Culture Shift and Transition to Green Economy; role of Technical and Vocational Education and Training in Kenya

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Abstract

With the current global challenges of population explosion and unemployment, poverty, reduced life expectancies, climate change, ecological degradation and social inequalities, urgent deliberate strategic actions must be taken to achieve a better and a sustainable future for all. Low carbon, resource-efficient and socially inclusive green economies are therefore inevitable, and it is in this sense that the Kenyan government has developed key policy measures among which are; the Long Term Development Blue Print, 2030 and the Big Four Initiatives, 2022, which include Affordable Housing, Universal Health Care, Manufacturing and Food Security, to combat the above challenges. This literature review paper examines five dimensions of culture that are directly responsible for the shift to a green Kenyan economy; Sustainable Lifestyles, Social Cohesion, Gender Inclusivity, Cultural Heritage and Skills Based Livelihoods, and how TVET can respond to facilitate and catalyze this shift. The methodology employed is online desk research in which relevant published reports and statistics from international organizations were reviewed, the discussions being based on theory and analysis of best practices and case studies of TVET propelling nations towards the path of sustainable development. It posits that TVET should improve access to quality training opportunities, attracting and providing quality programs heavy in technical, entrepreneurial and digital employable skills for the world of work, and foster partnerships and collaborations with relevant partners on policy, best practice and funding, for which the net effect is a sustainable culture that generates employment opportunities, eradicates poverty, conserves the environment, supports the Big Four Initiatives, Vision 2030 and the global agenda for sustainable development.

Key words: Green Economy, Technical and Vocational Education and Training (TVET), Sustainable Development, Culture, The Big Four Initiatives.
1.0 Introduction

In September 2015, world leaders met at the United Nations in New York to adopt a new global plan of action for ending poverty, ensuring environmental sustainability and achieving social inclusion and justice by the year 2030, a seventeen point agenda known as the Sustainable Development Goals (SDGs). With just 11 years left to the 2030 deadline, there is need of urgency in terms of decided actions by countries along with collaborative partnerships among governments and stakeholders at all levels.

According to the Kenya Green Economy Assessment Report, (2014), Kenya has one of the most dynamic economies in Africa, yet it is facing a number of pressing economic, environmental and social challenges. From climate change and natural resource depletion to high poverty rates and rising unemployment, concerns that must be addressed through commitment to a low-carbon and resource-efficient development pathway, a shift towards a green economy which calls for decided targeted policy interventions, practice and financing.

In response Kenya has developed key policies and ambitious programs, over the years, to combat the above challenges, and model its economy around the 2030 global agenda for sustainable development. These include:

- National climate change response strategy and action plan that seeks to embrace a low-carbon development pathway that is inclusive and equitable, and contributes to global competitiveness.
- Greening Kenya Initiative (GKI), a database on green economy activities, which highlights efforts on the manufacturing of eco-friendly materials, tree planting, organic farming, fish farming, renewable energy, eco-labeling, solid waste management and environmental management, among others.
- The country’s long-term development blueprint, Kenya Vision 2030, launched in 2008, that aims to transform the country into “a newly industrializing, middle-income country, providing a high quality of life to all its citizens in a clean and secure environment” by 2030.
- The Constitution of Kenya (2010), in which Article 42, recognizes a healthy environment as a right and calls for “sustainable exploitation, utilization, management and conservation of the environment and natural resources.”
• National green economy strategy (GESIP); a low carbon, resource efficient, equitable and inclusive socio-economic transformation strategy, 2016-2030 with five thematic areas as; sustainable infrastructure, building resilience, sustainable natural resource management, resource efficiency and Social inclusion and sustainable livelihood
• The "Big Four" transformation agenda for Kenya which identifies Four Priority initiatives to be implemented between 2017 – 2022 i.e. revamping the manufacturing sector, improving food security and nutrition, universal health coverage and affordable housing.

