

The Role of TVET in Africa's Development Agenda

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Abstract

At the dawn of independence for most African states, it was realized that complete independence could only be achieved through the Political, Economic and Socio- Cultural frontiers. Much has been achieved on the political frontier while, to some extent, on the social frontiers. However, the economic frontier has been constrained by Africa's lack of critical skills and technologies in the production of goods and services essential for meeting such basic needs as food, shelter, water, clothing, energy and infrastructure. Fifty years down the road of political emancipation, it has finally dawned on us that while Education is the key to our development, Technical and Vocational education and Training (TVET) is the master key to unlock our potential in meeting our needs and wants. This can only be achieved through the application of knowledge and skills of a well educated and trained workforce and the application of technologies in a sustainable manner. TVET has all along been the missing link in Africa's development agenda. In the 21st century; a new global labour market has emerged. There is increasing demand for higher skilled labour with tertiary and higher education. Those with lower skills with basic education will find it more difficult to find jobs with better remuneration and decent work environments. When all is said and done at the end of the day we all treasure a warm meal, a secure shelter, a comfortable chair to sit on and affordable means to enable us to communicate and travel just to mention a few. In this paper, we take a critical analysis of TVET's role and the necessary policy and legal frameworks that should be availed for it to effectively impact Africa's development agenda in a competitive global labour market of the 21st century.

Key words: *Education, development, TVET, global labour market*

Introduction

Over the past five decades, from the dawn of independence to the dawn of the globalized 21st century, Africa's development agenda has been dominated by her efforts to fight poverty, hunger, disease and ignorance. To do so, it was believed that she had, first, to extricate herself from the debilitating forces of political, economic, and social-cultural enslavement. While notable gains may have been made on the political and social-cultural frontiers, much of Africa is still going to bed hungry, is ravaged by disease and has high levels of illiteracy. In brief, Africa has not gone beyond the provision of basic needs levels of illiteracy. In brief, Africa has not gone beyond the provision of basic needs.

The ultimate goal of development is for the improvement of the quality of life of a given people and it is expected that it is the same people that must bring about this

Transformation. To do so then education must be the key and this has been demonstrated in the developed Western and Eastern countries. In his remarks as an alumnus of Uganda's Makerere University, on its 90th Birthday celebration, Kenya's third President (now retired) Mwai Kibaki, once a lecturer of economics at the university, raised the following concerns:

- How can Africa's universities claim a place of honour in and fully benefit from a world that is increasingly interested in our resources and geo-political relevance?
- How do we instil an industrial strength work-ethic and visionary culture among, especially the youth, so they embark on modern use of African resources and how do we provide them the post-industrial digital tools and expertise to facilitate this ethos?
- What concrete measures should we take to lift our citizenry from poverty to a people with dignity and unassailable self confidence?
- How do we empower our people to ably play their part in shaping the destiny of the community of modern nations?

From President Kibaki's vast experience gained over fifty years of public service having been a Minister of Finance, Vice President and President of the Republic of Kenya, one can only adduce the enormity of the challenges he has lived with. He has called upon the youth of Africa to expand their horizon of imagination and creativity to forge practical solutions that can yield measurable results. This indeed would require a paradigm shift if President Kibaki's concerns above were to be effectively addressed. Much would also depend on the type and nature of agenda that Africa faces today. It would certainly, include a careful study and incorporation of the characteristics of the world in which we live today.

The World Today

Today, we live in a world characterized by phenomenal scientific and technological explorations and explosions. The scientific enterprise has grown to unimaginable proportions advancing frontiers on earth, in waters and space. Advancements in technology have given us the power to produce, with ease, the goods and services that we need to meet our needs and wants whilst assuring us the promise to face any future challenges. We live in a global village bound together with an array of Information and Communication Technology Networks unimaginable hardly three decades ago.

However, despite these phenomenal advances, it is a world still overburdened by its dark past in which peace and happiness are increasingly becoming rare commodities at individual, family, community, and global levels. It is still a world in which the long dreaded enemies of man: poverty, ignorance and disease are still real threats to humanity particularly in the developing world. Food shortages, environmental degradation and depletion of natural resources accompanied with political, religious and cultural conflicts continue to threaten the quality life that we all cherish and relentlessly pursue.

Global Trends and Challenges. Today, there are global trends whose impacts transcend national boundaries and societies in our global village. These consist of the following: a). the emergence of a Knowledge Society characterised by economic change from manufacturing economy (material value) to service economy (knowledge value). b). an emerging global labour force with more emphasis on higher productivity levels supported by technologies and higher technical skills demanded of the labour force. c). a green society in a green economy leading to a green revolution based on alternative sources of energy and innovative ways of production, preservation and conservation. d). ageing societies and economies of Europe where skilled workers will retire occasioning a shortage of such manpower as these economies use higher technologies to sustain high productivity. e). new industrialising economies from developing economies that will provide both lower skill and higher skill labour force in the global labour market.

