Values and Life Skills (VaLi) Working Group

POLICY BRIEF

ENHANCING KENYA'S YOUTH PREPAREDNESS FOR THE FOURTH INDUSTRIAL REVOLUTION (4IR)

Zizi Afrique Foundation

Policy Brief

Enhancing Kenya's Youth Preparedness for the Fourth Industrial Revolution (4IR)

Despite improvement in education attainment levels and enrollment in TVET institutions, skills mismatch is still evident in the labour market. Employers are interested in employing graduates with not only technical skills, but also other employable skills including life skills, entrepreneurship, financial planning, technology, and computing skills. While majority of job seekers are lacking common essential skills such as marketing and sales, core values, numeracy, basic computer, and social-emotional skills were all deficient across all industries, according to studies. Nonetheless, more youths are changing their minds about TVETs and are willing to enroll in TVET institutions to widen the scope of their skills. In addition, the Fourth Industrial Revolution (4IR) comes at the right time to enhance human-machine relationships, unlocking new market opportunities, and fueling growth across the global economy. This calls for adequate investment in requisite 4IR skills especially through the TVET sector.

Why Fourth Industrial Revolution (4IR) Skills?

The 4IR represents a new era of innovation in technology: one that is enhancing human-machine relationships, unlocking new market opportunities, and fueling growth across the global economy. Specifically, the 4IR centres on artificial intelligence (AI), robotics, 3-D printing, cloud computing, and the Internet of Things (IoT).

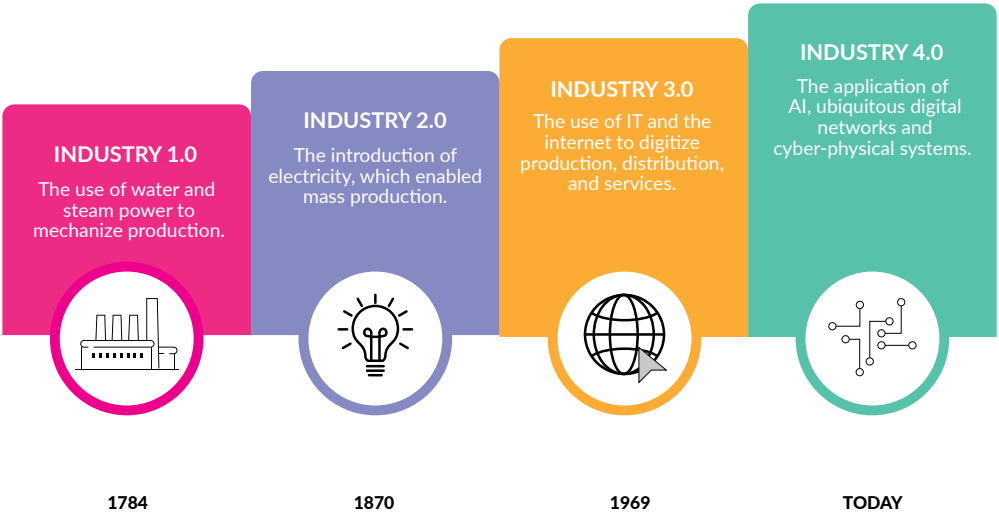


Figure 1: The 4IR in the Context of the Four Industrial Revolutions

While the TVET curriculum includes technical courses, the technical and professional skills that **are specifically unique to the 4IR have not been fully articulated and neither has there been significant investment in the related resources, equipment, and workforce**.

Based on studies that were conducted in 2018, this policy brief explores the preparedness of the youth for the 4IR by identifying the factors that may be responsible for these gaps.

Demand and Supply of Skills in the Labour Force Market

Analyses on the skills demanded and supplied in the market have established that marketing and sales, technical abilities, financial planning and management, life skills, and entrepreneurship were lacking in both official and informal sectors (Awiti et al., 2019). The analysis of the gap between the skills sought by employers and the skills acquired by entry-level employees is shown in Figure 2.

