, evidence in this area should illuminate the magnitude of the problem, particularly the number of OOSCY by sex, age and location, along with their learning levels and enrolment disparities before and after the COVID-19 lockdowns.

[We need to assess] COVID-19 impact, especially [by the change in] the number and location of out-of-school children by sex, and the real learning levels. (KII 1, Mozambique)

The evidence is based on how many children there were in a school before and after COVID-19. How is the enrolment now compared to before? Statistics. (KII 3, Kenya)

To fully understand what drives dropping out and failure to re-enter, and how such problems could be solved, it is critical to engage with the affected population that remain vulnerable. Therefore, evidence should be elicited in terms of OOSCY data and perspectives on the causes of school dropout, how this population would like to be supported towards re-entry into schools, and suggestions as to the kinds of education they would prefer:

We will be able to find out what is the cause; why they did not come back to school ... and the question would be to actually assist them on re-entry ... whether those will come back to high school or whether we shall take them to vocational places. (KII 1, Kenya)

Based on this perspective, we can argue that evidence on OOSCY - regarding challenges they envision on re-entry into schools, how these can be mitigated to support school re-entry and retention, as well as how schools can be made more conducive for them - is critical. We add that the perspectives of parents, teachers, and education official as well as members of the community are also crucial in forging meaningful, holistic, inclusive and sustainable interventions.

This evidence is critical for future interventions whose aim is to develop measures to accelerate school retention as well as enrolment in consideration of identity markers such as sex, age, social class, and (dis) ability.

Also, in the case of teenage pregnancy as well as early marriages, the participants problematized the lack of data, suggesting the need for it:

We may not have the data; in some areas, especially the girl child was affected. Some of them dropped out of school because of issues of premature marriages and pregnancies, even though we may not have the data. (KII 5, Kenya)

Further, we deduce that evidence is needed regarding the number of girls who got pregnant; the causes of the pregnancies, such as rape and defilement; the challenges these young mothers face; how they can be supported to cope and return to school or continue their education; and how teenage pregnancy and child marriages can be mitigated. Also, such evidence should entail potential second-chance programs for OOSCY. We further infer that evidence is needed regarding country policies on the re-entry of pregnant girls into schools: Do countries have such policies? What are the gaps in these policies? To what extent have countries implemented these policies? What are the gaps and how can they be plugged?

Learner well-being:

The need for evidence regarding the impacts of the pandemic on vulnerable learners such as those who faced SGBV, pregnancy, death of parents, IDPs, was illuminated across all the selected countries. Such evidence should be disaggregated by sex, disability, and socio-economic class including other markers of marginalisation such as orphan hood and refugee status of learners:

Statistics are needed on the number of vulnerable children; the number of displaced households; and the number of children whose parents died from COVID-19 in order to provide better care. It is also necessary to know the number of girls who have been raped, the number of teenage mothers, the number of children from poor families (KII 1, Mali)

Overall, the psychosocial well-being of learners provides building blocks for effective teaching and learning (Oppong Asante et al., 2020). Therefore, in addition to information about the status and causes of students' poor mental health, the need for evidence on the challenges associated with poor mental health for students, the kinds of support available to support mental health, and how students would like to be supported in this regard, is paramount. Broadly, evidence on structures for building resilience and service providers in this regard is needed in order to facilitate the psychosocial health programming.

Addressing the impact of COVID-19 on teachers in Africa

The stakeholders illuminated the need for evidence on teacher attrition and well-being in order to address the projected impact of COVID-19 on teachers in Africa.

Teacher attrition:

The envisioned teacher attrition, as this study has shown, is based on morbidity, limited recruitment into pre-service teacher education programs, psychosocial challenges, as well as poor teacher welfare during the COVID-19 pandemic. The evidence needed in this regard includes establishing the causes and effects of teacher attrition along with strategies to ensure teacher retention.