According to the Sustainable Development Goals (SDGs) Index and Dashboards Report (2018), Kenya ranked 119 globally with a score of 56.8 in the implementation of the SDGs. African countries ahead of the East African nation include Morocco (66.3), Tunisia (66.2), Mauritius (64.5), Egypt (63.5), Gabon (62.8), Ghana (62.8), South Africa (60.8), Namibia (58.9), Zimbabwe (58.8), Botswana (58.5), and Senegal (57.2). This therefore implies that much more have to be realized in so far as realization of The Big Four Initiatives, Vision 2030 and the Global Agenda for Sustainable Development are concerned.

1.1 Objectives of the study

i. To describe the dimensions of culture responsible for steering Kenya on the path to sustainability
ii. To describe the role of TVET in shifting culture to sustainability and the immediate realization of the Big Four Initiatives

2.1 Green economy

In recent years, interest in the ‘Green Economy’ has grown rapidly, due largely to economic, social and environmental challenges, including climate change, natural resource depletion, social inequality, unemployment and loss of biodiversity and ecosystem services. (Green Economy Assessment Report, 2014)

The UNEP Green Economy Report (2011) defines a Green Economy as one that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. It entails essentially a low-carbon, resource-efficient and socially-inclusive economy. The concept presents a new paradigm in development thinking, emphasizing growth that is friendly to the earth’s ecosystems and that can also contribute to poverty
alleviation. It is an approach to achieve sustainable development and requires transformation of production and consumption ways into one that enhances and preserves environmental quality, while using energy, water and natural resources more efficiently (Green Economy Assessment Report, 2014)

During country stakeholder consultations, the agriculture, energy, transport and manufacturing sectors were identified as having significant potential for greening the economy because of their contribution to GDP, employment creation, poverty reduction and global competitiveness. These to a large extent covers economic, environmental and social dimensions of a green economy, cultural aspects remote since tourism and creative industries, peace, dialogue and tolerance (building bridges), gender inclusivity and empowerment, education and green skills development and preservation of cultural heritages among others seems sidelined. This study would therefore seek to describe the impacts of positive culture and cultural sustainability as an integral dimension of sustainable development and how it can steer Kenya towards the path of green growth and development by 2030.

2.2 Culture

According to Geert Hofstede, culture is the collective programming of the mind which distinguishes the members of one group or category of people from another." (Hofstede, 1991,).

This collective programming ought to socialize members of such communities to wholly live for the present and leave a practical legacy for future generations. Culture being a way of life of a huge number of people, has immense potential to influence and change attitudes and mindsets and steer communities on the path to sustainable development.

The Director-General of UNESCO, Irina Bokova declared in 2012 that culture is what makes us who we are, that no development can be sustainable without including culture as it provides answers to many of the challenges we face today and that we must do far more to place culture at the heart of the global agenda for sustainable development (UNESCO, 2012a).

Hawkes (2001) recognizes that, the three dimensions of sustainable development, i.e. economic growth, social inclusion and environmental balance no longer reflect all the dimensions of our global societies since the world is not only facing economic, social, or environmental challenges: Creativity, knowledge, diversity, and beauty are the unavoidable basis for dialogue for peace and progress as these values are intrinsically connected to human development and freedoms (UCLG 2010).
Throughout the past decade, statistics, indicators and data on the cultural sector, as well as operational activities have underscored that culture can be a powerful driver for development; with community-wide social, economic and environmental impacts. Of particular relevance is the cultural sector’s contribution to the economy and poverty alleviation. Cultural heritage, cultural and creative industries, sustainable cultural tourism, and cultural infrastructure can serve as strategic tools for revenue generation, particularly in developing countries given their often-rich cultural heritage and substantial labor force (UNESCO, 2012a)

2.3 Technical and Vocational Education and Training (TVET)

Professor Asha Kanwar, President and Chief Executive Officer, Commonwealth of Learning (2017) reiterates that Skills development for livelihoods is a key priority for most governments today. That therefore, Technical and Vocational Education and Training (TVET) is more important globally than ever before, the reason why Sustainable Development Goal 4 aims to “ensure inclusive and equitable quality education and lifelong learning opportunities for all,” and to “substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent jobs and entrepreneurship” by 2030. (UNESCO, 2017)

