Box 19.8: Digital learning being mainstreamed in Kenyan schools

Since its inception in 2016, the government’s Digital Literacy Programme has set out to generalize the use of digital technology and other communication tools in primary and secondary education.

The first phase focused on improving digital infrastructure, developing digital content, training teachers and procuring digital devices.

The second phase commenced in July 2019 with a focus on ‘using to learn’. The aim is to use technology to enhance pupils’ creativity and capacity to innovate. During this phase, a Shared Digital Learning Resource Centre will be set up in schools.

The theme of the third phase is ‘using to produce’. Here, the objective is to start making use of technology to create jobs and mentor learners to prepare them for university. During this phase, advanced laboratories will be set up within schools to enable pupils to design their own prototypes.

Source: compiled by authors; see: https://tinyurl.com/edu-kenya

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A roadmap for sustainable development
In 2018, Rwanda began implementing its fourth medium-term strategy, the National Strategy for Transformation (2017–2024), which bridges the last stages of Vision 2020 (2000) and the start of Vision 2050, Rwanda’s roadmap for becoming a high-income knowledge economy. All five areas outlined in Vision 2050 embrace ICTs and advanced technological innovation.

Vision 2050 accommodates global commitments such as the SDGs, the EAC’s own Vision 2050 and the African Union’s Agenda 2063.

The government approved a roadmap for implementing the SDGs in December 2015. The National Institute of Statistics has since launched an online portal grouping the latest data available for relevant indicators.

Rwanda is applying natural capital accounting to inform the planning process by considering the important contribution made by natural resources to the economy, in keeping with its endorsement of the Gaborone Declaration in 2012 (Rep. Rwanda, 2019; Urama et al., 2015).

The National Risk Atlas of Rwanda (2015) has assessed the five hazards to which Rwanda is most exposed, namely droughts, floods, landslides, earthquakes and windstorms, to inform disaster risk reduction strategies (Rep. Rwanda, 2019).

The National Climate and Environment Fund (FONERWA, est. 2012) was formally established by law in August 2017. It has financed projects that include zero-carbon, affordable housing, power generation using rice husks and the establishment of a modern e-waste recycling facility (see photo, p. 78), implemented in partnership with the Ministry of Trade and Industry (Rep. Rwanda, 2019).

When it comes to scientific publishing, it is health sciences that dominate output (58%). Just 7% of publications focus on environmental sciences. Of the 56 SDG-related research topics analysed by UNESCO, Rwandan scientists produced the greatest number of publications (92) on HIV research between 2012 and 2019.

every constituency will start with one innovation hub and eventually increase these to four. Each hub will introduce young people to online work and provide them with the necessary tools, training and mentorship to enable them to work and earn a decent income. The hubs will each be equipped with 40 tablets, for use by those who do not have their own devices. The National Government Constituency Development Fund Board will finance each hub (Mukara, 2018).

The lower cost of broadband and faster connectivity speeds have spawned a competitive public–private partnership involving the state-owned National Optic Fibre Backbone Infrastructure and privately owned terrestrial fibre network operators (Ndema and Weiss, 2017). This has resulted in a growing number of new ventures applying high-tech solutions to real problems across a wide range of sectors, including digital finance (fi tech), agriculture, energy (Boxes 19.1 and 19.7) and education (Box 19.8).

Digital loans surpass traditional loans
The revolution in digital finance, including the advent of mobile money, has been unprecedented. Kenya is one of the most mature digital credit markets in developing economies, where the volume of digital loans surpassed traditional loans in 2015 (MicroSave Consulting, 2019).

Market-enabling digital platforms are emerging in Kenya, as evidenced by the growing number of successful tech-based start-ups. With 70, Kenya has, by far, the most tech hubs in Central and East Africa (see Figure 20.2). These start-ups have made it easier for buyers and sellers to do business (Douiliard, 2017).

Kenya’s first graduate school in information technology
Kenya’s first graduate school in information technology, the Kenya Advanced Institute of Science and Technology, will be accommodated by Konza Technology City (Urama et al., 2015), which is still under development.

The graduate school has been modelled on the Korean Advanced Institute of Science and Technology. The Korean government is expected to contribute KES 10 billion (ca US$ 90 million) towards establishing the graduate school, which is set to admit its first intake of masters and PhD students in 2021. They will be enrolled in three faculties: Mechanical, Electrical and ICT Engineering; Chemical, Civil and Agriculture Engineering and Biotechnology; and Basic Science.