From the literature, while various issues drive teacher attrition, stakeholders were keen on some of them. Specifically, the evidence needed to mitigate teacher attrition in Burkina Faso, Kenya, Malawi, Mali, and Mozambique includes establishing its root causes:

You look at data about mortality or morbidity of teachers or students at that time. (KII 1, Malawi)

In many GPE partner countries, other than for health professionals, data on COVID-19-related mortality was hardly disaggregated by profession. This makes it difficult to estimate the number of COVID-19-related teacher replacements needed in future. However, from the stakeholders' perspective, it appears that COVID-19 teacher mortality is a concern due to its implications on indicators such as pupil-teacher ratios and class sizes. That said, and in addition to eliciting the causes of teacher attrition, our analysis suggests the need for evidence drawn from the teachers on their experiences of the pandemic as well as their recommendations for mitigating teacher attrition during crises like the COVID-19 pandemic.

Teacher well-being:

The need for evidence about the impacts of the pandemic on the mental health of teachers was illuminated across all the selected countries. Evidence on the challenges associated with poor mental health for teachers, the kinds of interventions available to support their mental health, as well as how teachers would like to be supported in this regard is paramount. Also, we deduce the need for evidence on the integration of mental health into pre-service teacher education programs in the GPE partner countries in Africa: Is mental health welfare integrated into teacher education programs? What are the gaps, and how can they be plugged? Further, there is a need for evidence regarding facilities and services offered on mental health wellness in schools for both learners and teachers: What services are provided? What are the gaps and how can these be plugged?

Addressing the impact of COVID-19 on schools:

The stakeholders illuminated the need for evidence on school closures, DLS, as well as progress in integrating WASH to address the projected impact of COVID-19 on school operations in Africa.

School closures:

The evidence needed to address the issue of school closures includes causes and effects of school closures and mitigation strategies to avert them. Indeed, the rampant closures, especially of private schools, across all the selected GPE partner countries in Africa raises questions about evidence on strategies needed for the retention of students, as explained below:

There are schools that are closing that had opened ... If you had 40 children and they all disappear you have to close because you cannot sustain a school with few numbers. But the retention strategy is still there. I think we should prepare for such emergencies in future. (KII 3, Kenya)

Questions such as "Did all the schools that were functional reopen after the measures were lifted" [could contribute towards the evidence generation]. (KII 4, Mali)

In addition to evidence for a retention strategy for students in schools that risk closure, our analysis adds that evidence is needed on how many schools closed; what kinds of schools closed (e.g., in terms of location, ownership, composition, performance); why they closed; and what support is needed for them to reopen. This evidence is critical in informing strategies to avert school closures, especially of private schools.

Distance learning solutions:

The evidence needed for DLS, including online learning, home schooling, learning packages, video/radio learning includes ascertaining their effectiveness, the magnitude of use, how to mitigate the digital divide, negative effects of DLS such as online learning, and how to allay them.

During the COVID-19-related school closures, there was a focus on learning continuity and trial-and-error approaches for how to deliver educational services. The pervasive use of educational technology during the pandemic across all the selected GPE partner countries, as illuminated in this study, raises questions about evidence of its effectiveness:

So, for you researchers, you would have to find out if our children truly gained from e-learning programs run by the State Department of Education or we were just doing some drama. (KII 6, Nigeria)

For a country to claim to be using ICT infrastructure (the main carrier for DLS) as the mechanism for instructional delivery, it needs to reach a critical mass. Evidence is therefore needed on the magnitude in the use of ICT infrastructure across education levels:

The other element is to also do a survey or a study on the issue of the importance of ICT in the education system to be able to show that there has been a revival of this use of ICTs at the level of the education system. (KII 1, Burkina Faso)

Further, following the gaps in the implementation of DLS, as illuminated in this study—including concerns about access, ICT literacy, connectivity, and the digital divide—there is need for evidence, including on how to improve access, connectivity, and ICT literacy as well as allay the digital divide to promote equitable learning outcomes for all learners.

If it is not well managed, technology can be obstructive, especially for young persons who quickly get carried away by all the available interesting and free-to-download content. Hence, the potential negative impact of educational technology on learning outcomes, including the effect on concentration and attention span, should be investigated.

Somebody was saying that children are increasingly having short attention spans, thus they cannot follow learning materials without audio-visual support. (KII 8, Nigeria)

Our analysis adds that evidence should be elicited in terms of the negative effects of educational technology and how these can be mitigated to optimize learning outcomes.

