

Impact of COVID-19 on Education in Sub-Saharan Africa

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Abstract

The eruption of the COVID-19 pandemic has affected every sphere of life and may forever change how we have always lived and conducted our businesses, and no one can resist the wind of change that is blowing. Of all the sectors of governance, the educational sector, particularly at the tertiary level, appears to have been most greatly affected and therefore requires a more pragmatic approach to resolution. As of 29th June, Sub-Sahara Africa has reported 382,190 cases of COVID-19. In rejoinder to the virus epidemic, several Sub Sahara African governments implement the resolution to slam learning institutions to enclose the infection. Consequently, advanced schooling institutions obliged to reorganize their loom, becoming more digitally become forward, and changing to online platforms.

Keywords: COVID-19; Deadly disease; Education; Resolution; Africa; Governments; Sub-Sahara

Introduction

Coronavirus disease (COVID-19) is an infection which is as a result of a novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). Infection for example, the novel severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) was known in 2002 and 2012 in that order were as a result of viruses analogous to SARS-CoV-2. Nevertheless, SARS-CoV-2 has a higher range more the earlier information related to viruses and as a result the obscurity in the cure and management of COVID-19 (Zhong *et al.*, 2020).

Therapeutic diagnosis and findings have revealed that people tainted with COVID-19 can be symptomatic or asymptomatic in the premature stages of the virus depending on the each person immune system. It is reported that the signs of the infection contain dry cough, fever, tiredness, shortness of breath, headache and general body weakness owed to the incentive of supplementary pains in the body (Zhong *et al.*, 2020). The newness of SARS-CoV-2 and its obscure hereditary scenery effect to complexity in management of COVID-19 and the improvement of defensive vaccines.

The occurrence of the new coronavirus plague in China lead to primetime reports in Africa as the dilemma of its global students in Wuhan where it start took centre phase. At the involvement of the epidemic, Hubei, the region where Wuhan is situated, have around 5,000 of the nearly 82,000 African students in China (Zhong *et al.*, 2020).

At the outset of the calamity, priority in the international north paying attention principally on the commotion that the virulent disease, would bring students from China and its financial impact on their upper learning stages. The hard work used to stop the broad of the virus spectrum from increasing or postponing educational requisites to banning incoming students.

The majority of Africa's original reaction focused on equipping students stranded in Wuhan or providing aid from afar. Nigeria, Benin, Ghana, in addition to added Sub Sahara Africa nearby countries, succeeded in providing aids for their students, an attainment that was greatly distinguished. Additional countries that are not having the willingness and the possessions to do the same had to presume unremarkable adjacent to civic view, which favored repatriation (Kekic and Miladinović, 2016).

COVID-19 will abscond no segment in whichever country in the planet untouched, and its impacts will be known for years to come. However, when vast impacts were being used to alter and advance elevated education in Sub Sahara Africa, there is a threat that COVID-19 will threaten the segment, with severe penalty.

Presently, students are at home and numerous tertiary institutions have organized a variety of e-learning stages (even though with confronts) to assist and make sure the academic schedule runs to closing stages. The virulent disease has revealed that we cannot persist to fuss things the same way as we used to and things have to adjust in the short, medium to long period. This describes for synchronized effort for all stakeholders surrounded by the educational segment to investigate alternatives for the solution.

The coronavirus deadly disease has uncovered the lack of preparation of a lot of higher education institutions in Africa particularly Sub Sahara part of Africa continent to roam online. When the virus first hit the continent, many Sub-Sahara African governments were moving quickly to fathom how best to grip the innumerable of confronting it, it would facade on the socio-economic development of their countries.

Countless of Sub-Sahara African governments have had to momentarily shut educational institutions in an effort to enclose the multiply of COVID-19 in their individual countries. Egypt was the first African country to account a case of COVID-19. Since then, Africa has witnessed more than 270,000 cases with over 7,000 deaths and over 121,000 recoveries.

