



## The Impact of Innovation on Youth, Employment and Skills

By Rianna Owusu

### Summary

Now more than ever, African governments need to build and strengthen the skills and employment opportunities of the continent's youth population, which is the largest in the world. Most governments temporarily closed educational institutions in 2020 to contain the spread of COVID-19. For many, the closures extended into 2021. According to the United Nations Educational, Scientific and Cultural Organization, these shutdowns impacted more than 80% of the world's student population across 138 countries. They also placed unprecedented challenges on policymakers, teachers, students, caregivers and parents to ensure continued learning. Governments are increasingly working towards policies that can support education continuity through distance learning. However, concerns around equity of access to digital tools remain.

### Thematic context

The 4<sup>th</sup> Industrial Revolution and the technological advancements that accompany it generally provide the world with greater opportunities. During the COVID-19 pandemic and accompanying school closures, for example, many countries utilized digital tools and technology to continue student learning from a distance—holding classes via online meeting platforms or broadcasting core subject lessons on television and radio. The need for individuals, groups and companies to adjust to the limitations brought about by COVID-19 has accelerated the need for people to be competent and skillful in the use of technology. Having such skills allows people to quickly adapt and produce new and innovative ways of doing business. By 2030, approximately 230 million jobs in Sub-Saharan Africa are projected to require digital skills. In Kenya, for example, this projection translates into 50-55% of jobs; in countries such as Côte d'Ivoire, Nigeria and Rwanda, it translates into 35-45%.<sup>1</sup>

However, Sub-Saharan African countries suffer from weak physical and digital infrastructure and major connectivity and access issues. To compound this problem, digital literacy is low in Africa—only 50% of African countries include computer skills as part of their school curriculum.<sup>2</sup> At the same time, the shift to distance learning during the COVID-19 crisis has highlighted the high levels of inequality that persist in societies. As distance learning generally relies on access to devices such as smartphones and laptops, as well as access to the internet and a level of foundational digital literacy, those who are well off are able to continue their studies while their poorer counterparts may not have the same opportunities.

### Innovation's contribution

The pandemic has intensified the need for Africa to significantly improve its digital connectivity and to use technological innovation to protect jobs and preserve continuity of education for young

people. Within the field of education, African countries have been attempting to integrate more flexible approaches to the delivery of education at scale.<sup>3</sup>

Several universities, in countries including Egypt, Ghana, South Africa, and Rwanda, have partnered with telecommunications providers to ensure free data for certain e-learning platforms and online facilities. Similar zero rated data programs have been initiated across Africa, including for primary and secondary school resources.<sup>4</sup> Some data access enhancement efforts are the result of government partnerships, like in South Africa where the Eastern Cape Education Department worked with MTN Business to distribute 72,000 SIM cards preloaded with mobile data to learners. These initiatives help improve access to financially constrained students, although those with limited internet access due to weak network coverage are still at risk of being left behind.

At the primary level, a number of even more widely accessible SMS and USSD-based solutions have emerged,<sup>5</sup> such as M-Shule – meaning “mobile school” in Kiswahili – an adaptive learning platform available to primary school learners in East Africa. Artificial intelligence is used to help provide individually tailored feedback and personalized lessons that are delivered entirely by SMS.<sup>6</sup> WhatsApp groups that facilitate interaction between students, parents, and teachers have been promoted in schools in Uganda, demonstrating another example of an easily replicable, mobile-based, and low-tech learning solution.

With innovation fueling the rise of new educational approaches around the world, African countries have an opportunity to more thoroughly integrate technology into education delivery in non-classroom settings. It is said that “necessity is the mother of all invention” and any past systemic resistance to change within African school systems might be easier to overcome in a post-COVID-19 context. Additionally, greater importance attached to certain foundational skills in science, technology, engineering and math (STEM) and information technology (IT) can help students adapt more easily to new ways of learning and foster digital innovation at an earlier age.

Transitioning to more technologically driven education systems will require significant co-investment by governments and the private sector to improve access to digital resources to the economically and socially vulnerable in both urban and rural areas. If executed effectively, this might also help Africa leapfrog the “access” issue that has continued to affect school enrolment.

## Recommendations

- Governments need to reassess curricula and pedagogy to identify areas that will benefit from a streamlined approach to delivery, in line with the changing nature of work. The use of accelerated learning paths and the combination of a cognitive and soft skills approach towards learning can help mitigate the impact of schooling disruptions and address issues around equity.
- Key stakeholders such as teachers, administrators and parents need to be trained and socialized through technical and behavioral change interventions to navigate a shift in education delivery. Specifically, educators ought to be quickly trained in the use of technology and innovative teaching methods to better enable them to provide individualized attention, psycho-social support and personal feedback—and in turn teach basic technological skills to their students. This endeavor should continue post-pandemic to help teachers use technology to make their classrooms engaging and interactive, while also helping them plan for any future disruptions.
- Governments must ensure their educational development plans have dedicated funding for integrating technology into learning. Significant investments in the short and medium term will be critical to training teachers and providing them with basic IT tools in the classroom.

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## About the Series

Policy experts and researchers from the [African Center for Economic Transformation \(ACET\)](#) and the [Development and Economic Growth Research Programme \(DEGRP\)](#), in partnership with [ODI](#), explore the critical role of innovation in Africa's recovery from COVID-19. Essays identify areas in which innovation can contribute to effective responses and offer high-level policy recommendations.

## Endnotes

1. Alejandro Caballero and Sajitha Bashir, "[Africa needs digital skills across the economy—not just the tech sector](#)" (World Economic Forum, 2020).
2. Salah-Eddine Kandri, "[Africa's future is bright-and digital](#)" (World Bank, 2019).
3. Kimberley Kerr and Mallory Baxter, "[The Impact of COVID-19 on Secondary Education in Africa—Amplifying Challenges and Opening New Opportunities](#)" (Mastercard Foundation – Africa, 2020). Published by AllAfrica.com.
4. Kinda Chebib, "[Education For All in the Time of COVID-19: How EdTech can be Part of the Solution](#)" (GSMA, 2020).
5. USSD refers to unstructured supplementary service data, a mobile communications protocol that helps facilitate network connections, often but not exclusively used to enable financial services on phones.
6. Chebib, 2020.

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