Integrating WASH:

The integration of WASH practices in schools was foregrounded in the aftermath of the COVID-19 school closures across all the GPE partner countries in Africa. However, as the study has demonstrated, schools serving low socioeconomic populations continue to struggle and improvise, given the inadequate funds to develop the infrastructure associated with hygiene and sanitation.

Following this, our analysis points to the need for evidence for the accessibility of WASH facilities: Which facilities have schools established? What are the differences between schools when it comes to integrating WASH facilities? Where are the gaps for implementing WASH? What are the

challenges? What are the effects of implementing WASH? How would schools want to be supported to implement and sustain these services?

In conclusion, this section emphasizes the pressing requirement for comprehensive and targeted evidence in order to effectively tackle the long-term effects of COVID-19 on education in Africa. It identifies three main areas where evidence is needed: learners, teachers, and school operations.

3.3. Support countries need

Counties need support for learners, teachers as well as schools in order to mitigate the projected long-term impact of COVID-19 on education in Africa.

Support learners need

Learners need support towards re-entry into schools, mitigating learning loss as well as strengthening guidance and counselling systems to address psychosocial impacts of the pandemic.

Supporting school re-entry and retention:

As part of meeting SDG 4, and in the spirit of leaving no one behind, the plight of pregnant and parenting adolescent girls cannot be ignored, including out-of-school child workers. The need for support for establishing strategies to enhance school re-entry, including informal training programs for teaching skills to OOSCY, was recommended:

We have to create informal ways of incorporating them into the educational system so that they can learn at their own pace and environment. (KII 2, Kenya)

Furthermore, in the last two decades, certain school financing models have seen enrolments in countries such as Kenya, Malawi, and Uganda skyrocket to over 100%. Support for learning from such financing models including establishing tuition-free programs, which have been taken up in countries like Kenya, are needed to mitigate school dropout rates:

Our learners don't pay the school fees. So, you don't have a reason to say that I'm not going to school, because we are not asking for school fees. The Kenyan government is paying for the school fees. That is one of the motivations why more learners should remain in school. (KII 4, Kenya)

Also, countries can be supported in engaging motivational speakers, as this has worked in the past in retaining students in school, especially in the aftermath of teenage pregnancies. The motivational speakers can support the re-entry and retention of students in school:

[Regarding] the support the government has given they've always had the chance to send a motivational speaker... to come and talk to our girls that [this] is not the end of life. You can still push. You can still soldier on with pregnancy or even after giving birth ... They've always encouraged our girls to be in school, even though a few have been reluctant. (KII 3, Kenya)

Children from low-resourced environments and those from areas prone to conflict manage with less than two meals a day. This makes school feeding programs critical to their survival. Countries would need support in establishing or strengthening school feeding programs given the devastating effects

of COVID-19 on food supply chains. Such programs were perceived as potentially instrumental in retaining students, as has been the case in schools in countries like Kenya and Nigeria, especially among IDPs:

NGOs have come up with lunch, and this is helping them. Some days, they take rice and beans. Other days, they take Githeri, and that has really helped with retention. There's a big store near my office, and that helped because for these children, school means food. (KII 3, Kenya)

They said the children don't like coming to school until you give them food. (KII 1, Nigeria)

Further, school re-entry and retention, particularly in hostile areas, can be accentuated by supporting countries in providing incentives for teachers as well as boarding options for the students:

We also need more incentives in the hostile areas. Of course, our teachers get a hardship allowance, but the children also need more incentives. If we would make those schools from hostile areas boarding schools, then we would retain so many of our children. (KII 3, Kenya)

Countries need to be supported in using multi-sectoral approaches whose aim is to identify vulnerable learners in order to support their education:

I think we need a multi-sectoral approach ... if [only] all arms of government can work together, starting from the assistant chiefs, chiefs ... Because I think the most critical bit would be identification of these unique situations ... If they are fished out from the system, I think it would be easier to be able to support them ... if we strengthen the civil societies, if we strengthen the religious societies, if we strengthen the billing systems, the government systems, assistant chiefs, children's officers, I think [effective support is possible] if we have a concerted effort together. (KII 1, Kenya)