The closures of schools and universities is said to have impacted over 70% of the world's inhabitants. However, current growths indicate acknowledgment that education has skilled a important swing. The headship and managers of educational institutions diagonally Sub-Saharan Africa have become fully conscious that authorize students to set up for a future where outbreaks for example, COVID-19 and other interruptions might become a part of our everyday lives also means implementation change in learning and teaching. What does this mean, and is this the right time to start?

In this piece of writing, several of these impacts and effects are tinted to allow leaders of higher education institutions, policy-makers and other stakeholders to reproduce on them and to be better equipped to deal with them.

The state of higher education in the COVID-19 era in Sub-Sahara Part of Africa

Presently, Africa has projected 1,650 higher education institutions, several of them in front of defy that necessitate the interference of an assortment of stakeholders, national governments and progress associates in line to the students to exploit their learning results and add efficiently to the labor force. The right of entry for the pertinent age group is presently at 5%.

Africa is said to have the lowest provincial standard in the globe, one-fifth of the universal standard is about 25%. Nonetheless, notwithstanding the efforts to make sure even teaching and learning by means of movement to online stage, students keep on to countenance a number of challenges. Numerous of these institutions went into refuse in stipulations of the superiority of teaching, research and research output. In the process, they became a reduced amount of effectual in regard to their aptitude to add to the socio-economic progress of their host country.

Currently, it is an excellent time for educational institutions in Sub-Saharan Africa to reorganize what the prospect of education would look like and take realistic stages towards adopting a blended learning to move toward in education in order to advance way in and fairness. Numerous universities across Africa, including the ones in countries such as Egypt, Ghana, Nigeria, Morocco, South Africa, and Rwanda among others have moved some of their programmes to online stages and partnered with Telco's to zero-rate these platforms. For examples, these universities have made data packages and laptops accessible to some students to advance the easiness of the students.

