Asante Africa Foundation:

The Path to a Viable COVID-19 Emergency Education Response

Policy Analysis Paper ~ 12/11/2020

Authors: Revanth Voothaluru, Ryan Pakebusch, and Charlotte Hinrichs

Harvard Graduate School of Education (A801: Education Policy Analysis and Research ~ Professor Fernando Reimers)

Asante
AFRICA FOUNDATION
Educating Children | Transforming Worlds

Harvard
Graduate School
of Education

The Path to a Viable COVID 19 Emergency Education Response

In rural Kenya, the odds of widespread active engagement of adolescents, particularly girls, in a COVID-19 emergency education response are low due to non-academic issues that beset vulnerable populations such as food insecurity and family financial circumstances. The challenge Asante Africa Foundation (hereafter referred to as Asante Africa) faces in light of the pandemic has been the complete disruption in programming and the increased need for students' families to receive material support such as food aid and learning materials. Moreover, the need for psychosocial support has increased since safe spaces such as programs and schools that Asante Africa supports do not currently operate. This project was introduced to assist the NGO in creating a viable plan to offer a COVID 19 emergency education response that would remain tenable in the pandemic aftermath.

The paper begins with a discussion about the challenges that Asante Africa faces due to school closures in rural Kenya and the obstacles besetting children who attend school in these remote areas. New developments are presented regarding changes to the timeframe for national exams given to Class 8 and Form 4 students. A literature review is then presented that explores qualitative and quantitative studies on the impact of targeted e-learning intervention for disadvantaged students. Special attention is given to promising practices for a COVID 19 emergency education response. Computer-aided learning is also explored to determine the impact of well-designed systemic intervention. Here, we examine the correlation between computer-aided learning programs and educational gains.

The literature review ends with a survey of teacher training and professional development practices that concern learning to implement a student-centered teaching approach. Key implications from the literature review that inform the second half of the paper are then summarized. The next section lays out the selection criteria for policy options. Each measure reflects best practices examined in the literature or discussed in class lectures. Policy options that explain the goals, activities, and assumptions associated with each suggested emergency response are presented. The paper ends with a policy recommendation that includes trade-offs and suggestions for next steps. Developing an effective policy response that addresses vulnerable children's needs amid a national health crisis that has disrupted access to education for the last

eight months is not an easy feat. However, the Asante Africa Foundation has attributes that position it to respond rapidly and strategically to the new circumstance with an integrated policy approach.

Policy Issue

The current global health crisis led many countries to temporarily halt in-person learning in March to avert students and staff in schools from contracting or spreading the disease. By July, the Kenyan Ministry of Education made the radical decision to close all public schools in the country until January 2021. Before COVID-19, the main system challenges of Kenyan youth living in rural areas included the need for jobs, job training, quality teacher training, the marginalization of girls, and students dropping out of school. Asante Africa addresses these concerns through the three core programs it implements to educate East Africa's youth and empower educators across 330 schools (Asante, Impact Report, 2019). This is important because there are nearly 1.3 million youth between the ages 15-24 who are illiterate in Kenya (UIS, 2020). Unesco's Institute for Statistics (UIS) reported that 48.9% of Kenyan females in the same age bracket cannot read. There is no published data on the number of students who attend lower and upper secondary school in rural areas of the country. A population pyramid shows that the majority of Kenyan residents are under the age of 24; 40% are under the age of 14 (UIS, 2020). The current challenges students face in marginalized rural communities due to COVID 19 reflect the intersection between cultural and institutional concerns Asante Africa works to ameliorate.

To appreciate the gravity of this problem, one must understand the difference between poverty and extreme poverty. Many students that Asante Africa supports live in extreme poverty. Wambua, Omoke, and Mutua (2014) found that 3.2 million people live in drought-impacted agricultural areas in rural Kenya, where food insecurity is a severe problem (p. 52). One critical reason for food insecurity is frequent famines. However, severe droughts, and swarms of insects that can quickly destroy crops have a destabilizing effect on livelihoods and financial security. Wambua, Omoke, and Mutua (2014) found that 66% of the households surveyed were utterly food insecure, meaning they experience food shortages many months in a year. Single female heads comprise 54% of the families interviewed for the study (p. 52). In short, there are many

single mothers raising their children in marginalized rural agricultural regions in Kenya. Asante Africa works in the heart of these areas, serving thousands of students.

In rural Kenya, vulnerabilities associated with living in drylands and climate change has also led to economic consequences that manifest in educational access. Muro and Burch (2007) found that food insecurity actually damages children (p. 4). Students who would otherwise attend school cannot because they have to work to support their families. However, research shows that completing just the first four years of schooling in grades 1-4 can lead to a 7.4% increase in agricultural production (Muro & Burch, 2007, p. 4). The point here is that the lack of food and the impact of prolonged food shortages perpetuate a cycle of extreme poverty. Yet, children who stay in school are more likely to better utilize the land and learn ways to negotiate hardships associated with living in a marginalized region.

Erna Grasz, the founder of Asante Africa, cites female genital mutilation, cultural norms about girls, and early marriage as significant issues that decrease girls' odds of actively engaging in learning opportunities in rural areas (Grasz, 2020). A school principal in the region, Abdikadir Ismail expressed the most notable cultural concern regarding girls' education in rural Kenya in a recent interview. He explained that families prioritize the education of boys over girls because they carry on the family's lineage. Girls are considered anchors for their future husband's family.

In this context, the possibility to attend school is entirely dependent upon a girl's family (Ismail, 2020). A female student may be required to dropout at any time in the school year without any explanation. The discontinuation of schools in Kenya has harmed girls living in rural communities because they have far fewer role models, including older female students and women in remote areas (Ismail, 2020). These challenges are prevalent in pastoralist communities such as the Samburu and Maasai.

