ACT-US

Existing Challenges to Education Facing Africa's Youth

One of the biggest challenges facing sub-Saharan Africa is ensuring equal and improved access to education for all children. Although the region has made positive strides towards ensuring universal primary school enrollment over the past few decades significant disparities still continue in secondary school and higher education. **In 2018, the secondary school enrollment rate across the globe was about sixty-six percent; however, the secondary school enrollment rate in sub-Saharan Africa was thirty-six percent.[1]** This inequality in access throughout sub-Saharan Africa presents a large challenge in ensuring the sustainable development of the region. Another challenge that is apparent throughout the region is that the expansion of enrollment has not necessarily led to improved educational outcomes for the school-aged population. **Globally, more than fifty-five percent of children and adolescents of primary and lower secondary school-age lacked minimum proficiency in reading and mathematics.[2]** This is largely driven by the poor educational outcomes realized in much of the developing world, specifically sub-Saharan Africa. In the sub-Saharan region, eighty-four percent of school-aged children lacked proficiency in mathematics, and eighty-eight percent lacked minimum proficiency levels in reading.[3] New solutions must be developed that not only target increased enrollment but also improving the quality of education.

[1] "Indicators." Data. World Bank Group, 2018. https://data.worldbank.org/indicator.
[2] "UN SDG Goal 4." United Nations. United Nations. Accessed April 1, 2021. https://unstats.un.org/sdgs/report/2019/goal-04/.
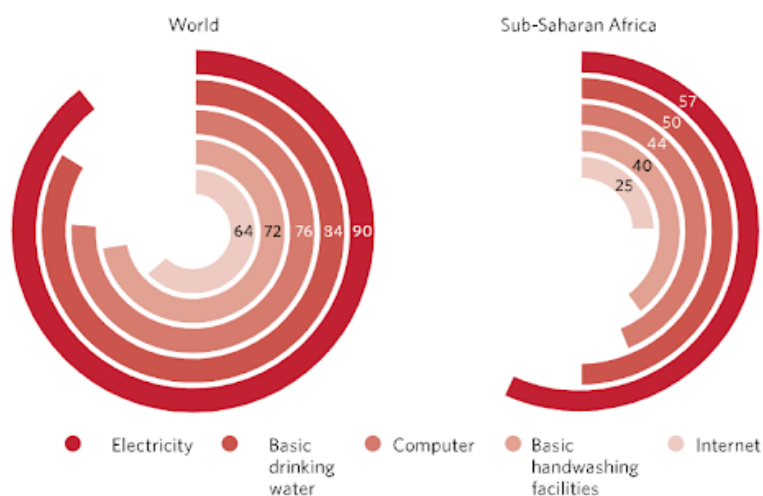[3] Ibid

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Perhaps the most affected group due to these gaps in education are girls and young women. **Ensuring gender equality throughout the region is one of the most important factors that will allow African economies and societies to sustainably develop.** Yet, significant inequalities persist between young girls' and boys' educational experiences. The importance of equality in education cannot be understated. **Each additional year of schooling in a woman's or girl's life can increase their earnings by ten to twenty percent.**[4] Nevertheless, women and girls continue to face challenges when seeking out an education. Worldwide, there are 132 million girls who are out of school. **Of the 132 million girls, 34.3 million are primary school-aged, 30 million are lower secondary school-aged, and 67.4 million are upper secondary school-aged.**[5] The majority of these girls and young women come from the developing world. This has significant negative impacts on sub-Saharan Africa's ability to develop and prosper.

Access to quality education is an important and necessary precursor to economic growth for the sub-Saharan region. Yet, as can be seen, when examining the disparities that continue to exist throughout the region, existing policy recommendations have had difficulty in ensuring equal access to quality education. As the global economy continues to become more interconnected through the use of technology, sub-Saharan Africa's youth will face even greater challenges and inequality. **Across sub-Saharan Africa, only about 43% of the population have access to the internet.**[6] **As depicted in the figure, these numbers extend to the classroom, with only a quarter of schools in the region having internet access.** This has led the region to be unable to produce an adequate number of professionals within the technology sector causing development to slow. New solutions that focus on the introduction of information and communications technology in the class-room are desperately needed. Without these new and innovative approaches, UNICEF estimates that up to ninety percent of sub-Saharan Africa's youth will grow up to live in poverty.[7] **Introducing ICT education as a solution to the growing inequalities in the education system also has the ability to address a growing concern for Africa, a lack of qualified teachers.** It is estimated that countries will have to recruit about sixty-nine million teachers by 2030 if they hope to provide every child with an education.[8] The majority of this need will be concentrated within the developing world, as many countries' populations continue to rapidly grow. In particular, sub-Saharan Africa faces the greatest teacher shortage, accounting for two-thirds of the new teachers needed by 2030.[9] This represents a shortage of almost fifty million teachers throughout the region, which will continue to exacerbate the inequalities faced by youth in the region. The introduction of ICT learning throughout the region will help to reduce the need for such an extreme increase in the number of educators, preventing sub-Saharan Africa's youth from falling further behind.