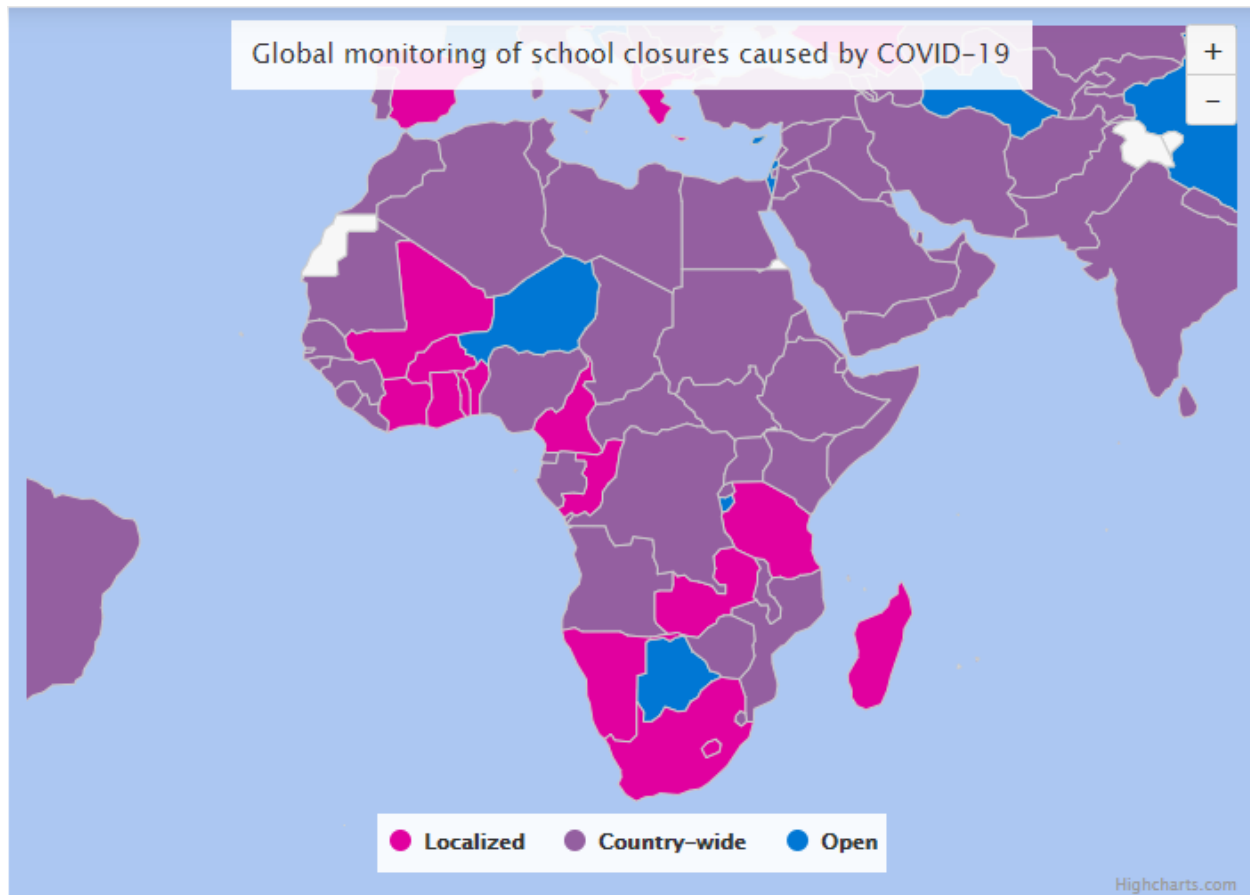


Image: UNESCO (June 16, 2020): School here refers pre-primary up to tertiary level

UNESCO reported that 89% of students in sub-Saharan Africa do not have right to use home computers and 82% do not have internet access; this means that these online classes cannot accommodate all students. In spite of these, the challenges with this access have seen some innovation in circumventing the bandwidth challenges; these include pre-recorded lectures on these zero-rated e-learning platforms, among others.

Methods

This review assesses accessible confirmation on subjects relating to impacts of COVID-19 deadly disease on education in Sub-Sahara Africa. Search for pertinent medical literature in databases like Google Scholar, Reesearchgate and African Education Journal was conducted using the following key terms: “Sub-Sahara,” “Africa” “COVID-19,” “Education,” “Impact,” and “epidemic”. Papers were selected by reviewing their abstracts and title and also using accompanying references gotten from the list of references on the paper.

Results

Impact of Covid-19 on Education in Sub Saharan Africa

Coronavirus Disease (Covid-19) deadly disease has resulted to total shutting of schools in about 215 countries all over the world with 91.4% of the total number of enrolled learners in these countries momentarily mandatory out of school (UNESCO, 2020). It is accounted that over 1.6 billion students transversely the world which are presently obliged to stay out of schools as social distancing is being enforced locally and regionally around the world in order to enclose the extend of coronavirus disease. Besides, statement shows that lockdown of schools is added important in some continents such as Africa, South America and in some parts of Europe (UNESCO, 2020).

It can be said that Africa is one of the continents which educational systems have been typically affected by the deadly disease as more that 98% of teaching and learning cannot be performed suitable to country-wide lockdown in these continent. In the shutting of schools across Sub Sahara Africa, of which over 91 percent are primary and secondary school learners.

In a short time, COVID-19 has disrupted the landscape of learning in Sub Sahara Africa by limiting how students can access learning across the country. However, apart from the pharmaceutical interventions and other preventive measures like using of facemask, washing of hands, social distancing has been the most effective way of minimizing the spread of COVID-19. The effective implementation of social distancing demands that schools be closed for as long as each government from different countries are certain that the pandemic has been curtailed enough for the safety of learners and teachers before recommence back to the class.

Ngogi and Mahaye (2020) discourse that long periods of learning would be lost for as long as the closures lasted. This is evident as different cases are recorded daily. Kekić *et al.* (2016) reported that schools losing long periods of learning because of the disease outbreak can upshot to both chronological and stable smash up on educational system. The temporal damage include disruption of curriculum which could take a long time to be recovered while the undeviating spoil which include the actuality that some students may never come again to school even when the infection outbreak ended.

Because of the doubts contiguous to the inhibition of COVID-19 in Sub Sahara Africa. It is envision that social distancing could still be implemented further than the time expected. The department of education has postulated a steady reopening of schools which it has described as “Phasing in Approach” in South Africa (HEDCOM, 2020). Countries across the world have been testing the phasing in moving toward to see how feasible it is for them order to open schools across Sub Sahara Africa.