According to UNESCO, Technical and vocational education and training (TVET) is understood to be integral to education and lifelong learning and to refer to all forms of learning of knowledge, skills and attitudes relating to the world of work. TVET comprises education, training and skills development activities relating to occupational fields, production and livelihoods. Transversal skills, citizenship skills and skills that enable lifelong learning are integral components of TVET. (UNESCO, 2015a)

As a leader in the global debate on TVET’s role, UNESCO has argued for profound transformations in the conceptualization, governance, funding and organization of TVET to ensure that the sector is capable of responding effectively to the many economic, equity and sustainable transformational challenges of the 21st-century world (UNESCO 2015c)

3.0 Methodology

This paper’s discussions are based on online desk research where published reports and statistics from international organizations and organizations on TVET such as UNESCO, UNDP, UNEVOC, Innovations in Vocational Education and Skills Training in Africa (INVEST Africa),
Common Wealth of Learning (COL) among others, were reviewed. From the literature findings, culture has been modeled into five dimensions as; Sustainable Lifestyles, Social Cohesion, Gender Inclusivity, Skills Based Livelihoods and Cultural Heritages.

4.0 Discussion

4.1 Sustainable Lifestyles

Lifestyle is a way of living of individuals, families and societies in terms of interests, behavior, diet and work patterns. It is therefore a culture and there are specific lifestyle patterns that can ensure green growth and development which encompasses realization of the Big Four Initiatives, vision 2030 and 2030 global agenda.

Kenya loses 90 people to cancer daily (WHO, 2014), the disease claiming 69% of its victims which is equivalent to 32,900 deaths annually with 130 new cancer cases daily. The increase in cancer cases is attributed to lifestyles which include, drug abuse, diets high in sugars, meat and animal fats and lack of body exercise. (WHO, 2017). Besides, research shows that while meat and dairy provide just 18% of calories and 37% of protein, it uses the vast majority, 83%, of farmland and produces 60% of agriculture’s greenhouse gas emissions and 24% of world’s total greenhouse gas emissions. (UNEP, 2010)

A global shift towards vegan diet is thus vital to save the world from hunger, poverty and the worst impacts of climate change and a culture of green and sustainable diet is inevitable for Kenya’s population to be vibrant and active in the world of work, for practical economic investments and for reduced carbon footprints, to ensure realization of the Kenya’s economic and social blueprints.

<table>
<thead>
<tr>
<th>Major causes of cancer</th>
<th>%</th>
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<tbody>
<tr>
<td>1 Diet</td>
<td>35%</td>
</tr>
<tr>
<td>2 Tobacco</td>
<td>25%</td>
</tr>
<tr>
<td>3 Infections</td>
<td>20%</td>
</tr>
<tr>
<td>4 Physical inactivity, environmental pollutants</td>
<td>15%</td>
</tr>
<tr>
<td>5 Others</td>
<td>5%</td>
</tr>
</tbody>
</table>

*Table 1 Major Causes of Cancer

Figure 1: % GHG Emissions by sectors

Source IPCC 2014

4.2 Social Cohesion

This is key for mutual understanding and building of bridges among communities leading to a culture of peace which is requisite for any form of investment and development. Extremist cultural and or religious views and practices such as cattle rustling, ethnicity, political manipulation, resources control and terrorism form breeding grounds of exclusion and poverty, risk factors that can push the youth towards violence. Without economic options, youth remain idle, become frustrated, and are vulnerable to manipulation by politicians and religious factions, exposing the women to extreme hunger and need. This therefore calls for increasing youth employability and women empowerment through life skills, financial literacy, and technical skills development emphasizing on increasing the supply of real jobs through business development and entrepreneurship.

4.3 Gender inclusivity

The ILO (2010) stresses the need to bring the experience, knowledge and interests of both women and men to bear on the development agenda, achieve fundamental changes in the existing power relations between women and men, develop programs that enable girls and women to enter occupations in which they are currently underrepresented.
The global gender gap report (2017) ranks Kenya 76 out of 144 globally with significant inequalities between males and females in education attainment, health outcomes, representation in parliament and participation in the labor market. The Kenya demographic health survey (2014) also indicates that almost half of women aged 15 – 49 have experienced either physical or sexual violence at some points in their lives.