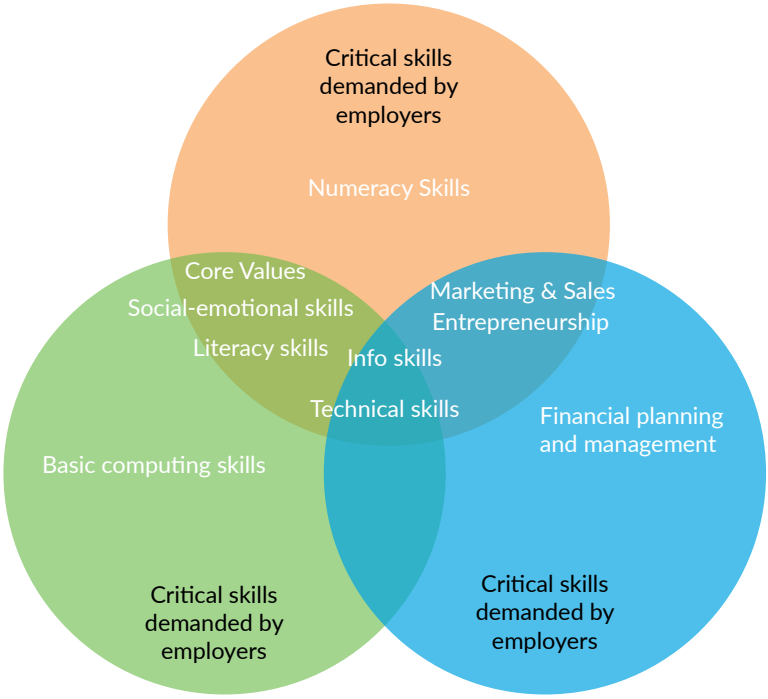


Figure 2: The Relationship Between Skills Demanded, Possessed, and Lacked by Entry-Level Employees[1]

1 *Adapted from the Survey of employers and employees in the formal and informal sectors to determine entry-level skills among youth (18–30 yrs.) in employment Kenya*

Research has it that employers are also affected by job market challenges such as skill mismatch. Soft skills such as fundamental communication skills and presentation, integrity, and attitude towards the work assigned are among the skills being sought after by employers when recruiting.

Moreover, employees in both the formal and informal sectors recommended the following skills to be taught by training institutions: technical **skills, life skills, entrepreneurship, financial planning, management and technology, as well as computing skills and core-values.**

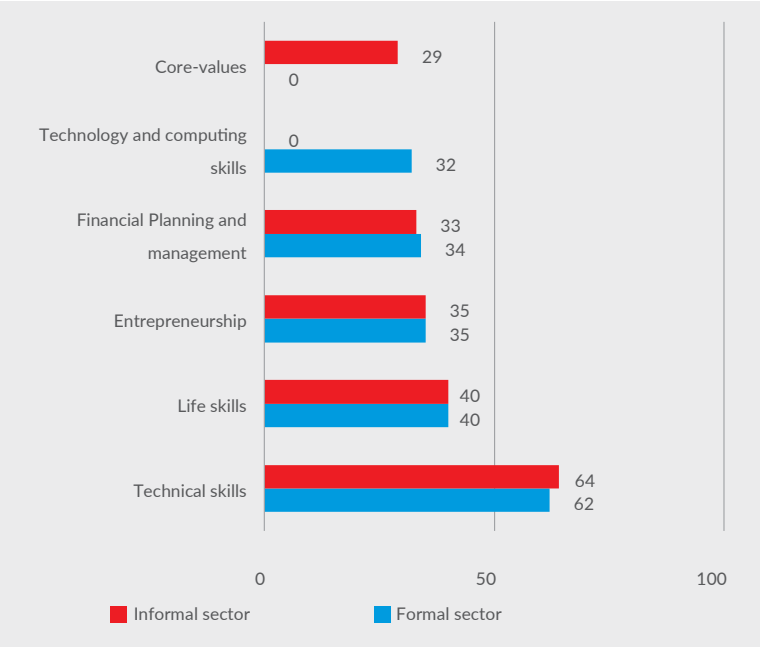
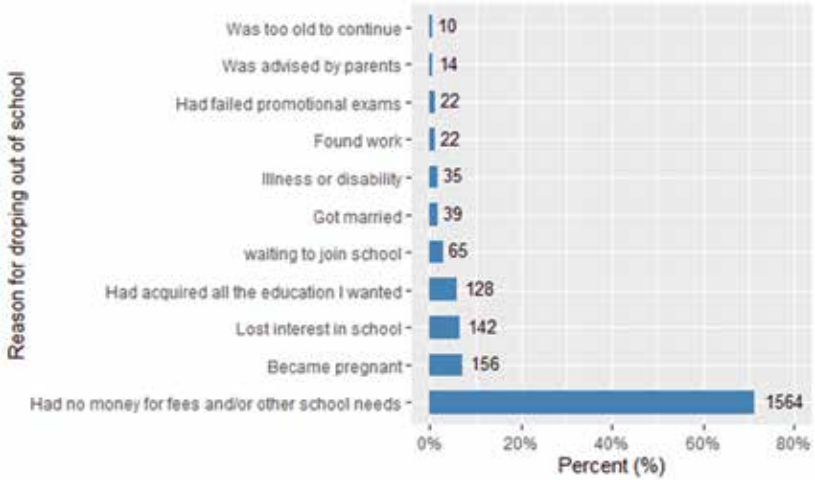


Figure 3: Skill Sets Sought by Employers

Association Between 4IR Skills Awareness and Youth Characteristics. Kenya has a total of 2,313 TVET institutions [3] spread across all the 47 counties. Evidence shows that the top five courses offered in TVETs were: **tailoring, engineering, masonry, carpentry, hair dressing & beauty** (Figure 4).