While political leaders criticize and discourage these practices, there is an apparent lack of institutional power in enforcing policies. The economic hardship of the pandemic in Kenya and the pre-existing issues of locusts and drought in rural and pastoralist communities are likely to lead some families to turn to their girls as sources of income. Once girls are married off by their families, it can become difficult for them to continue school. Grasz also expressed concern

about the stigma which has developed about getting tested for COVID 19 or seeking treatment for the disease in rural areas.

New Developments

It was announced by the Kenyan Ministry of Education that on 12 October 2020 the partial reopening of schools will commence with Grade 4 (the competency-based curriculum class), Class 8 (the final year of primary school), and Form 4 (the final year of secondary school). From that point on Class 8 and Form 4 will be on a comparatively accelerated timeline. These two cohorts are expected to take their official leaving examinations, the KCPE and KCSE respectively in approximately three months (see Table 1 in the Appendix). It is important to note that while the KCPE results will not influence a student's ability to matriculate to secondary school, it will influence the quality of school a student can attend and scholarship opportunities to attend these schools. However, the KCSE results will have a direct impact on a young person's ability to matriculate to tertiary education in Kenya or abroad.

The non-governmental organization Usawa Agenda suggests that many students have not been learning in Kenya during school closures for the past eight months. The most striking findings from its report are that only 22% of students surveyed access instruction digitally and pre-secondary students are less likely to access school work remotely (Usawa Agenda, 2020, p. 2). The low level of active engagement in online learning is indicative of issues related to digital literacy and existing infrastructure problems. Other challenges involve issues connected to financial hardship.

Education Technology, Teaching, and Learning. A review of the literature on large-scale device rollouts, such as One Laptop Per Child, indicates that there are many omissions such as teacher training, technical capacity, alignment with curriculum, and stakeholders' roles (Coomar & Rzyhov, 2013). However, when there is a targeted e-learning intervention, studies have shown that this can yield promising results. We will focus on this intervention in contexts where students targeted in the intervention are primarily from disadvantaged backgrounds.

In Sierra Leone, the 60 Million Girls Foundation facilitated a multi-year tablet program called the Mobile Learning Lab (MLL), which demonstrated itself as adaptable since it was effectively rotated between communities during the Ebola epidemic. They also reported a low operating cost per student during the initial startup phase (7.2 USD per student for a full 8-month program). After the initial project, communities retained the technology and continued the program with no additional funds needed, only tech support - other operations were run by local volunteers (60 Million Girls Foundation, 2018).

These characteristics are promising for a COVID-19 response since they address the financial and logistical constraints facing schools, governments, and organizations. 60 Million Girls also conducted a randomized controlled trial, and although the experiment was non-mandatory and offered no conditional incentives, they had a recorded attendance rate of 90% (60 Million Girls Foundation, 2018). Math test scores of the full treatment group improved by double the amount of the control group. An interesting finding was that for the partial and full treatment group (which differed by 88 hours of screen time), the increase in literacy was still significantly higher compared to the control group. Overall, the absolute gains were modest, considering the baseline. This gives reason to believe the mere introduction of an intervention involving technology during COVID-19 may at least have a positive impact on engagement, peer support, and subsequent re-enrollment of vulnerable student populations in rural Kenya.

Computer-aided Learning. While we've looked at the broad implications of introducing technology hardware and mobile applications, we must also take a closer look at intentionally-designed systemic interventions. Mindspark and Bridge International Academies, in particular, were consistently identified as programs with the strongest correlation between computer-aided learning programs and educational gains, though in very different ways. Mindspark can be more accurately labeled as an adaptive e-learning software that serves individual students. At the same time, the Bridge model is aided by an enterprise software, which serves a wide range of organizational functions such as managing academic and financial data.

This dichotomy presents an opportunity to embrace each of their most applicable innovations in the current COVID-19 context, given the particular economic, institutional, and

logistical constraints. The Mindspark computer-aided learning system provides an initial assessment of each student user's actual grade level which supports the Teaching at the Right Level (TaRL) approach.

While having dedicated educational specialists is prohibitively high, the systematic gathering of real-time data to inform the design process can be a model for monitoring the success of COVID-19 virtual learning programs and teacher training provided by Asante Africa. A longitudinal study called found that students who attended Bridge schools in Kenya for five years or more scored .41σ higher than the average student on the national primary school exam (KCPE), which is equal to about 2.5 years of educational gains compared to the average student (Bridge International Academies, 2019). Similarly, students in the Mindspark treatment group scored 0.37σ higher in math and 0.23σ higher in Hindi over just 4.5 months (Muralidharan, Singh, & Ganjimian, 2018). Both cases illustrate the effectiveness of capturing student performance data in real-time to use for curricular and pedagogical adjustments to meet student learning needs. This offers some guidance on how Asante Africa can structure any education continuity programming that prioritizes student learning outcomes.

Regarding the literature reviewed, it is clear that Asante Africa should give special attention to developing open-source software and applications to improve education continuity. Through collaboration with actors in Kenya's education technology space, devices like RACHEL can be pre-loaded utilizing inexpensive, home-grown tablet systems like Kio Kit (designed in Kenya), adapted to the Kenyan curriculum, designed for assessment, and administered through a learning pod environment.

In contrast, offline connections can allow distance learning on shared, borrowed, or personal devices, addressing general parent concern for family health and safety while maintaining a learning community and access to learning materials. Lastly, this intervention may support an accelerated curriculum, an education approach that is crucial for vulnerable learners during and after the pandemic.