Specifically, the use of sheltered workshops was suggested as one of the interventions for which countries can be supported, to enhance teaching skills when working with students with special needs:

If we would have sheltered workshops, where they'd be able to come and do their trades, and after they produce ... we can have markets for them ... we have people who manage them ... so that they are also protected from the harsh realities of the society. (KII 1, Kenya)

Also, the provision of basic educational needs for students with special needs, who were disproportionately affected by COVID-19, was recommended as yet another area for which countries need support:

The government can also supply the basic needs, the requirements of vulnerable learners, maybe girl refugees ... who cannot take care of themselves, who cannot help themselves in acquisition of teaching and acquisition of knowledge and learning processes. (KII 4, Kenya)

Well, the suggestion we have is for the government to take full responsibility in educating the less privileged, particularly the IDPs, because the government has neglected that badly ...

Also, other organizations that are coming in ... we also recommend that they should support the IDPs' education so that the children will not be left out. (KII 3, Nigeria)

Further, the recognition of the limited number of schools for students with special needs during COVID-19 was highlighted. It is, as such, an area in which countries need support to work towards equity in education for all:

In Garissa County, we only have one primary and one secondary school for children with special needs. (KII 3, Kenya)

Mitigating learning loss:

This was identified as an issue in all the countries surveyed, which emphasized the need for support to generate evidence on the magnitude of learning loss in order to develop relevant interventions:

We can also do an analysis on the school results before and after COVID...being able to see what the impact of that has been, then see how to rectify it. (KII 1, Burkina Faso)

There is no data on how much time was lost, and that information is necessary to quantify the learning loss... Inaccurate statistics may hide the impact of COVID-19, and the Ministry could make wrong plans. (KII 5, Kenya)

This suggests that countries need support in using the evidence to develop and implement customised interventions, including instructional delivery approaches to meet learner needs and plug learning gaps. Countries, as we add, need expert support in tailoring such interventions to mitigate learning loss for vulnerable learners, especially those disadvantaged by sex, disability, socio-economic status, IDPs, orphan-hood in order to ensure that no one is left behind.

Strengthening guidance and counselling:

As mentioned earlier, one of the long-term impacts of COVID-19 is negative psychosocial effects such as depression and exposure to SGBV. Therefore, given the prevalence of mental health issues, countries need support towards establishing functional guidance and counselling units:

We need to start strengthening our guidance and counselling. I think, over time, this period has shown us there's a lot of issues related to mental health, a lot of stresses either at the workplace or at the domestic level, and people are crying out for help. (KII 1, Kenya)

I belong to the National Association of Private Proprietors ... what we discuss often is to ensure that all the private schools have a counsellor ... these counsellors were very effective, most especially for the children that came from rural areas to get them integrated into the schools in the city. (KII 2, Nigeria)

We also recommend the construction of more counselling centres in order to facilitate the management of gender-based violence and rape. (KII 4, Malawi)

Indeed, countries need in order to train teachers with competences to support students' mental health as well as address psychosocial issues, which remain problematic even after the COVID-19 school closures:

Matters of gender-based violence and how they can offer psychosocial support to vulnerable learners ... and other emerging issues [are important to address at the earliest opportunity]. (KII 2, Kenya)

Anybody going through [teacher training] college now must learn how to handle learners, how to treat learners, how to teach in a COVID-19 situation, because this is not something we may think is going to go away. (KII 1, Kenya)

Support teachers need

The stakeholders suggested the need for support to address teacher attrition and promote their well-being in order to address the projected impact of COVID-19 on teachers in Africa.

Addressing teacher attrition:

The primary drivers of teacher attrition as illuminated by this study include morbidity, psychosocial challenges, as well as poor teacher welfare during the COVID-19 pandemic. The stakeholders especially from Burkina Faso, Kenya, Malawi, Mali, and Mozambique were keen on garnering support to generate evidence needed in order to mitigate teacher attrition. This suggests that countries need support to use evidence in order to develop and implement interventions associated with improving teacher's psycho-social as well as social-economic welfare, in ways that cushion them from shocks during crises, thereby ensuring teacher retention even during emergencies.