Changes to societal attitudes and cultural beliefs around gender roles, norms and female empowerment at the community and household levels have been slow in Kenya especially due to systematic gender barriers fueled by deeply held and persistent stereotypes. (USAID, 2018)

### 4.4 Skills based livelihoods

With the current challenges of population explosion especially in Africa, environmental degradation, diminishing natural resources, globalization and technology revolution, today’s university and college graduates face a much more dynamic and uncertain world of work, glaring unemployment and poverty.

A recent study by the United Nations Development Program (UNDP) ranked Kenya as having the highest unemployment rate in east Africa. According to the study, one out of every five youth in Kenya is unemployed even as thousands of graduates flock the job market every year with limited or no skills necessary for the dynamic job market.

The 21st century world of work is very dynamic and thus should be the graduates, trained in technical green skills, flexible skill sets, digital and financial literacy skills and entrepreneurship skills for gainful employment and the future world of work. The society must therefore come to terms with the fact that conventional white collar employment is unsustainable in the light of the current world challenges.

### 4.5 Cultural heritages

With the enormous growth of knowledge, increasing mobility and the increased accessibility of travel, there is a widespread curiosity about other places and a huge demand to visit and personally experience other societies. Thus tourism and cultural sectors have emerged globally with great inputs to the global GDP. Attributes of cultural heritage include archeological resources, cultural sites and landscapes, monuments, oral traditions, customs and customary law, indigenous knowledge, history and historical evidence as can be found in art, music and records and traditional cultural expressions among others (UNESCO 1972)
4.5.1 Cultural and creative industry

A recent study on cultural and creative industry by UNESCO (2015) showed that the global creative economy generated close to US$ 2,250 billion in revenue, equivalent to 3% of the global GDP, providing jobs to 29.5 million people, Africa and Middle East accounting for the least of the revenue and employment.

<table>
<thead>
<tr>
<th>Regions</th>
<th>% Revenue</th>
<th>% Jobs</th>
</tr>
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<tbody>
<tr>
<td>Asia</td>
<td>33</td>
<td>43</td>
</tr>
<tr>
<td>Europe</td>
<td>32</td>
<td>26</td>
</tr>
<tr>
<td>North America</td>
<td>28</td>
<td>16</td>
</tr>
<tr>
<td>Africa &amp; middle east</td>
<td>3</td>
<td>8</td>
</tr>
</tbody>
</table>

Table 2 Global Creative Economy

*UNESCO, (2015)*

In Nigeria, Film and Music industry is a vital contributor to the economy, being the second-largest employer after agriculture, with over one million direct employees and generating an estimated US$ 7.2 billion annually, accounting for 2% of Nigeria’s GDP compared to Kenya’s US$ 200 million. (2015)

With Kenya currently experiencing a youthful bulge, it’s critical to nurture the creative economy. Establishment of policy and institutional initiatives that can propel the creative industry which includes fine art, performing and visual arts such as music, dance and film. It is estimated that 12% of the Kenyan population is unemployed, 70% of which are youth, about 800,000 graduating every year from the training institutions into the job market. Rightly harnessed, the creative economy can be used to fill the youth unemployment gap.

4.5.2 Development of cultural heritage tourism

Since 1963, Kenya has relied heavily on wild life and beach resources as her main tourist attractions; however for adequate competitiveness there is need to diversify tourism products and match the competition from countries such as Seychelles, Mauritius, Namibia and Botswana that have already diversified their tourism products. This would imply conservation and preservation of public monuments, cultural sites, traditional technologies and customs.
5.0 The role of TVET

During the launch of Technical and Vocational Education and Training Authority Strategic Plan (2018 – 2022), Cabinet Secretary Ministry of Education, Amb Amina Mohamed said that TVET plays a key role in generation of skills for national development and access to higher earnings. That it’s also key in the realization of the government’s Big 4 agenda to provide world class skills for irrigation, construction, maintenance of health facilities, entrepreneurial skills for trade and investment and manufacturing TVET therefore has a role to play in ensuring that the knowledge, skills and competencies acquired by individuals enables them to contribute to the development of green economy, which encompasses the big four initiatives, and to pursue sustainable practices in other areas of their lives.