Teacher Training and Professional Development. The literature indicates the importance of right curriculum and instructional practices as the key to accelerate learning post-crisis situations (Accelerated Education Working Group, 2017a). This includes developing instructional practices needed to facilitate learning in a student-centered manner (Manda, 2011). The support teachers receive must be pertinent to the implementation of an accelerated learning program and provide pre-service and in-service training (Accelerated Education Working Group, 2017a; Accelerated Education Working Group, 2017b)). The usage of individual coaching methods or collaborative learning practices can be leveraged to keep the support continuous (Accelerated Education Working Group, 2017a; Boisvert, 2017b).

In the absence of in-person training during the pandemic, this can be done through web-conferences or observations of lesson recordings (Carrillo & Flores, 2020). Teacher professional development must be relevant, continuous, and cyclic. The literature reviewed highlights a few best practices in AEP implementation. This includes monitoring and evaluation, hiring locals as support for teachers in the classroom, flexible scheduling, and monitoring AEP implementation (Accelerated Education Working Group, 2017b; Menendez et al., 2016).

Key Implications

There are long-term implications regarding how technology-aided learning can influence instructional delivery during and post-pandemic in rural Kenya. The most critical findings from our Literature Review pertinent to the work of Asante Africa are the following:

- Self-directed, technology-aided learning yielded positive learning gains and reinforced prior knowledge in resource-constrained environments; and
- Volunteerism sustained the most successful technology-aided learning programs.

Mechanisms and interventions that permit self-directed learning are advantageous to implement since it is unclear how schools will mitigate students' estimated learning loss during the last nine months. From an operational perspective, the efficacy of any intervention that involves technology and self-guided learning will require a dedicated volunteer force, which is consistent with the interventions presented in the literature review. Asante Africa will need to recruit or identify volunteers from its reserve of individuals (e.g., Asante program alumni,

Asante teacher beneficiaries, Asante scholarship students) who could support students depending on the context.

In the last few months, the NGO has implemented a tablet-based learning program for 106 students and will procure RACHEL devices for 60 students. The learning pod approach is implemented in Samburu, Narok, Turkana, and Marsabit counties. Scaling this pilot educational model could present avenues for effectively addressing learning disruptions for an extended length of time. A number of options, such as Mindspark, Bridge@Home, and RACHEL encourage self-directed computer-aided learning. Depending on the per-student implementation cost, these options could be alternatives worth exploring.

However, the procurement of devices and technology does not in itself contribute to improvement in learning. It is essential to couple implementing technology-enabled learning with effective instructional strategies, e.g., learning pods. As noted earlier, this is already the case. Student engagement for technology-enabled learning translates into improved learning outcomes. Considering that Asante Africa has piloted this approach with a small group, scaling it for all students could be propitious.

Lastly, teacher training and professional development must be relevant, continuous, and cyclic. For a policy response that focuses on accelerated education programming needs effectively, relevant PD includes a pre-service and in-service component. The continuous aspect of the policy response should involve individual coaching and collaborative models of teacher training. To realize a cyclic approach, Asante Africa should design or invest in web conferences and opportunities for teachers to participate in discussions around recorded lessons that demonstrate best-practice.

Selection Criteria For Policy Alternatives

Asante Africa Foundation works with "off the paved road communities" whose problems are generally under-served or overlooked by most NGOs and even the national government. The pandemic disrupted the organization's programming in multiple ways forcing them to adapt

quickly to the complex situations that keep changing dynamically with time. The policy alternatives recommended for the organization need to be considered with the criteria relevant to this context.

Scalability: Asante Africa impacts over 594,000 lives through their three different projects in East Africa. Any recommended policy alternative will benefit from exploring the aspect of scalability, considering the magnitude of the work. Among three forms of educational change at scale, scaling to 'seek educational efficiency' is pertinent to this context (Reimers, 2017). Scalability in this form includes identifying technical ways to drive change, obtaining resources to procure essential inputs, and managing the tasks to convert inputs into results.

*Alignment***:** The policy alternatives recommended must be relevant to the philosophy and the operational processes of the organization. Asante Africa's service model leverages the involvement of local volunteers in communities to facilitate change. Therefore, it is essential to determine if the alternatives are actionable without additional staffing costs. If the option requires a shift in the organization's philosophy or core operational methodology, it might lead to complications that present new challenges and increased expenses.

*Equitable***:** Disparities in income levels and gender-based discrimination are predominant in the marginalized communities that Asante Africa serves. Interventions proposed by organizations for development in these contexts tend inadvertently to accentuate existing disparities. Therefore, it is essential to view the policy alternatives through the lens of equity, catering to all students' contexts in a way that maximizes benefits.

Cost-Effectiveness: Cost-effectiveness refers to the maximization of output for a given input cost. Asante Africa Foundation is a non-governmental organization that functions through fund-raising and philanthropy. In this context, it is important to view every policy intervention through the lens of cost-effectiveness, considering that any additional costs will involve new funding efforts. Checking for a "low cost – high impact" intervention might be appropriate for the context among the options present.

Policy Alternatives

Our research led to three policy recommendations for Asante Africa to address educational continuity challenges and enhance student learning opportunities. These three policy recommendations represent an integrated model of two or more interventions that provide practical solutions to the students' challenges.