Promoting teacher well-being:

The prevalent need for evidence about the impacts of the pandemic on the mental health of teachers as illuminated across all the selected countries, suggests the need for support in generating and using evidence to develop and implement relevant interventions. We infer that countries need to leverage the expertise specifically of Western GPE country partners with a longer history of researching and developing mental health-related interventions in order to institutionalise facilities and services on mental health wellness in schools for both learners and teachers. The institutionalisation of mental health and wellness in schools should include the training and recruitment of relevant personnel, whom African countries would need support to train in this regard.

Support schools need

School systems in Africa need support towards mitigating the long-term impact of COVID-19 specifically in terms of enhancing DLS, facilitating school system emergency preparedness as well as integrating WASH.

Enhancing DLS:

Countries need support in improving access to ICTs as well as Internet connectivity to accentuate learning and mitigate the effects of digital inequities:

Digital learning is very promising and efficient, but in our context, we are not there yet ... we still need more investment on digital infrastructure to ensure equity and equality in using this media ... Most learners from poor households are not able to access this media and so they are missing out on learning support. (KII 8, Nigeria)

It is quite necessary for the ministry or even the government to ensure that we have a network in all parts of the country ... there should be no disadvantage to the learners ... quite a number of places in our country have a challenge of network ... if we are saying all children have a right to education, we need to focus on how we can improve that network problem. (KII 5, Kenya)

Data prices need to be lowered, because data prices remain the highest in the region, and that is challenge. We need to have readily available data to support online lessons. (KII 3, Malawi)

This is corroborated in ADEA's recent study as commissioned by the Islamic Development Bank and the African Development Bank, on status and capacities of 34 countries on the use of ICT in education and remote learning during the COVID-19 crisis. The findings revealed that for ICT in education to be inclusive and accessible beyond the privileged few, there is an urgent need to address electrification and ICT infrastructure issues.

Further, support is needed to make special considerations in providing customized ICT support for vulnerable persons, such as learners with special needs and internally displaced persons:

We are not just targeting the IDPs ... Perhaps we can formulate some policies targeting vulnerable learners with special needs. I am talking as an ICT expert, and I do not know what other officials could be doing in the ministry to help support them. (KII 8, Nigeria)

It is now evident that use of ICT in schools is inevitable. This is largely due to lessons learned from COVID-19 and global trends that emphasize knowledge-driven social and economic systems. Therefore, support is needed in training teachers to use ICTs to support continuity of learning as well as providing incentives to support access to ICT devices such as computers:

We also need to equip our teachers with ICT skills so that, should such a situation arise, our teachers will be [equipped] when it comes to handling virtual programs. (KII 5, Kenya)

In the teacher training colleges, ICT should be made compulsory. The government should provide administrators with desktop [computers]. Some schools can't even afford [these]. (KII 3, Kenya)

Further, in order to ensure that no one is left behind, there is a need for support to establish safe and conducive community viewing centres for learners from low-resourced communities who can receive instructions from their teachers collectively:

If we go to some rural areas, you see somebody having a generator, and he has a television [set] where he is having a viewing centre showing us Manchester playing ball, and people go there and gather to watch the [match] ... Now, why can't we establish viewing centres for education in these rural areas? We have a centre with a very big television [set] and the teacher goes there ... and is teaching the children, [who] are able to listen, able to hook up and learn. (KII 2, Nigeria)

Facilitating emergency preparedness:

Countries need support for investing in physical school infrastructure such as aerated classroom spaces and WASH facilities (discussed later on), in order to facilitate conducive and safe learning environments:

One of them would be to think about the expansion of the physical facilities ... one of the schools in Mombasa has up to 143 children in one room. So, that is not COVID friendly. That is a disaster waiting to happen. There is a need for government to invest more in the physical facilities so that the learners get better learning environments, which are aerated, and [facilitate] safe distance. (KII 1, Kenya)