Source: Dalberg Data 2018

Majority of youth depend on TVET training to get their post-basic education training. This is because there are many factors that contribute to the youth's not continuing with education. These factors include, but are not limited to: dropping out of school at primary school, lack of school fees, teenage pregnancies, loss of interest in school and the feeling that they had acquired all the education they needed. These, and other reasons are presented in Figure5.

2 https://www.tveta.go.ke/institutions/

3 *such as the accomplishment of 97.7% of primary schools having digital devices installed (as of September 19, 2019), the development of digital content on Kenya Education Cloud, and the recent launch of Telkom and Google Loon Internet services*

Digital Equipment, ICT Skills and 4IR Skills

Desktop computers, laptop computers, tablets, and other mobile devices are vital tools for continuing with education and training. The tools allow students to gain access to digital content, instructional apps, social media, and educational programming. Online learning has a lot of advantages, but it is also associated with more infrastructure, design, and instructional requirements.

Additionally, while there are various initiatives that support digital learning[3] , a large percentage of learners are unable to access or afford internet services.

Recommendations

Interventions towards enhancing youth awareness and application of 4IR skills include those that can be instituted by Government, and measures to be put in place by TVET institutions.

1. **Proposed Interventions for National and County Governments**

b. *Accessibility to reliable electricity:* The national government has enhanced access to electricity distribution. However, a large number of youths still do not have access to electricity across the country, especially in rural and hard-to-reach areas. The government, with support from other stakeholders such as the private sector, could further lower the costs of connection to the grid and significantly reduce the cost of consumption to enable as many homes as possible to have access to reliable electricity or solar energy which is critical for internet connectivity.

c. *Accessibility to reliable and high-speed internet:* The technological advancement in Kenya is quite commendable, and this has been made possible through the partnership of the government and telecommunication companies. The launching of the 5G balloons in rural and hard-to-reach areas, the first on the continent, is the most recent achievement. The government should continue to encourage, partner, and offer incentives to local and international telecommunication companies to deepen internet connection or improve signals especially in the rural and hard-to-reach areas.

d. *Equity:* Gender equity has seen reduction in gender inequalities. However, the current policies on gender equality should be extended beyond admission and focus on courses and other

marginalized groups. There needs to be an affirmative action to ensure equity with respect to gender, vulnerable groups and persons with special needs for 4IR courses.

e. *TVET funding: Policy reforms on funding TVETs through the Higher Education Loans Board (HELB) has seen increased enrollment of learners in learning institutions.* However, focus on supporting only the ones admitted through the Kenya Universities and Colleges Central Placement Service (KUCCPS) has resulted in the exclusion of other learners. Therefore, the policies in TVET funding through HELB should be enhanced to include all learners in TVET institutions in Kenya, and not only the ones admitted through Kenya Universities and Colleges Central Placement Service (KUCCPS). Where possible, the funding should be differentiated to take into account the nature of the courses. In addition, the costs of courses could be further reduced to allow even the neediest to access relevant education and programmes including the acquisition of the 4IR skills.

f. ***Design and deliver new curricula with a core 4IR technology:*** The review of curricula has opened avenues to make sure that learners train on skills that are required by the market. The Directorate of TVET (DTVET) should continue to integrate key 4IR skills that will guarantee the realization of the Kenya Vision 2030. The country has an opportunity now, with the new Competency Based Education and Training (CBET), to introduce both 4IR skills as well as life skills and values which employers look out for in potential employees.

g. ***Strategies to transfer skills:*** As much as training is important, the skills need to be transferred to learners. The government will need

to come up with strategies to ensure the country has enough human resources to train the youth in 4IR. This could be achieved through strategic collaborations with developed countries and institutions across the world. Under such collaborations, trainers will get the opportunity to acquire academic and industry skills under the mentorship of experienced 4IR experts.

2. Proposed Interventions for TVET Institutions

c. ***Short courses:*** TVET institutions should organize short trainings to educate their learners on the current skills market trends.

d. ***Mandatory internship:*** TVET institutions could link their students to industries relevant to the courses they are undertaking for mandatory internships that must be scored to form part of the overall grading. Currently, such internships exist but are optional, not graded, and in some instances not relevant to the course the student is taking.

e. ***Computer laboratories and virtual centres:*** All TVET institutions need to have computer laboratories that are sufficiently equipped with computers installed with the latest operating systems, and to have trainers adequately trained on general and 4IR-specific computer skills e.g., programming and data analytics, among others. Graduands from TVET institutions could be supported with basic tools of work such as a laptop and a smartphone.

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