Policy Option 1. **Distribute Additional RACHEL Devices and Implement An Accelerated Curriculum**

Procurement of RACHEL (Remote Area Community Hotspot for Education and Learning) devices pre-loaded with educational software can address the challenges presented by learning discontinuity. Since Asante Africa already uses them in a pilot program, integrating them in the learning pod model would be feasible. However, access to technology alone does not close learning gaps. When the devices are loaded with concepts based on the accelerated learning curriculum and with guidance from teachers, the intervention can ensure that students learn the fundamental concepts relevant to their age and grade level within a short period of time. However, teachers will need professional development for implementation.

Beyond the rollout of RACHEL devices, Asante Africa must help schools conduct a baseline assessment to understand student academic needs at the macro-level. The NGO should also implement an accelerated curriculum for all students. The intervention is highly relevant because it aligns with the government's curriculum and contributes to student learning outcomes. The policy alternative is also highly scalable because it involves a series of scalable actions like increasing the use of RACHEL devices and integrating them into the learning pod model.

When it comes to alignment and sustainability , the intervention can receive a high rank because it builds on the existing pilots and requires minimal skill-building for volunteers and teachers. The NGO could easily integrate the policy into this model, thus expanding cohesion within existing operational structures. Leveraging devices in learning pods is sustainable for learning access, considering the high volatility and uncertainty that has resulted from the pandemic. Post the pandemic, schools and learning communities can continue to use the devices as well.

However, each RACHEL device is 500 USD. Procuring devices at scale can be expensive. The cost-per student comes up to 12.5 USD. However, RACHEL devices can be effectively utilized if students have smartphones or tablets of their own. In the absence of this there would be an increase of additional 46 USD per-student to procure a smartphone. Hence this model becomes a "high cost – high impact" model when it comes to the criteria of cost-effectiveness. This intervention is not equitable because it is fair to assume that many students may not have access to electronic devices, which further widens the gap in access education.

Policy Option 2. **Partnership for Social-Emotional Learning and Food Security**

In light of new developments associated with the pandemic and the need for a highly effective emergency response, Asante Africa could collaborate with schools and the communities it serves to build a durable partnership as a viable policy response. The goal of this partnership is to provide all students with social emotional learning (SEL) at this critical time and to address the issue of food insecurity. There would be no cost or low cost associated with social emotional support depending on the strategies employed by volunteers.

To encourage student enrollment and help families alleviate food insecurity, the three could develop a program that allows students to learn how to grow their own food. Establishing a farm to school program would allow Asante Africa to implement an emergency education response that is both participatory and student/community-centered. The NGO could provide training to community volunteers in agricultural science, nutrition, farming techniques, and home-related subjects. These practices are aligned with our belief that any emergency education response must be culturally sustaining.

In the School-to-Home emergency education response model, schools provide a space where students can experiment with farming and create an edible garden. The students, school, and community would have a stake in the project, thus increasing the possibility to sustain the program after the pandemic. One assumption this policy makes is that a school-to-home program would be welcomed by schools and communities. We also assume that students would have an

interest in the topics associated with farm science. A high level of interest in this field of study could lead to a substantial increase in student re-enrollment.

This option allows students to participate in authentic opportunities to learn and mitigates a real-world problem faced by marginalized communities. Low-cost farming equipment such as a mini-tractor and irrigation tools would make this possible. An estimated investment of $5,000 per school is necessary for the implementation of a farm-to-school program. Approximately 3,000 students participate in the 30 schools AA programs support in rural Kenya. Therefore, the annualized cost per student is $50. However, this cost would decrease based on total student enrollment per school since the policy options presented in this paper are designed to impact all students at all school sites that AA supports.

The Policy Alternative Matrix developed for this project indicates this is a high cost / high impact option. It ranks high in terms of cost because of start-up needs and high in terms of impact because students, schools, and communities will benefit from the emergency response. It is worth noting that many areas where AA works are impacted by severe, extended droughts in rural Kenya. As a result, there is concern regarding equity because the option is not feasible for many schools.

The response is aligned to Asante Africa's service model which is to leverage the involvement of local volunteers in communities to facilitate change. It is also scalable and places student needs and professional/communal training at the center of Asante Africa's work. Schools in some rural areas in Kenya reopened in November, therefore AA could begin to partner with schools and communities. In light of COVID 19, this option is viable in part because all activities can occur outdoors.

Policy Option 3. **Establish Community Workshops and Teacher Professional Development**

Our third integrated option begins with a multi-level intervention in the form of community workshops that would collaboratively identify and define barriers to re-enrollment.

Baseline testing would also occur before the start of the term to assess students for academic competencies (as they relate to literacy and numeracy). The findings from both efforts would inform relevant teacher professional development. They would also guide the design of alternative models of educational continuity and support/accountability structures. The design of training and models would all be co-developed with the technical support of Asante Africa.

A digital monitoring system would sustain this intervention to monitor student well-being and academic progress and rapidly adapt practices based on evaluations. It is important to note that this intervention is built on the assumption that a multi-level workshop with extensive participation is achievable, given the public fears and government regulations concerning gatherings. We also assume that the idea of alternative models of education will have ideological and programmatic support of school staff.

This option is scalable and well-aligned because it builds on the institutional strengths of Asante Africa to help students develop competencies and transferable skills. It can be scaled vertically as a school policy and, consequently, horizontally to reach parents, students, and teachers across rural Kenya. Equity is core to the multilevel workshop to ensure all students, regardless of barriers, are part of the design process for the rest of the school year. This policy is also highly relevant because it features a student-centered approach to learning and engages various stakeholders in discussions about the barriers facing students who want to re-enroll in school and how best to address their learning loss.

This approach is low cost (coming 2.28 USD per student approximately). However, Asante Africa would need to determine the likelihood that digital monitoring is executable, given that each school would need a device to record data and access a network to make it shareable. While self-directed learning is not an essential component of this policy option by design, a core facet is to implement a sustainable response with local autonomy built into a standardized process for implementation.