Digital Global Overview Report (2020) describe about 60 percent of people from Nigeria (a West Africa is country) are not associated to the internet. The data for mobile phones, which could also be used as a learning intermediate, are more hopeful. According to the report, around 169.2 million people, 83 percent of Nigerians have right of entry to mobile phone connections; however, of these, 50 percent, around 84.5 million people, live in municipal areas. For the populace with access, the quantity would be twisted towards elevated socio-economic households and urban households; an awe-inspiring preponderance of whom are private school students who already have a learning benefit over their community school peers. For children from poorer backgrounds who tend to have less access to internet connectivity, computers, and other devices, and reside in rural areas where local languages take dominance over English, ICT-learning uptake will be limited. The impact of Covid-19 on education in Sub Sahara Africa is discussed in details below:

I. Responses

Sub Sahara Africa has taken the coronavirus deadly disease seriously only in the last few weeks, following the confirmation of its first cases. Early retort include the shutting of schools and universities begin in mid-March. Progressively more, universities across the continent are setting up institution-wide mission forces to alleviate the effect of the virulent disease. Some are determined to participate in high-end research towards finding a cure for the virus. Many are attempting to shift to online teaching and learning through institutional, national, continental and international initiatives (Hrastinski, 2019).

The majority of plans is only at their preliminary stages of implementation and describe for ramping up present efforts, forging wider cooperation and sharing experiences and resources across the whole continent. Two main subject that hold severe insinuation in the clash against the epidemic are online teaching, which is now championed as an substitute form of educational

delivery, and the financial impact of the virulent disease on Sub Sahara African higher education (The Head of Education Committee (HEDCOM), 2020).

II. Inequities

Sub Sahara African countries had no alternative but to shut their higher education institutions as element of their lockdown measures to enclose the extend of the virus, and higher education institutions had no alternative but to have remedy to the use of information and communications technology (ICT) to convey their programmes online at a detachment to their enrolled students.

But the process has laid bare the digital divide within the Sub Sahara African countries between those countries that have better ICT infrastructure than others; between higher education institutions within the same country, with some being far better equipped and experienced than others; and between students within the same institution, the rich who live in urban areas and the poor in rural areas who can barely afford to access the internet, when and if it is available.

It is true that the crisis has provided an opportunity to all higher education institutions to quickly improve and maximize their ICT operations. However, the greater part of them do not have the capacity to fully deliver whole programmes online.

It is the few open universities in Sub Sahara Africa that have that capacity, but their targets are mostly mature students, those in employment and those wishing to improve their qualifications, not fresh school-leavers.

While a momentous number of Sub Sahara African higher education institutions have been implementing blended learning (a mixture of face-to-face and online learning) in order to increase access and improve learning, hardly any had intentions for their face-to-face delivery to be completely replaced.

How then can Sub Sahara African countries and higher education institutions contract with the inequity arising from the extensive use of online learning, even for a relatively short period?

III. Online Delivery

According to UNESCO, 9.8 million African students are experiencing disruption in their studies due to the closure of higher education institutions. The danger of contamination has triggered institutions to move their courses online. However, going online is not that simple on a continent where only 24% of the population has access to the internet, and poor connectivity, exorbitant costs and frequent power interruptions are serious challenges.

Increasingly, universities are partnering with internet providers and governments to overcome this critical challenge by negotiating zero-rated access to specific educational and information websites, as in the case of Rwanda, South Africa and Tunisia.

At the institutional level, a number of universities, such as the public University of KwaZulu-Natal in South Africa and private universities such as Ashesi University in Ghana are offering data bundles to their students and staff. Going digital effectively requires substantial coordination with, and swift support from, institutional and national service providers, regional entities, international partners, NGOs, the private sector and ICT providers to rally behind such tools and platforms at little or no cost.

It is imperative to seriously seek alternative means and approaches in order not to leave behind students with little or no access to electronic communication. The painful reality of the digital divide on the continent has to be strategically and systematically managed; reaching out to millions of ‘marginalized’ students must become a national priority in this time of crisis.