5.1 Status and attractiveness of TVET

For increased enrolment and consequently massive exposure to quality skills training opportunities, TVET must be attractive to the youths and the working population, in terms of training infrastructure, entry requirements, courses offered, highly qualified and motivated trainers, remuneration of graduates among others so that TVET is not seen as cocoons for academic dwarfs but avenues for world skills training for gainful employment and entrepreneurship.

5.2 Access and equity

UNESCO-UNEVOC (1999) pointed out that in addition to preparing people for the world of work, TVET is expected to be an instrument for social cohesion and integration. It stated that the Member States needed to make their TVET programs comprehensive and inclusive by:

- Promoting special initiatives and efforts to ensure equal access for and participation by girls, women.
- Making programs available to the unemployed and marginalized and excluded groups such as people living with disability by limiting barriers and entry requirements
- Promoting flexible access to lifelong learning and training and designing short demand and skill based training programs for immediate employment, skills upgrade, value addition and women empowerment.
• Introducing and applying ICTs in teaching and learning to increase access and quality in terms platforms of training, modes of training, for instance, open and distance learning (ODL), and materials especially through Open Educational Resources (OER). ICT integration therefore transcends time, distance, social barriers and the need for teachers and learners to be in the same location at the same time, thus unlimited numbers of geographically dispersed learners can be provided with unlimited access to quality learning/training experiences that would otherwise be unavailable or far too costly.

5.3 Flexibility of training

To match the growing demand of skills training and competencies development TVET must embrace flexible approaches to delivery and administration to match the diverse needs of learners. This should be in terms of modes of study for instance work based learning, weekend and evening programs, time of study, length of program, assessment and accreditation and platforms of study such as social media platforms, and other Learning Management Systems such as MOODLE, besides the traditional classroom setting.

5.4 Quality and relevant skills training/upgrading

The government of Kenya is keen on realization of the Big Four Initiatives by 2022, and to be a middle income economy by 2030, ambitious adventures that requires a workforce with relevant and specific employable skills. TVET being the current avenue for skills training must therefore seize the opportunity, to attract, train and deliver graduates ripe with skills in manufacturing, agriculture, building, health care, creative industries among others and the respective value chains. This calls for a culture reorientation towards TVET as being an alternative path way to higher education, implying diminishing barriers to access and improved investment in infrastructure and skilled training workforce.

Manufacturing

TVET should respond by training individuals who poses skills in:

• New technologies in industrial production like Computer Numerical Control (CNC) machining, 3D Printing, MIG/TIG welding techniques
• Energy-efficient applied technologies.
• Hybrid and electric transport systems
• Solid waste management
• Value addition and product development such as leather works, food processing

Agriculture and food

• Technical knowledge for new practices like organic farming and agribusiness
• Technical knowledge for the application of energy-efficient technologies in the agriculture sector
• Short courses on harvest wastage reduction such post harvest technologies
• Efficient use of water and irrigation technologies
• Use of information and communication technology (ICT) in agriculture.
• Alternative green diets and nutrition

Cultural economy

• Music and film production
• Cultural sites, monuments and artifacts management
• Intercultural dialogue and social cohesion
• Cultural art and fashion design
• Cultural modeling
• Video games development
• Peace management and conflict resolution

Housing

• Sustainable building designs
• Sustainable building technologies and construction materials
• Plumbing, Water supply and sanitation
• Solar water heating and other renewable energy generation methods in buildings
• Solid waste treatment
• Innovation and entrepreneurial skills
Health

- Alternative diets and nutrition
- Medical engineering/equipment handling and maintenance
- Lab technology
- Nursing

5.5 Collaborations and partnerships

TVET ought to be a dynamic system that responds to the ever changing nature of the world of work, fostering collaborations and partnerships with governments, industry, development partners and international organizations on policy, practice, capacity building, sponsorships and global trends to ensure that the quality of TVET not only leads to greater employability but also labor mobility. Such partners being engaged in all aspects of training; training curricula being aligned to skills and competencies required for direct employment, world of work, entrepreneurship and national development.