Comparison of the Policy Alternatives

The three policy alternatives explored in the previous section address educational access and continuity challenges through core levers (see Table 2 in the Appendix). Option 1 suggests that Asante Africa use technology devices in its existing learning pod model. Although this solution meets the selection criteria, the costs involved are high. Moreover, costs to insure these devices in case of damage or theft would add to expenses. Option 1 is relevant only when students have access to devices like smartphones, tablets or computers. Considering our context, this is implausible. For these reasons, Option 1 is not an equitable solution. This is important because the core work at Asante Africa is to ensure equitable opportunities for underserved communities. However, the policy is worth exploring with funding agencies that provide technical support.

The second policy alternative suggests that Asante Africa partner with local schools and communities to support student wellbeing. Considering the barriers to educational access that COVID-19 has compounded, social-emotional learning has grown in importance. Leveraging a partnership with communities and schools could lead to an increase in student wellbeing both at home and school. The other two policy alternatives do not address this concern directly. Option 2 also presents farm-to-school programming as a strategic, scalable emergency education response.

The literature reviewed by the team highlights the effectiveness of such an intervention to increase education levels and skill development. However, the policy suggests that Asante Africa create a new project. Additionally, the NGO, community, and local schools would need to agree on a garden location and farming area. The response is not feasible due to extended periods of severe drought in many areas. There are logistical concerns and the recruitment of volunteers to consider as well. Although Option 2 reflects several promising practices and meets most criteria, equity issues and possible staffing requirements make it an untenable emergency response for Asante Africa.

Option 3 proposes community workshops, teacher professional development, and progress monitoring as an emergency education response. In comparison to the other two alternatives, Option 3 would involve fewer expenses. The device needed for schools to monitor student data might require a procurement cost. However, the device's cost is considerably less than the price for start-up gardening tools and/or farm equipment or devices for all students. The

policy also aligns with the operational philosophy of Asante Africa because it involves adding the layer of data collection and data-informed decision-making for professional development.

However, this policy alternative may not have the same impact as an accelerated education program or a partnership to care for students' social-emotional well-being. This is important because Asante Africa aims to support the whole child through its continuity of learning response. Therefore, we propose an integrated policy alternative. An integrated approach would entail baseline testing and progress monitoring, coupled with school and community-based workshops. An integrated policy would involve training teachers, students, and parents to leverage an accelerated holistic curriculum designed for the local context. The move would address the need to support student well-being and address learning gaps created by the limited access to education during the quarantine.

Trade-Offs

Each policy alternative is designed to result in the continuity of learning during and after the pandemic. We selected Option 3 as our primary response mechanism and incorporated the curricular aspects from the two other policy options due to their high relevance to student outcomes. In this section, the trade-offs associated with the decision to recommend an integrated approach are presented.

There are two core trade-offs associated with Option 3 because the direct outcomes are adult-centered. For instance, the investment of time and resources in data collection, professional development, and parent engagement links indirectly to student outcomes. However, the edible garden and farm-to-school response presented in Option 2 reflects a student-centered approach that strategically addresses household food insecurity in the community and offers an indirect form of cash transfer in the form of food assistance.

Even with changes in teaching practices and school support structures, the trade-off here is that families may prioritize income-generating opportunities that involve their children over re-enrolment in school because food and financial insecurity are a pervasive problem. However, community workshops have the potential to address this trade-off because families and Asante Africa have the opportunity to collaboratively explore solutions to barriers that deter school re-

enrollment. Ultimately this gives autonomy to schools to address the unique and varied needs of local families appropriately.

The second trade-off involves Option 1 and has implications for Option 3. The decision not to invest in RACHEL devices and increase digital literacy could impact the feasibility of employing e-monitoring and evaluation mechanisms proposed in Option 3. We address this concern in the final section of this paper. Considering that tablets are available at approximately 4500 Kenyan Shillings (40 USD), procuring a tablet for 30 schools could cost up to 135,000 Kenyan Shillings (1232 USD). In addition to these costs, additional fees for maintenance and insurance of devices are also necessary. However, the total expense is potentially less than the costs associated with procuring essential gardening tools and farm equipment per school site.

Increasing teacher capacity to deliver instruction can improve student outcomes both in the short-term and the long-term. Similarly, improving parent training to create safe-spaces for children can also have significant long-term benefits. The two other policy alternatives discussed do not work to balance both the long-term and short-term gains. For instance, procuring farm equipment or RACHEL devices may not be justifiable expenses during a period of economic recovery. Our final policy recommendation is based on an investment in institutional practices and increasing a volunteer's capacity to make a lasting impact on education in rural Kenya beyond COVID-19.

Next Steps for Implementation

Asante Africa will need to leverage the existing educator network, modify training materials, assess physical implementation conditions, and conduct a needs assessment for data collection, monitoring and evaluation as their immediate next steps.

The educator network across rural Kenyan schools needs to be informed about the emergency education response timeline. Also, stakeholders need to know the range of activities, teachers' roles, and how they are connected to the research team's teaching, learning, and enrollment goals. Implementors should primarily consult and modify the preliminary logical framework developed by the research team (see Figure 2 in the Appendix). Asante Africa should include additional assumptions to enhance the activities incorporated to reach the defined

objectives and goals. This is particularly important because the NGO works in a range of geographic and cultural contexts.

Educators must also collaborate with Asante Africa staff to modify existing training and facilitation materials from the Accelerated Learning in the Classroom and Wezesha Vijana programs to utilize them in multi-level workshops with school leaders, teachers, families, and community members, and subsequent teacher professional development.