While this is taking shape, institutions need to develop a comprehensive plan and a rigorous follow-up scheme to ensure that academics and students make proper use of digital platforms. This task cannot be left solely to the discretion of individual actors.

IV. Quality

It is a misleading concept to consider that online learning can be effective by just posting a lecturer’s notes online or having a video recording of the lecture. So far, this is what is generally happening at hand.

Knowledge has revealed that eminence online learning need that the teaching material is prepared by a specialized instructional designer, which the lecturer is pedagogically trained for bringing the programme and the students are equally uncovered to the pedagogy of online learning.

The credulous online freedom will have an contact on the value of the programmes. This is ill-fated at a time when key deeds have been made in improving the dominance of teaching and learning in Sub Sahara African advanced education institutions.

The most horrible affected programmes will be science and technology as students will be not capable to right of entry to laboratories for their practical. Thus far, science and technology programmes are the ones that are most vital for Africa's growth.

How can higher education institutions find choice to proceed to use laboratories and subsequently, how can they weaken the outlay of poor-quality programmes as a result of unplanned online liberation?

V. Apprehensions and Opportunities

The continent's scanty institutional and national capacities, frail healthcare systems and mobile way of life may start destructive should the virus carry on extending at the equal pace and attention as in other perilously affected countries.

The impact of such a catastrophic situation in sub Sahara Africa is simple to picture and alarming to forecast. The effects of the virulent disease on Sub Sahara Africa's nearly 2,000 higher education institutions cannot be overemphasizing. If the disaster persists, it may seriously impact the obligation of governments in the direction of higher education in the face of opposing anxiety from the healthcare, business and other main anxiety of sectors serving vulnerable phases of society.

Additional, international help to higher education examine collaborations and partnership schemes, most often directed at severe areas such as strengthening PhD programmes, could be particularly scaled back. Sub Sahara African higher education institutions are expected to do more in the months ahead while concurrently battling across many fronts.

This comprises addressing the more instant challenges of the risk of COVID-19, seeking improved methods for online delivery and planning to address the long-term effects of the pandemic on institutional aptitude.

In the outcome of the plague, price recovery through fiscal contribution from beneficiaries in the form of fees or loan repayments will not be easy, since economies will have seriously rejected, if they indeed survive a total crumple.

The development of public universities will be suddenly become unmoving. Private providers, which are needy on tuition and other fees, will also be hard hit, with many facing downsizing or even closure, as they receive little or no support from governments.

On a positive note, this peril and the approaches to win over it may be catalytic for long-lasting changes in Sub Sahara African higher education. Among others, diversified means of educational delivery, in particular a non-residential model may become more mainstream, more acceptable and more respectable.

VI. Pipeline Effect

Secondary schools which feed students to higher education institutions have also been closed. Already, it had been observed in many Sub Sahara African countries that with the high increase in enrolment in secondary schools, resulting from measures taken to improve access, the quality of students entering higher education institutions had deteriorated.

The circumstances will be provoked with the closure of schools, and higher education institutions will have to devise measures to cater for a poorer quality of student intake, perhaps by running remedial courses in the first year.

Also, end-of-secondary school examinations are being cancelled. What approaches should higher education institutions adopt in selecting their next cohort of students if assessment results are not available? Here, a nationwide advance covering the whole education sector needs to be adopted.

VII. Research

In turn to perk up the research productivity from Sub Sahara Africa which is known to be the lowly of any region, a overabundance of initiatives and projects have been initiated over the past couple of decades, whether at national, regional or continental level.

The importance has been on increasing postgraduate training, especially at doctoral level, and facilitating research projects in higher education institutions with an emphasis on areas which are of priority to the expansion of Sub Sahara Africa. And all indicators show that the initiatives are now bearing fruit.

However, the bulk of the research initiatives are funded by European countries and by agencies and foundations in the United States, and lately by China. In Sub Sahara Africa, there are very few national agencies funding research and hardly any regional or continental ones. Also, almost all the research is undertaken in teamwork with higher education institutions in these foreign countries.

