



Education

Africa's future education requirements: Vocational education

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Last updated 27 October 2023 using IFs 7.84

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Future job requirements differ from country to country and defy easy generalisation. The modern trend appears to be towards broader sectoral training, which includes a set of generic business and life skills rather than preparing an individual for a specific job such as being an accountant, welder, carpenter or chef. This allows the individual to move from an entry-level job to a longer-term career more readily. A report from the Global Commission on the Future of Work confirms this analysis and refers to 'a universal entitlement to lifelong learning that enables people to acquire skills and to reskill and upskill.'^[1]

A study from the African Development Bank found three main factors that constrain rapid job creation in Africa. First, job creation has not kept pace with the number of graduates from secondary and tertiary institutions. Also, those who finish school are not equipped with the skills required by the available jobs. Finally, young people generally lack the soft skills, social networks and professional experience to compete with older job applicants.^[2] The African Center for Economic Transformation specifically also noted that there is too little emphasis on relevant training in science, technology, engineering and maths, on technical and vocational education and training, and on higher-order cognitive and analytical skills. This leads to a considerable mismatch between job seekers' actual skills and those that employers require.^[3]

In 2019, only 8.5% of upper secondary school students were enrolled in vocational programmes in sub-Saharan Africa. This is less than one-quarter of North Africa's average and less than half of the world's average and South America's. Angola has performed well in this regard with more than half of upper secondary students enrolled in vocational programmes. Additionally, other countries had at least 30% of upper secondary school students enrolled in vocational programmes in 2019. However, countries such as Comoros, Kenya, Tanzania, Equatorial Guinea, Sudan and Mauritania all had less than 3% of upper secondary students enrolled in vocational programmes.

At the tertiary level, in 2019 merely 14.2% of tertiary graduates in sub-Saharan Africa had a science and engineering background, which is considered key to the future of work. Although this is a little close to the averages in North Africa (16.7%) and South America (16.1%), it lags behind South Asia's average of 24.3% in the same period. Djibouti has the highest share of science and engineering graduates, constituting close to 40% of total graduates, followed by Eritrea, Algeria, Sudan and Tunisia, respectively, with shares close to 30%. Uganda, The Gambia, Sierra Leone and Eswatini are the worst performers with less than 5% of graduates with backgrounds in science and engineering.

In the light of this evidence, African educators should balance the need for academic education with vocational and technical training. Education in Africa needs to respond to the demand for expanding small-holder farming and agribusinesses (see the theme on agriculture), allowing countries to enter low-end manufacturing (see the theme on manufacturing). This will prepare for the rapid expanded use of modern systems and technologies (see the theme on leapfrogging) as digitisation and the Fourth Industrial Revolution present new opportunities and risks for the future. The trend is away from low-skilled, and even semi-skilled, labour towards skilled labour.

In addition to advocating for technical and vocational training as a parallel education stream from secondary school onwards, the World Bank advocates for workplace training and short-term job training programmes.^[4] It finds that informal apprenticeships are most common in sub-Saharan Africa, supported by examples in Benin, Cameroon, Côte d'Ivoire and Senegal where these programmes account for almost 90% of the training that prepares workers for crafts jobs and employment in some trades.^[5]

Valuable examples of technical teaching innovation come from modern Germany. One of the most widely acclaimed German practices is its vocational training system at secondary level schooling and the partnership that has been established, in law, between publicly funded vocational schools and small and medium-sized companies. The system culminates in providing a student with a certificate issued by a competent body (e.g. a chamber of industry and commerce or a chamber of crafts and trades) in around 330 occupations requiring formal training in Germany.^[6]

However, what works in a highly formalised and developed economy such as Germany will not work in most of Africa. In addition to many other challenges, the low quality of education in most sub-Saharan countries means that students may not have fully mastered the foundational skills of reading, writing, numeracy, critical thinking and problem-solving that are required for entering the vocational training stream. The World Bank refers to this as 'not just a lack of trained workers; it is a lack of readily trainable workers.'^[7] Regardless of the continent's preparedness, digitisation and the Fourth Industrial Revolution will require a large cadre of technical skills, and the poor quality of general schooling in Africa implies that great care must be taken to ensure that students who do choose this vocational line of education have sufficient grounding.

Endnotes

1. Global Commission on the Future of Work, *Work for a brighter future*, Geneva: International Labour Organization, 2019, 13.
2. African Development Bank, Asian Development Bank, European Development Bank for Reconstruction and Inter-American Development Bank, *The future of work: Regional perspectives*, 2018.
3. African Center for Economic Transformation, *The future of work in Africa — The impact of the Fourth Industrial Revolution on job creation and skill development in Africa*, Accra: African Center for Economic Transformation, 2018, 2.
4. World Bank, *World Development Report 2018: Learning to Realize Education's Promise*, Washington DC: World Bank, 2018, 154.
5. World Bank, *World Development Report 2018: Learning to Realize Education's Promise*, Washington DC: World Bank, 2018, 155.
6. Federal Ministry of Education and Research, *The German Vocational Training System*.
7. World Bank, *World Development Report 2018: Learning to Realize Education's Promise*, Washington DC: World Bank, 2018, 9, 157.

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Cite this research

Enoch Randy Aikins and Jakkie Cilliers (2024) Education. Published online at futures.issafrica.org. Retrieved from <https://futures.issafrica.org/thematic/06-education/> [Online Resource] Updated 27 October 2023.

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