Proportion of schools with access to basic school resources globally and in sub-Saharan Africa, upper-secondary, 2017 (percentage)

World

Sub-Saharan Africa

64 72 76 84 90

57 50 44 40 25

● Electricity ● Basic drinking water ● Computer ● Basic handwashing facilities ● Internet

[4] Psacharopoulos , G., & Patrinos, H. A. (2002, September). Returns to Investment in Education: A Further Update (Policy Research Working Paper; No. 2881.). World Bank.
[5] UNESCO Institute for Statistics. (2018, February). One in Five Children, Adolescents and Youth is Out of School (Fact Sheet No. 48). http://uis.unesco.org/sites/default/files/documents/fs48-one-five-children-adolescents-youth-out-school-2018-en.pdf

[6] "Africa Internet Users, 2021 Population and Facebook Statistics." Internet World Stats. Accessed April 1, 2021. https://www.internetworldstats.com/stats1.htm.
[7] Poverty, ILliteracy and Early Deaths Await World's Most Disadvantaged Children: UNICEF. (2016, June 28). UNICEF. https://www.unicef.org/rosa/press-releases/poverty-illiteracy-and-early-deaths-await-worlds-most-disadvantaged-children-unicef
[8] UNESCO Institute for Statistics. (2016b). THE WORLD NEEDS ALMOST 69 MILLION NEW TEACHERS TO REACH THE 2030 EDUCATION GOALS (UIS Fact Sheet 39). UNESCO. http://uis.unesco.org/sites/default/files/documents/fs39-the-world-needs-almost-69-million-new-teachers-to-reach-the-2030-education-goals-2016-en.pdf
[9] Quality Education Needs Qualified Teachers. (2014, October 7). UNESCO. https://en.unesco.org/news/quality-education-needs-qualified-teachers.

Two particular countries that face significant challenges in ensuring access to quality education in sub-Saharan Africa are **Tanzania and Uganda. In Tanzania, there are over 1.4 million children out of school.**[10] Although we have seen significant progress in primary enrollment throughout the country, **only around thirty percent of Tanzanian youth continue on to secondary school.**[11] This is driven largely by the increasing lack of qualified teachers and quality learning materials that characterizes the education system throughout sub-Saharan Africa. **Increasing the role of ICTs in education could help to fill this gap and address this shortage of qualified teachers and materials.** However, in Tanzania, only about thirty-seven percent of the population has access to the internet.[12] Similar disparities exist throughout Uganda as well. In Uganda, only about thirty-nine percent of the population has access to the internet.[13] Thus, innovative solutions that are able to address not only the need for ICTs in education but the low internet connectivity rates are needed.

Embrace Relief's Solution

To address the growing inequalities in the education systems in Tanzania and Uganda, **Embrace Relief has introduced the Accessible Computer Technology for Underserved Students (ACT-US) program. Our program will provide students in the region with improved educational opportunities and better life outcomes.** In partnership with the African Union, Embrace Relief has delivered **324 ICT devices equipped with Endless OS technology to local K-12 schools in Tanzania and Uganda as part of the ACT-US Project.** The devices, produced by Endless Solutions, are designed to provide technological access and educational

resources to students with limited to no access to the internet. **ACT-US has provided 156 computers with Endless OS to local K-12 schools in Uganda and 168 computers with Endless OS to local K-12 schools in Tanzania.** In order to achieve the intended outcomes of the program, we have enlisted the support of organizations in both Uganda and Tanzania who will help us provide oversight for the program. **In Uganda, we have partnered with the Nile Humanitarian Development Agency, a Kampala-based NGO that will help us distribute the computers to schools in the Wakiso District of Uganda. In Tanzania, we have partnered with Feza Schools and the Time to Help Foundation Tanzania to distribute the 168 computers to local K-12 schools.**