For in-person training and workshops, we encourage Asante Africa to determine the best format and location with each local partner to ensure these are conducted according to the Ministry of Health's health and safety standards. This may increase participants' confidence and maximize attendance; this is especially necessary given the amount of holiday travel that will occur just before the reopening of schools. For instance, if the goal is to reach 150 parents through a community workshop in one locality, at least eight sessions could be held on certain days of the week, at certain times, and in suitable locations to prevent transmission of COVID-19. Moreover, accurate contact information for students and families should be a priority for schools to build stronger ties between home and school.

The needs assessment will identify the technical capacities each school has to operationalize an effective baseline test fully and fully monitor academic progress. In particular, Asante Africa must determine if there is at least one device to input and evaluate data at each partner school. The NGO should evaluate how the current digital investment made (e.g., previous purchasing of devices) can be leveraged to cover a large geographic area through sequenced usage. This will depend on the organization's goals. Moreover, with a digital approach, Asante Africa must identify appropriate providers that can provide software that can be utilized for baseline testing. The research team can aid Asante Africa in identifying providers.

Conclusion

The pandemic has widened the existing gaps in educational equity and created numerous challenges experienced by students in Kenya's underserved rural communities. While people in these marginalized areas face multiple problems and obstacles, we intend to promote policies that identify these individuals, children to adults, as change agents in their communities. We

hope our policy recommendation is flexible and durable enough to make incremental changes to attitudes and practices in this context. Such changes will offer solutions that work despite the barriers young people face to access and continue their education. Lastly, we hope this policy will lead to better partnerships and collaborative programs between the Asante Africa Foundation and the communities they serve.
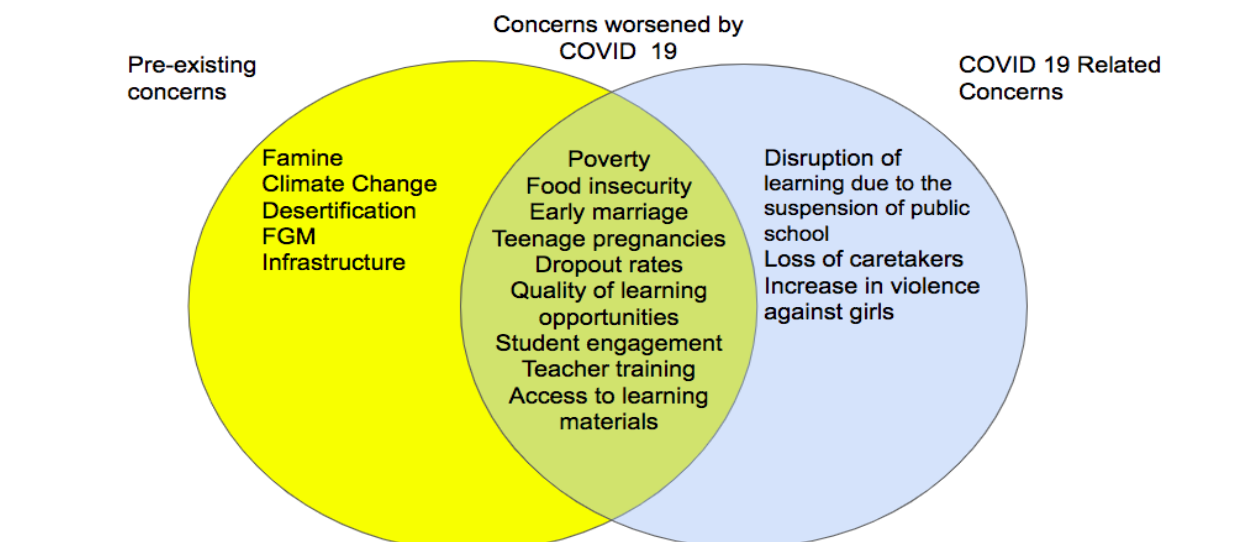
Appendix I

Table 1

Kenyan Revised School Calendar				
	Grade/Class/Form	**Opening**	**Closing**	**Duration**
Term 2	Grade 4/Class 8/ Form 4	12/10/2020	23/12/2020	11 Weeks
Holiday	Grade 4/Class 8/ Form 4	24/12/2020	01/01/2021	1 Week
Term 2	Grades 1-3, Classes 5-7 Form 1, 2, and 3	04/01/2021	19/03/2021	11 Weeks
Holiday	Grades 1-3, Classes 5-7 Form 1, 2, and 3	20/03/2021	09/05/2021	7 weeks
Term 3	Grades 1-3, Classes 5-7 Form 1, 2, and 3	10/05/2021	16/07/2021	10 weeks
Term 3	Grade 4, Class 8, Form 4	04/01/2020	19/03/2021	11 Weeks
KCSE	Form 4	25/03/2021	16/04/2021	3 Weeks 2 Days
Exam Marking	KCSE	19/04/2021	07/05/2021	3 Weeks

asanteafrica.org

Policy Analysis Paper

Table 2 - Policy Alternative Matrix

Criteria	Parameters	Policy Alternative 1: *Distribution of Additional RACHEL devices and Implementing An Accelerated Curriculum*	Policy Alternative 2: *Partnership for Social-Emotional Learning and Food Security*	Policy Alternative 3: *Community Workshops and Teacher Professional Development*
Alignment	1 to 5 *(On the scale of 1 being the least aligned and 5 being most aligned)*	4	3	3
Cost-Effectiveness	*High Cost - Low Impact (1)* *Low Cost - Low impact (2)* *High Cost - High Impact (3)* *Low cost - High impact (4)*	3	3	4
Equity	*equitable/not equitable (1/0)*	0	1	1
Scalability	1 to 5 *(On the scale of 1 being the least scalable and 5 being most scalable)*	4	2	3