6.0 Response of the Kenyan government

To ensure an improved TVET, the government has over the recent past embarked on reforms which includes creation of the Technical and Vocational Education and Training Authority (TVETA) established under TVET Act No. 29 of 2013 with a mandate to regulate and coordinate training in the country through licensing, registration and accreditation of programs, institutions and trainers, the TVET Funding Board that oversees disbursement of funds to TVET institutions and the Curriculum Development, Assessment and Certification Council (CDACC) which addresses issues on syllabuses for the training institutions, examination, assessment and competence certification. (Mercy M. & Mary M. 2019, January 30)

Other government interventions include increased public spending on technical education and training that averaged 4.2 per cent of total education spending between 2012/13-2018, creation of new training institutes, payment of capitation grant of Ksh 30,000 to the institutes for every student admitted, offer of government loan through Higher Education Loans Board (HELB) amounting to Ksh 40,000 per year per student and reduction of fees by 30 per cent from Ksh 92,000 to Ksh 56,420 to increase access and affordability.
The government has also ensured international partnerships and exchange programmes in delivery of technical education and training such as German Society for International Cooperation Limited (GIZ), Swedish International Development Agency (SIDA), and China Phase II initiative on training of trainers and TTIs equipping. (Mercy M. & Mary M. 2019, January 30)

7.0 Recommendations

i. There is need for revitalized campaigns on benefits of technical training and skills acquisition for development and employment through sustained government-industry advertisements and career guidance policies.

ii. Equipping every institution with relevant timely infrastructure to make them centers of excellence in specific fields of skills acquisition

iii. Need for equitable distribution of training institutes and resources as some areas/institutes are currently marginalized and under equipped

iv. The established bodies such as CDACC and TVET Funding Board to be empowered to fully execute their mandates

v. Dual system of TVET should be embraced, releasing graduates with the skills necessary for the work environment by emphasizing on learners spending 50 per cent of the training time under classroom instruction and the other 50 per cent in on-job-training environment, as the successful case of Germany.

vi. Private sector support in embracing and realizing the dual system and funding of TVET

vii. Exploring further regional and international partnerships and exchange programs in delivery of TVET

viii. Need for national skills inventory system that would provide information on the labour market needs.

ix. Government and private sector support in revitalizing the creative industry

x. Encouraging enrolment of female candidates to STEM based programs especially in marginalized regions by giving incentives

xi. Encouraging embrace and training in green diets to reduce lifestyle diseases
8.0 Conclusion

With three years to the 2022 deadline of the realization of the Big Four Initiatives by the government of Kenya and 11 years to the deadline of the achievement of the global goals for sustainable development, there has to be a sense of urgency and accelerated efforts from all stakeholders including the government, development partners, international organizations and communities in terms of policy formulation and implementation to achieve a better and more sustainable future for all. There is need for societal cultural awakening in terms of beliefs, customs and conduct, embracing sustainable practices and discarding wasteful and unsustainable practices and the link towards this awakening being TVET. TVET being the most practical avenue for acquiring readily employable skills in terms of wide accessibility and nature of courses, must therefore be facilitated to ensure that by 2022, Kenya realizes universal health care, affordable quality housing, revamped agricultural and food productivity and manufacturing and by 2030, Kenya attains middle income economy state and the global challenges including those related to poverty, inequality, climate, environmental degradation, prosperity, peace and justice are addressed.
References

Cultural times: The first global map of cultural and creative industries, E Y , 2015


SDG index and dashboard report 2018: Global Responsibilities, Implementing the Goals

UCLG (2010) Culture: fourth pillar of sustainable Development. UCLG policy statement, UCLG Committee on culture and world secretariat policy statement for Mexico City, United Cities and Local Governments (UCLG), Barcelona, 16 Sept 2010


UNEP. (2011). Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication. Available at:


World Health Organization 2017. Cancer Factsheet. Available at
http://www.who.int/mediacentre/-factsheets/fs297/en/