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[10] "United Republic of Tanzania." UNESCO UIS, April 12, 2017. http://uis.unesco.org/en/country/tz.
[11] Ibid
[12] "Africa Internet Users, 2021 Population and Facebook Statistics." Internet World Stats. Accessed April 1, 2021. https://www.internetworldstats.com/stats1.htm.
[13] "Africa Internet Users, 2021 Population and Facebook Statistics." Internet World Stats. Accessed April 1, 2021. https://www.internetworldstats.com/stats1.htm.
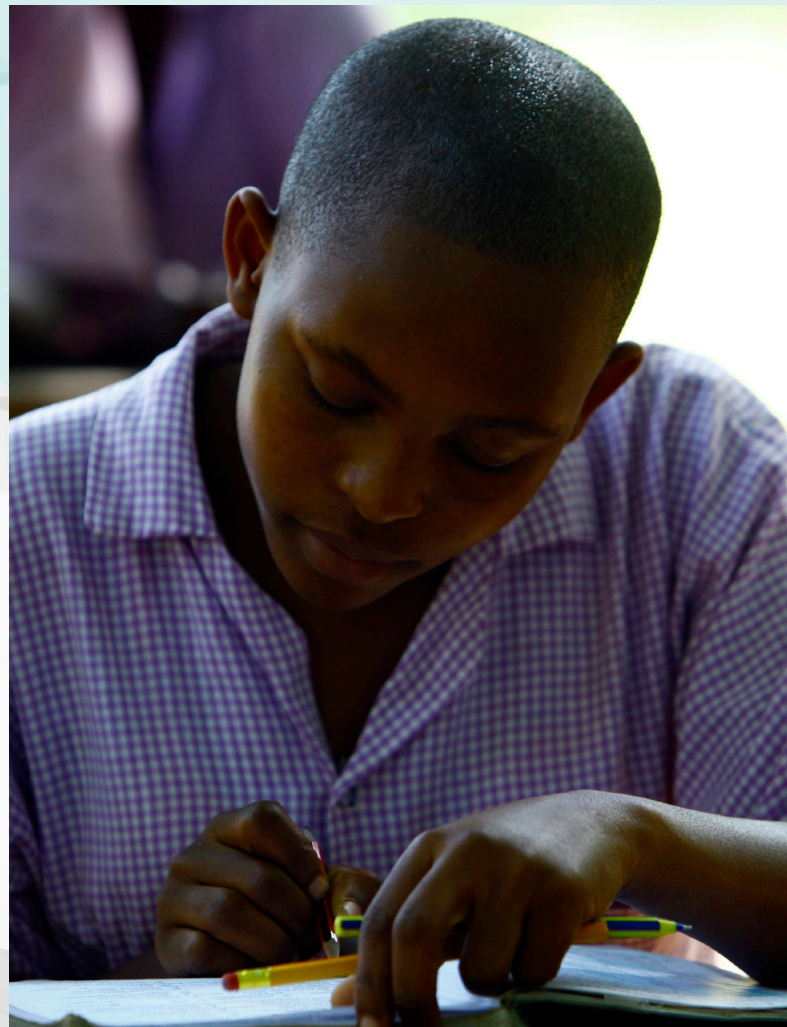
The computers come pre-installed with applications aimed at teaching general school subjects such as science, math, and reading, as well as life skills development including health, farming, and sanitation, among others. The operating system is also equipped with training for ICT skills, such as typing and coding education, making it a valuable resource that will enable previously underserved youth with the ability to successfully transition to an increasingly technology-dependent world. Without the need for internet access, students who would otherwise lack the opportunity to gain technical knowledge will be able to learn these important skills. **These computers are also able to be updated remotely by Endless Solutions, providing a cost-effective solution to the lack of internet access.** In addition to providing essential educational resources, ACT-US seeks to contribute to countries in Africa's economic development and increase their potential workforce in the long-term. Considering the correlation between economic progress and education, Embrace Relief fully recognizes the significance of improving educational outcomes for youth populations.

Embrace Relief has the support of the Ministry of Education and Sports and the Ministry of Information and Communications Technology (ICT) and National Guidance in Uganda. Both Ministries will provide strategic guidance for the ACT-US Program in Uganda. Due to their familiarity with the local region, the Ministry of Education and Sports has selected the schools that will benefit from the program in Uganda. In Tanzania, Embrace Relief will work with the Ministry of Education, Science, and Technology. This partnership will provide Embrace Relief and our local partners with the necessary support and guidance for the program. ACT-US will provide students hands-on training with computers in a region that has very limited access to internet services. With this training, students will be positioned to contribute an increasingly valuable set of skills to the economies of Uganda and Tanzania.

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