Figure 1.1

Circles of Concern

Pre-existing concerns

Concerns worsened by COVID 19

COVID 19 Related Concerns

Famine
Climate Change
Desertification
FGM
Infrastructure

Poverty
Food insecurity
Early marriage
Teenage pregnancies
Dropout rates
Quality of learning opportunities
Student engagement
Teacher training
Access to learning materials

Disruption of learning due to the suspension of public school
Loss of caretakers
Increase in violence against girls

Figure 2 - Preliminary Logical Framework for Final Policy Recommendation of Community Workshops, Teacher Professional Development, and Data Monitoring

	Objective Statements	Indicators	Assumptions
Goal 1	Total re-enrollment and retention of students	% of re-enrolled students % of enrolled students who continue education beyond this academic year	All students have access to schools within the geographical location they are situated in Students have enough agency and independence to attend school
Objective 1.1	Effective participation of parents in school-based activities	% of parents participating in school based activities	Parents are invested in student progress Parents have the ability to attend school-based events
Results Area 1.1	Parents demonstrate interest and engagement in their students' learning and wellbeing	% of parents participating in school based activities % of parents reporting that they are engaging in student learning.	Parents are invested in student progress Parents have the ability to attend school-based events
Activity 1.1.1	Community workshops to define barriers to re-enrollment and identify context-specific solutions	% of parents attending the community workshops	Parents are invested in student progress Parents have the ability to attend school-based events Schools have instructional capacity to plan alternative class schedules
Activity 1.1.2	Teacher professional development on assessing the state of a student's academic progress, wellbeing, and communicating this to parents	Professional development opportunities for teachers executed	Teachers value parent input
Activity 1.1.3	Teacher-parent conferences on student progress, wellbeing, and home-based strategies for improvement	% of parents attending teacher-parent conferences	Parents are invested in student progress Parents have the ability to attend school-based event Parent-teacher conferences will lead

asanteafrica.org

Policy Analysis Paper

			to improvement in class and wellbeing
Activity 1.1.4	Utilizing an electronic monitoring system for attendance	# of schools using electronic monitoring systems	Schools have capacity to procure at least one device for monitoring and evaluation Teachers have previously been engaged with Asante Africa programming and have necessary digital literacy
Activity 1.1.5	Student and parent accountability mechanism through learning pods	% of parents and students participating in learning pods	Students will participate effectively in pods Learning pods will lead to increased student retention
Goal 2	Measurable increase of student competencies in literacy and numeracy from baseline testing and access to wellbeing support	# of students who perform above the baseline academic performance	School leaders and teachers believe in data-informed decision making Schools have access to baseline testing Schools have access to resources for wellbeing Teachers have adequate resources to deliver literacy and numeracy instruction Teachers and students value the presence of social emotional learning
Objective 2.1	Teachers are effectively prepared to continue the academic year and teach and support learners with appropriate materials and professional development	# of teachers supported by professional development # of students supported by participating teachers	Teachers have capacity to quickly implement learning from professional development School leaders and teachers have capacity to coach teachers in implementation of professional development
Results Area 2.1	Teachers demonstrate knowledge about learning loss, accelerated curriculum, social emotional learning and the impact on student academic performance	Demonstrated ability to apply knowledge in a classroom setting Measurable change in teaching and student support practices	Change in practices will lead to more engaged learners and increase competencies in literacy and numeracy

asanteafrica.org

Policy Analysis Paper

Activity 2.1.1	Teacher professional development about implementation strategies for managing learning loss, conducting baseline testing, and developing an accelerated curriculum	% of teachers implementing knowledge into classroom practices	Teachers have capacity to quickly implement learning from professional development School leaders and teachers have capacity to coach teachers in implementation of professional development
Activity 2.1.2	Teacher professional development on social emotional learning and classroom implications	% of students benefiting from social emotional learning	Teachers and students value the presence of social emotional learning Teachers have capacity to quickly implement learning from professional development School leaders and teachers have capacity to coach teachers in implementation of professional development
Activity 2.1.3	Development of an accelerated curriculum	Curriculum developed	There are existing resources and capabilities within the Asante Africa network (inclusive of all partners) that can co-develop an accelerated curriculum and social emotional learning guides There are existing open source materials that can be utilized by educators
Activity 2.1.4	Development of social emotional learning guides	Tool developed	There are existing resources and capabilities within the Asante Africa network (inclusive of all partners) that can co-develop an accelerated curriculum and social emotional learning guides There are existing open source materials that can be utilized by educators
Activity 2.1.5	Utilizing an electronic monitoring system for learning	Presence of tool Monitoring reports	Schools have capacity to procure at least one device for monitoring and evaluation

asanteafrica.org

Policy Analysis Paper

References

Accelerated Education Working Group. (2017a). *Accelerated Education: 10 principles for effective practice*. https://inee.org/system/files/resources/AEWG_Accelerated_ Education_10_Principles_ENG_screen.pdf

Accelerated Education Working Group. (2017b). *Guide to the Accelerated Education Principles*. https://www.eccnetwork.net/sites/default/files/media/file/AEWG%20Accelerated%20Education% 20Guide%20to%20the%20Principles-screen.pdf

Boisvert, K. (2017a). *Case Study Report: RET International Kenya*. University of Massachusetts Amherst. https://scholarworks.umass.edu/cgi/viewcontent.cgi?article =1001&context=cie_eccn