Also, given the challenges in relegating spaces for quarantine, as confirmed in countries such as Malawi, the need for support for infrastructure development was commended as a concern to be addressed in working toward preparedness for education during crises:

We really lacked infrastructure to cater to the quarantine; otherwise, our situation could have turned out to be very difficult if we never had an alternative. (KII 3, Malawi)

The absence of effective disaster preparedness capacity and systems largely explains why schools struggled with mitigation measures, including preparedness for reopening after the COVID-19 school closures. The need for support for developing policies and guidelines for engagement with emergencies such as COVID-19 came up as a measure to support continuity of education during crises:

I think that as a country, we need to come up with guidelines on how to handle education within emergencies like COVID ... we need to have either a policy or a guideline on how, in future, in case we have a similar situation, we deal with it so that we don't have to wait until a pandemic strikes, and then we can now start running around. So, I will say that was an eye-opener. (KII 5, Kenya)

In emergency preparedness, financial resources are critical (to purchase equipment, pay for services, and train and pay personnel); yet revenue-collection streams are low in some countries. Specifically, support in preparation for emergencies and crises should entail budgeting for such eventualities:

At the national level, in terms of education, the lesson we got was ... we need to have a budget for disaster management. (KII 4, Malawi)

Additionally, there is a need for support for developing strategies to cushion and prepare for crises, which were disproportionately experienced by private schools:

As private schools, we need to think of other means to support ourselves when such a calamity hits. Lord forbid that this pandemic should hit us again; otherwise, we did not have help. The banks were not available to cushion us. We have now resorted to establishing cooperatives. We are trying to develop ourselves so that we have something to rely upon ourselves. (KII 4, Malawi)

Further, the lessons learned during school closures and after reopening are critical in building resilience of educational systems in GPE partner countries in Africa. The need for support towards capacity building in scaling up innovations born of the COVID-19 crisis such as locally made (sometimes school-based) sanitizers was highlighted:

We actually distributed hand sanitizers and our boys [staff] from the lab developed their own sanitizer ... We were the first to produce our own [sanitizer] before the University of Malawi or Malawi University of Science and Technology ... We only lacked the capacity to multiply it. (KII 3, Malawi)

The need for support to scale up innovations locally born of the COVID-19 crisis is aligned to building national capacity to harness indigenous knowledge as well as support innovation to address contextual problems was noted:

I think we need support on capacity building for home-grown initiatives to counter the pandemic. You see this issue of pleading with governments [from the Global North] saying, "Please share with us some of your vaccines." [Laughs] For how long are we going to do that? We need to stand on our own ... We are begging everything from the Western world, yet the Western world gets the raw materials from us to develop those things. I think we just need to develop capacity just for ourselves. We have universities here, which can do research and come up with ... home-grown vaccines, home-grown remedies. We do not have to forget indigenous knowledge systems that we have here; how can that be used to ensure that we have home-grown strategies for overcoming pandemics—something that is cost-effective, rather than begging for vaccines and donations from the Western world (KII 1, Malawi)

Further, in a knowledge-driven era, data for decision-making is critical. In many GPE partner countries in Africa however, existing data systems are hardly effective in meeting demand for evidence-informed decision making. The need for capacity to collect, analyze and use education data in a timely manner to inform decision making was highlighted as another area in which countries can be supported:

[Education] data on COVID-19 were not well managed due to lack of capacity. We need better and more data ... the numbers could have been underestimated. In general, primary and secondary schools need an increase in funding and accountability to improve conditions, build new classrooms, increase the number of qualified teachers, and provide them with better in-service training. (KII 5, Malawi)

Integrating WASH:

The investment in hand-washing facilities was advocated as another gap, where countries need support in order to provide sustainable access for all learners:

That would be very critical during the COVID period - the hand-washing facilities - and so they would need this for facilitation to be able to sustain those efforts so that [they] do not become a one-off activity. (KII 1, Kenya)

Countries need support to generate evidence on the magnitude of gaps related to WASH in order to develop and implement relevant interventions in this regard. Particularly, countries need support in

prioritising the integration of WASH in schools serving low socioeconomic populations, which continue to struggle in this regard; given the inadequate funds to develop the infrastructure associated WASH.