As COVID-19 is impacting the whole world, and Europe, the US and China emerges to be the hardest hit, can Sub Sahara Africa continue to depend on research funding from these sources? Several of these countries will probably end up in downturn and their higher education institutions will understandably give priority to redressing their own situation rather than supporting international research collaboration.

How then will research projects already initiated in Sub Sahara Africa and funded outwardly be maintained? To what alternative sources of funding can Sub Sahara African higher education institutions turn to undertake their research?

VIII. Graduate unemployment

Approximately every Sub Sahara African country has recently been experiencing the challenge of graduate unemployment, and in some countries the joblessness figures are disturbing. From criticism obtained from employers, a main cause of the joblessness is the lack of 'soft skills' in graduates, pitiable communication skills, be deficient in personal initiative, powerlessness to work in a team, etc.

The broad employ of online learning because of COVID-19 will undoubtedly worsen the circumstances as students will be working on their own. Here is an chance to actively engage employers to help out in providing the skills they require.

Unluckily, for financial reasons, many possible private employers of graduates may be forced to lay off their staff, thus increasing joblessness. This will make it even harder for graduates to find employment. The social and political penalty of large-scale unemployment, especially among the educated youth, can be severe.

IX. Private higher education institutions

The quality of the higher education sector in Sub Sahara African countries is the presence of private institutions. The number of institutions is already appreciably greater than public ones, and private student enrolment has steadily increased over the years, with some countries now having almost equivalent to the student enrolment in public and private institutions.

These private institutions usually function along a business replica and are greatly needy on students' fees to cover staff salaries and operational costs. While public institutions may eventually receive assistance from the state to overcome the consequences of COVID-19, the private ones may be forced to stop their operations for lack of funds. Closure of these institutions would have a theatrical impact on the higher education sector and countries' economic development.

What are the possible solutions? How can the Sub Sahara Africa Countries assist? What are the possible solutions? How can the state lend a hand to the private institutions at such a time of disaster?

Suggested Solution to reduce the Impact of Covid-19 on Education in Sub-SaharaAfrica

The pandemic has offered the government the opportunity to correct the anomaly and inequality in the educational system in Sub Sahara African countries which people from these countries from pastoral be the victims over the years. There should be equal access and opportunity to education and to education facilities in the countries to foster love and peace.

Reaching the vulnerable population in Sub Sahara African countries will require adopting multiple learning delivery modalities ranging from television, radio and SMS-based mobile platforms that are more easily available to the poor.

With over 80 percent of the adult population having access to radios and phones, it would be possible to reach most children left behind with targeted instructions via these mediums. However, while online platforms offer personalized learning, other delivery modalities require a central planner, as well coordination between all three tiers of government, and the private sector (media platform owners).

This is where the role of the Ministry of Education will crucially extend beyond traditional policy making and regulations. The commissioners of education could help in the deployment and use of these tools within states, while the federal government coordinates the state efforts by plugging capacity and finance gaps (Thelma and Adedeji, 2020).

Understandably, at present Sub Sahara African countries, as elsewhere in the world, are prioritizing the health sector to minimize contagion and limit deaths. They are also trying to assist the socially-disadvantaged of their population.

Economic recovery and support to other sectors of the economy will have to come later. But it is vital for each sector to start reflecting on the impact of COVID-19 and assessing its possible consequences, otherwise recovery of the sector may be too slow, too late.

This applies to the higher education sector as well. The approach must be holistic and involve all stakeholders, including the private sector. Each country should set up a task force on higher education under the leadership of the relevant ministry to survey the situation, suggest immediate and short-term measures and be ready to affect redress when the crisis is over.

The COVID 19 pandemic has had an impact on just about every aspect of life around the world, with education being one of the hardest hit sectors. The pandemic has to date caused the disruption of learning to over a billion students globally.

Most schools have been closed due to the pandemic, meaning students either don't have any classes or have to rely on e-learning. However with Sub Sahara Africa's challenges in terms of

connectivity and accessibility, this is not possible across the board. But despite quarantines and lockdowns, education must go on.

School closures affect students, teachers and families and have far-reaching economic and social effects. This is especially the case for fragile education systems and the negative effects will be more severe for disadvantaged learners and their families. Finding alternative learning forms during this time is difficult. But it is not impossible.

