The Concept of Emerging Technological Solutions as Vocational Skills: A Review

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While taking lunch at Hutong, Beijing, China, in September 2014 Paul Kipchumba asked why Africans were not working as much as the Chinese. Xiao Qijia replied that it could have been because of the nature of education in Africa's schools. Since then we have had a conversation on the necessity of having an educational model based on local conditions and future needs.

Then we would take issue with traditional technical and vocational courses offered in most developing economies, especially in Africa, that they needed to incorporate a strong technological component and, where possible, to apply technologies to teach application of technologies, whether home-grown or foreign technologies.

We nearly came to a consensus about this supposed model of education while taking lunch at Zen Gardens, Nairobi, Kenya, four years later in September 2018. In our view, a competitive technical and vocational education that is practically strong and enduring should encompass

(i) traditional approaches,

(ii) industry experience, and

(iii) emerging technologies.

We faulted traditional technical and vocational courses such as carpentry and joinery, plumbing, dressmaking, among others by asking these questions:
(i) supposed students are trained purely on how to use or own machines to do their work?
(ii) supposed students are taught how to live in a world where their skills may not be needed?
These questions point to a future of workforce where employment opportunities are not certain but can be made certain through creative and continuous retraining; for instance, in the Fourth Industrial Revolution with preponderance of Artificial Intelligence (AI), putting aside attendant ethical considerations.

Therefore, there is need for teachers, schools, and curriculum developers to adopt a more proactive and projective approach to traditional technical and vocational education by incorporating emerging technologies such as blockchain, Internet of Things (IoTs), machine learning, robotics, among others or by converting these emerging technologies into technical and vocational skills for the new era.