In conclusion, this section emphasizes the need for support to generate evidence as well as develop and implement relevant interventions, taking the most marginalised groups into consideration, in supporting countries to effectively tackle the long-term effects of COVID-19 on education in Africa, with a focus on learners, teachers, and school systems.



4 Conclusion

Firstly, this qualitative study provides insights into the perspectives of education stakeholders across seven GPE partner countries in Africa regarding the long-term impact of COVID-19 on education. Secondly, the study highlights evidence needed by the countries to mitigate these projected long-term impacts. Thirdly, it elucidates the nature of support the countries require to alleviate the long-term impacts of COVID-19 on education in Africa.

COVID-19 is projected to have both positive as well as negative long-term impacts on education. The impacts cut across learner- and teacher-based outcomes, as well as outcomes at the school system level. On the positive side, it is evident from stakeholder perspectives that GPE partner countries in Africa took the opportunity of the pandemic provided to institutionalize and scale up their efforts in providing ICT and WASH infrastructure. This may have been driven by the need for learning continuity and the control of COVID-19-related infections, putting learners' health at the core of policy and practice responses.

Unfortunately, this opportunity can also be a disadvantage, as not all education systems have the capacity to provide ICT and WASH infrastructure to all corners of a country. The resulting digital divide and infrastructure disadvantages related to running water and proper sanitation compromise equitable and inclusive access to education for all. This also risks exacerbating pre-existing inequalities between high- and low-resourced institutions of learning.

At the individual level, perspectives mainly show negative long-term impacts of COVID-19 on education in Africa. On one hand, impacts are predicted to manifest through learning loss, learner well-being, school dropout, and teacher attrition. On the other hand, the negative impacts are likely to disproportionately affect vulnerable groups, including learners with special needs, IDPs, and low socioeconomic populations. This will increase disparities between highly privileged and less privileged learners. This has future implications for equitable investment to enhance quality and inclusive education for all.

In the COVID-19 era, many decisions that touch on learners, teachers, and the school system must be made. This implies that knowledge translation and scaling what works become central in mitigating challenges posed by COVID-19. Therefore, generating evidence and using it to inform policy and practice are critical to mitigate the projected long-term impacts of COVID-19 on education. The stakeholders' perspectives linked their evidence needs to long-term impacts of COVID-19; such evidence needs to focus on individuals and school systems. The evidence cuts across six mutually inclusive areas:

- School dropout and associated factors, such as pregnancy, early marriage, and child labour.
- School closures and strategies to avert them.
- Teacher attrition and measures to curb it.
- Effectiveness of DLS and how to address the digital divide.
- Competence gaps and how to plug them.
- Teacher and learner well-being and how to support their psychosocial well-being and mental health.

Finally, many countries have experienced resource constraints, given that COVID-19 was an emergency of unprecedented magnitude. Such constraints are expected to continue in the future and may manifest themselves in the form of budget cuts and skills needs. In their quest to generate and use the evidence mentioned above, education systems in GPE partner countries in Africa will need support in key areas that will ensure they mitigate learning loss through strengthening DLS, among other strategies; strengthening school re-entry programs and curbing dropout; enhancing learner well-being through guidance and counselling; and ensuring that vulnerable groups are not left behind through prioritizing their needs and response strategies.

Overall, governments have established several interventions to support continuity of learning within educational institutions in Africa. Such interventions have been essential in addressing the short-term consequences of COVID-19 on education in Africa. However, a dearth of information exists when it comes to the longer-term implications of the pandemic on education, especially from the perspective of local education stakeholders. This study is therefore critical in providing reliable information to plug this gap to mitigate the impact of COVID-19 on education, which is likely to be felt in the future.



5 Recommendations

The analysis of stakeholder perspectives on the long-term impact of COVID-19, as well as the evidence and support countries need to mitigate it, elicited the following recommendations.