In response to COVID-19 school closures and adherence to social distancing, UNESCO and many governments and agencies have recommended the use of distance learning, open educational applications and online learning to reduce disruption to education.

Richer households are better placed to sustain learning through online learning strategies, although with a lot of effort and challenges for teachers and parents. In poorer households many children don't have a desk, books, internet connectivity, a computer, or parents who can take the role of homeschooling. The disparity in access to digital devices and connectivity between rich and poor is immense.

While it's necessary to institute educational programmes during this period, these will not replace regular school. Despite the best efforts of government, schools and parents there will be learning losses for almost everybody and worsened educational outcomes for the poor.

While other critical needs such as health, water and sanitation are being responded to, educational needs cannot be forgotten and these have an equally detrimental impact if left unaddressed. The 'pile-on effect' of the coronavirus is that, during the global COVID-19 pandemic, interruptions to education can have long term implications — especially for the most vulnerable.

There is a real risk of regression for children in sub Sahara Africa whose basic, foundational learning (reading, math, languages, etc.) was not strong to begin with. And millions of children who have already been deprived of their right to education, particularly girls, are being more exposed to health and well-being risks (both psychosocial and physical) during COVID-19. These are the children and youth we at Education Cannot Wait (ECW) prioritize, including:

Girls: Young and adolescent girls are twice as likely to be out of school in crisis situations and face greater barriers to education and vulnerabilities such as domestic/gender-based violence when not in school.

Refugees, displaced and migrant children: These populations often fall between the cracks as national policies might not necessarily include these vulnerable groups and they must be included and catered for in any global responses to this crisis if this has not already occurred.

Children and youth with disabilities: Along with other marginalized populations, including children from minority groups, are neglected in the best of times and have lower educational outcomes than their peers.

Young people affected by trauma or mental health issues: Schools and learning centers are places for communities to address health related issues, including mental health and psychosocial support (MHPSS), which the most vulnerable students rely on for their wellbeing and development in order to learn.

Without access to education, as shocks are experienced, including loss of life, health impacts and loss of livelihoods, children are more vulnerable and unprotected. As household finances are being strained and needs increase, out-of-school children are more likely to be exposed to risks like family violence, child labor, forced marriage, trafficking and exploitation, including by responders. For the most vulnerable children, education is lifesaving. Not only does it provide safety and protection, importantly, it also instills hope for a brighter future.

So continuing education through alternative learning pathways, as soon as possible, must also be a top priority right now, to ensure the interruption to education is as limited as possible. We urgently need to support teachers, parents/caregivers, innovators, communications experts and all those who are positioned to provide education, whether through radio programmes, home-schooling, online learning and other innovative approaches.

In the short term, this means we must maintain access to learning and ensure kids retain knowledge and skills (i.e. through temporary remote, alternative or distance learning programmes). In the medium term, this means catching up and transitioning students who have fallen behind or had a break in their education to re-join their level of schooling and competency

(i.e. automatic promotion with a mandatory catch up/remedial period at the beginning). In the longer term, this means there is a need for education systems to be set up with contingency capacities to mitigate and manage risk in the future.

Recommendation

The above listed points discussed the recommended way out of the negative impact of covid-19 on education in Sub-Sahara part of Africa:

Revitalizing Higher Education

Before we proceed to look at the options available to address the concerns immediately, all stakeholders need to understand that we are not in normal times and therefore extraordinary measures will have to be taken. Stakeholders need not take entrenched positions and ought to be flexible in meeting each other halfway. We must all understand that we need to make sacrifices to ensure that we successfully roll-out e-learning options. At this point the position that, negative narratives must be should. Focus should be on questions like “how do we do it?” and “what do we need?”

It is clear that technological innovations such as content management systems (CMS), learning management systems (LMS), and internet use have become a part of the DNA of higher education in Africa. These innovations, like COVID-19, have come to disrupt teaching and learning pedagogies.

Here are some ways in which higher education institutions are revitalizing education in Africa.