Boisvert, K. (2017b). *Case Study Report: Save the Children Sierra Leone*. University of Massachusetts Amherst. https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1002&context=cie_eccn

Burch, F., & Muro, P. (2007). *Education for rural people: A neglected key to food insecurity*. Research Gate. file:///Users/user/Downloads/Education_for_Rural_People_ A_Neglected_Key_To_Food.pdf

Bridge International Academies (2019). Learning Gains in Kenya. https://www.bridgeinternationalacademies.com/impact/kenya/

Carrillo, C., & Flores, M. A. (2020). COVID-19 and teacher education: A literature review of online teaching and learning practices. *European Journal of Teacher Education*, *43*(4), 466–487. https://doi.org/10.1080/02619768.2020.1821184

Coomar, S., & Rzyhov, I. (2013). A Short Case Study of the Impacts of the OLPC Project around the World. Zurich: Department of Informatics, University of Zurich. https://files.ifi.uzh.ch/hilty/t/examples/IuN/Case_Study_One_Laptop_per_Child_(OLP C)_Project_Coomar_Ryzhov.pdf

Educate a Child. (2016). *Accelerated Education Programming*. https://educateachild.org/sites/default/files/docs/2016//Accelerated%20Education%20Programming-Occasional%20Paper%201%20(f)%2024%20Feb%202016.pdf

Flemming, J. (2017). *Case Study Report: Norwegian Refugee Council, Dadaab, Kenya*. University of Massachusetts Amherst.

https://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1000&context=cie_eccn

Koval-Saifi, N., & Plass, J. (2018). Feed the Monster: Impact and Technical Evaluation. Washington, DC: World Vision and Foundation for Information Technology Education and Development.

Manda, S. (2011). *Evaluation of the Accelerated Learning Programme in Liberia*. Unicef. https://www.unicef.org/evaldatabase/files/4_Reports._ALP_Evaluation_Report._Final. pdf

Mathewson, T. (2020). *Self-directed learning' skills are key to making remote instruction work*. The Hechinger Report . https://hechingerreport.org/self-directed-learning-skills-are-key-to-making-remote-instr uction-work/

Mendenhall, M., Dryden-Peterson, S., Bartlett, L., Ndirangu, C., Imonje, R., Gakunga, D., Gichuhi, L., Nyagah, G., Okoth , U., & Tangelder, M. (2014). *Quality education for refugees in Kenya: Pedagogy in urban Nairobi and Kakumba refugee camp settings* (Vol. 1). Education in Emergencies INEE. http://s3.amazonaws.com/inee-assets/resources/JEiE.V1N1.Mendenhall.Education_fo Refugees_Kenya.Oct2015.pdf

Mendez, A., Ramesh, A., Bexter , P., & North, L. (2016). *Accelerated education programs in crisis and conflict: Building evidence and learning*. The Pearson Institute.

https://thepearsoninstitute.org/research/accelerated-education-programs-crisis-and-confl ict-building-evidence-and-learning

Muralidharan, K., Singh, A., & Ganimian, A. (2018). Disrupting Education? Experimental Evidence on Technology-Aided Instruction in India. Pittsburg: American Economic Review.

Population Pyramid: Kenya 2020. (n.d.). https://www.populationpyramid.net/kenya/2020/

Reimers, F. (2020). *Audacious education purposes: How governments transform the goals of education systems*. https://doi.org/10.1007/978-3-030-41882-3

Reimers, F. (2017). *Empowering all students at scale*.

Santos, R., & Novelli, M. (2017). *The effect of the ebola crisis on the education system's contribution to post-conflict sustainable peacebuilding in Liberia*. Unicef. https://educationanddevelopment.files.wordpress.com/2016/06/liberia-report_march201 7_lowres.pdf

Save the Children. (2010). *The Future is Now: Education for children in countries affected by conflict*. https://reliefweb.int/sites/reliefweb.int/files/resources/03F6E199D2EC8C38852577200 069E8B8-Full_Report.pdf

School of Professional Studies in Education, Faculty of Education, North-West University, South Africa, & du Toit-Brits, C. (2019). A focus on self-directed learning: The role that educators' expectations play in the enhancement of students' self-directedness. *South African Journal of Education*, *39*(2), 1–11. https://doi.org/10.15700/saje.v39n2a1645

Smith, A., Lovatt, M., & Wise, D. (2003). *Accelerated Learning: A user's guide*. Bloomsbury.

UNFPA. (2017). *Recovering from the Ebola Virus Disease: Rapid assessment of pregnant adolescent girls in Sierra Leone*. United Nations. https://sierraleone.unfpa.org/sites/default/files/pub-pdf/Rapid%20Assessment%20of%2 0Pregnant%20Adolescent%20Girls.pdf

UNICEF. (2020a). *Building back equal: Girls back to school guide*. https://www.unicef.org/media/75471/file/Building-back-equal-Girls-back-to-school-gui de-2020.pdf

Unicef. (2020b). *Education in a post-COVID world: Nine ideas for public action*. https://en.unesco.org/news/education-post-covid-world-nine-ideas-public-action

Unicef. (2020c). *Framework for reopening schools*. https://www.unicef.org/documents/framework-reopening-schools

Wambua, B., Omoke, K., & Mutua, T. (2014). *Effects of socio-economic factors on food security situation in Kenyan drylands ecosystem* (Vol. 2). Asian Journal of Agriculture and Food Science . file:///Users/user/Downloads/EffectsofSocio-EconomicFactorson FoodSecuritySituation.pdf

60 Million Girls Foundation. (2018). Mobile Learning Lab: Project Evaluation Report - Sierra Leone.