Learners

1. Support the re-entry of all out-of-school children and youth (OOSCY) into school through developing school re-entry programs and/or strategies such as school feeding and tuition waivers, including informal training programs to support the skilling of OOSCY and addressing factors that lead to school dropout. School re-entry and retention strategies should more specifically focus on learners with special needs, those in hostile situations, and/or internally displaced persons (IDPs), as well as those of low socioeconomic status.
2. Strengthen guidance and counselling by institutionalizing it in schools to support both teachers and students in coping with both post-COVID shocks and the pressures of daily life. This should entail recruiting qualified personnel as well as training teachers in addressing psychosocial issues in schools.
3. Support vulnerable groups, such as girls and children from disadvantaged backgrounds (from low-income households, children living with disability and those with special needs, and children living in refugee communities), who are more at risk of adverse effects of COVID-19. One way to minimize the adverse effects is for ministries of education, parents, local communities, and key national-level education stakeholders to prioritize (in interventions/programming) vulnerable groups in all their current and future adversity mitigation measures. The prioritized programming should include building robust data mechanisms; access to learning opportunities, including special schools, eliminating barriers to schooling, and strengthening educational resources (e.g., building libraries); as well as providing alternative/complementary skilling programs for them to enable self-sustenance. This can be achieved through forging partnerships between the government and development organizations.

Teachers

4. Ensure that teachers are well equipped with distance-learning solutions (DLS) skills, invest in capacity strengthening on digital technology, especially focusing on lesson delivery, development and use of instructional materials, and leveraging the power of technology to create networks with the school community.

School system

5. Enhance infrastructure expansion, including improving access to digital technology, as a public good, targeting households and schools. This will improve learning continuity during emergencies, mitigate learning loss, and alleviate the growing digital divide for Internet access. Expansion of education technology should go hand in hand with measures to enhance access to affordable Internet services and digital devices. Expansion of digital technology also implies capacity building and/or strengthening among key stakeholders, especially teachers and students, to ensure optimal

use of services and infrastructure. This could entail the integration of information and communication technologies (ICTs) into pre-service and in-service teacher education programs.

6. Infrastructural development should also entail investment in more physical school infrastructure to enhance conducive and safe learning environments for all learners. Such spaces should be aerated, devoid of overcrowding, and in proximity to learners' homes. They should also comprise adequate facilities for water, sanitation, and hygiene (WASH) as well as quarantine in case of emergencies.

Education systems' evidence and support for preparedness

7. Research and data systems are critical for decision making; therefore, research institutions such as the African Population and Health Research Center (APHRC) and universities in Africa, as well as regional policy bodies such as the Association for the Development of Education in Africa (ADEA), should join forces with decision makers (policy actors) to codesign education data systems and cogenerate evidence to mitigate the long-term impact of COVID-19 on education. Such collaboration should also include research and/or data generation funders like the International Development Research Centre (IDRC) and the Global Partnership for Education (GPE), and evidence consumers such as ministries of education. This should include capacity building with a focus on inculcating research skills; competences to harness indigenous knowledge; as well as support and scale-up innovations to sustainably address contextual educational problems. Among the areas that should be prioritized for evidence generation include impact on *schoolchildren* - school dropout, learning loss, learner well-being; on *teachers* - teacher truancy and well-being; and on *education operations* - including impacts on school closures and effectiveness of DLS.
8. Facilitate emergency preparedness through developing policies at both macro (government/ministry), meso (sub-national levels), as well as micro (school) levels for managing crises and emergencies such as COVID-19. This should include both protocols as well as emergency budgetary allocations to cushion schools and teachers, especially in private education institutions, which were disproportionately affected during COVID-19. On the whole, policy actors and program implementers should target responses that maximize resource use for the policy and programs to have a long-lasting impact.
9. Mobilize resources through national governments; partners such as GPE, IDRC, World Bank, UNICEF, and Education Cannot Wait, among others; as well as the private sector and other education stakeholders. This should include ring-fencing budgets for educational programs that target the most vulnerable. The role of the private sector here is to support the private school with access to affordable credit for bouncing back better and also to partner with governments in subsidizing Internet costs. Ministries of education should develop evidence-driven long-term budgeted plans on how to mitigate the long-term impacts of the pandemic (e.g., how to get OOSCY back to the educational system) as well as commit a proportion of their education budgets to address such long-term implications.

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