Blended and modular learning

COVID-19 has shown that the most powerful and positive impact on education is the digital transformation of the educational sector. The agility of many institutions and governments, especially to quickly move learning modules online and to dedicated mass media channels is admirable.

Course and programme development by university faculty are also in need of an overhaul. Lecturers and faculty are leveraging on content available online from other institutions to complement their own like never before. Students who could previously not afford the cost associated with in-person sessions would now have access to full modules for programmes online and at a reduced cost. In some cases, with a few face-to-face sessions over the programme duration.

Technical Support

It is important to provide the necessary technical support. Therefore, we call on institutions to provide a toll-free call line and/or email addresses to provide support for their students who have challenges when online. This support centers should work 24/7. This is easy to do because currently most of the administrative and non-administrative staff work from home and are not fully utilized, so a shift schedule can be arranged to cover the 24/7 period.

We must understand that there are still challenges with access to internet and connectivity. These challenges have been with us prior to COVID-19 and we cannot resolve them within the short to medium term. We need to discourage the use of real-time (live) teaching sessions which requires students to connect to live session as it consumes much of their data. Rather we could record lectures and upload on LMSs, use voice over PowerPoint slides for explanations and engage students for discussions, and questions and answer sessions through forums on the LMS and WhatsApp platform.

Customized experience

Another great opportunity that comes with the digital transformation is the opportunity for customized learning. Students will benefit from customization by developing their curriculum to suit their career aspirations through data-driven suggestions from the learning management systems. Currently, some Massive Open Online Courses (MOOCs) can suggest what classes students should take depending on previously taken courses and performance. Students with intellectual disabilities will also benefit from such an opportunity.

To minimize the impact on the continuity of learning for students, Ministries of Education in several Sub-Saharan African countries like Nigeria and Kenya have launched the campaign to

adopt distance learning mode through radio lessons in FM radio stations and TV lessons in TV stations.

Students who live in remote villages can arrange and move to nearest big town where there is connectivity, download the lecture and learning materials, assignments and examinations questions and go back to their villages to work on them and submit them via the same medium or other pre-arranged mediums. Here, attitudinal change is important from all stakeholders. We know that many universities give official email addresses and also form WhatsApp groups for students. Such mediums can be used as alternatives to the LMS to send materials and examination questions to students. This could be a viable option for institutions without LMS. We also call on the various unions and associations at the tertiary institutions to support their management and students in this regard.

High quality educators

Educators all over the continent have been compelled by current circumstances to use digital tools efficiently to deliver their courses. This era allows educators to join online professional learning communities to pursue in-service career training to stay in touch with the trends, share tips and best practices to achieve the goal of an evolved and high-quality standard of education. Instructors can invite colleague educators from another university to deliver a guest lecture to their students.

In order to make education more meaningful to all students, we must make education more accessible and less expensive. Education should be a right and not a privilege.

Policy

There are a number of national and international bodies and organizations that have developed principles, guidelines and benchmarks for quality assurance and the use of technologies to support e-learning. The Institute for Higher Education Policy in the United States of America explains a number of benchmarks that are argued as essential to ensuring quality excellence in Internet-based distance learning. Similarly, in the United Kingdom, the Quality Assurance Agency (QAA) proposed a code of practice for the assurance of academic quality and standards in the provision

of flexible and distributed learning, including e-learning. Indeed, there are Universities that have used e-learning and they have built a wealth of experience that we can tap into.

Conclusion

In conclusion, it must be stated that to all intents and purposes, e-learning as a form of educational delivery has become prominent in institutions all over the world, even in the pre-COVID-19 era, and going forward, it is obvious that e-learning will have be considered as part of mainstream education.

E-learning should be given the utmost attention and properly implemented to help attain the growth we seek for in our education system in Sub Saharan Africa. COVID-19 has exposed the flaws and we can learn from places where these models have been adopted to form a basis for which we grow from her.

Education in Sub-Saharan Africa has suffered setbacks over the years. Now is the time for stakeholders to craft meaningful initiatives as we prepare for an era where COVID-19 becomes a part of our society. It is obvious that nations that refuse to accept and use technology and for that matter e-learning cannot survive going forward.

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