There are already some trail blazers ready to participate in the new global green industrial revolution: a). The European Union- target to cut the EU's greenhouse gas emissions by 20% in 2020 compared with 1990 level. b). The USA targets for significant reductions in greenhouse emissions include cuts in emissions by 25% by 2020 and cuts up to 80% by 2050. c). China plans to more than triple its wind power generation capacity towards becoming the world's largest wind power producer by 2020. d). Germany targets renewable energies that will provide a lasting impetus for exports, economic growth and employment. e). Australia has often relied on innovation to maintain a competitive advantage and match or exceed the productivity growth of much larger economies (such as the USA and the EU).

Amidst all these dizzying trends and positioning in the global economy, what is Africa's position? As the world community strides into the 21st Century – a century characterized by phenomenal Scientific and Technological growth, Africa lingers at the doorstep in a dilemma and faced with a millennium challenge. Her dilemma: a vast continent well endowed with both human and natural resources, yet, a mother to so many poor nations greatly afflicted by ignorance, poverty and disease. Her millennium challenge: to enter, survive and remain competitive in a world that is fast becoming a global village; to embrace and nurture the culture of scientific and technological literacy; to have a workforce with the necessary knowledge and capacity to propel Africa into the 21st Century and sustain it.

Africa's Development Agenda

Africa's development agenda must, of necessity, have been informed by two important sets of challenges. One is her perpetual search for the ways and means to meet her basic needs and wants. Simply put, it is to overcome the long dreaded enemies of poverty, disease and ignorance as defined by African leaders at the dawn of independence. The other set comprises of challenges confronting the modern global community of which Africa must be a part of. These include: impacts of

globalisation, knowledge society, green society, terrorism, corruption, ethnicity in Africa and racial and religious discrimination amongst countries.

Africa, by any comparison, is well endowed by both natural and human resources. However, over the past five decades of development assistance by developed nations and donor agencies, her development policies seem not to have born some fruits in the medium or long term. Discoveries of abundant oil reserves, minerals and abundant wild life have not helped much. As of today, most countries still have elaborate development plans that have not translated into tangible results.

Africa's Vision. Despite all these challenges, Africa has a vision as expressed by AU:

“...To be an integrated, peaceful, prosperous Africa, driven by its own people to take its rightful place in the global community and the knowledge economy...” (AU, 2008).

Most African countries have national visions and strategies for development with similar aspirations as the AU's vision above. For example, Kenya and Nigeria have the following:

Kenya's Vision 2030 is the country's new development blueprint covering the period 2008 to 2030. It aims to “transform Kenya into a newly industrialising, middle-income country providing a high quality life to all its citizens by the year 2030” (Kenya, 2007 p.1)

The Vision 2020 represents Nigeria's Economic Transformation Blueprint and long term development agenda aimed at “repositioning Nigeria to become among the top twenty largest economies in the world by the year 2020” (Nigeria, 2011).

While the above visions are laudable, the strategies for their implementation do not have realistic attainable targets. They do not have clearly marked beacons to guide the extent of achievement within any reasonable time frame though it may be apparent in the vision statement.

New World Vision for Education. UNESCO together with UNICEF, the World Bank, UNFPA, UNDP, UN Women and UNHCR organized the World Education Forum 2015 in Incheon, Republic of Korea in May 2015. The forum ended in a resolution of Education 2030 (Incheon Declaration) of a new World Vision of Education for the next 15 years. The Vision aims at “achieving inclusive and equitable quality education and lifelong learning for all by 2030” (UNESCO, 2010 p 13, 14, 15). The following three targets out of seven under Goal 4 of the current Sustainable Development Goals (SDG), are particularly emphasized with respect to TVET:

Target 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university

Target 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent work and entrepreneurship

Target 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

In order to achieve the status desired in each of the above visions, a critical component will be the availability of a workforce with prerequisite, knowledge, skills and attitudes to drive Africa's economies toward their desired visions in addition to that of global vision 2030.

A research report by the McKinsey Global Institute (MGI, 2012), identified an emerging global labour market over the past three decades from 1980 to 2010 whose new characteristics may have major implications on the future labour market for the next three decades leading up to 2030. It was noted, for example, that approximately 1.1 billion non-farm jobs were created worldwide raising non-farm employment from 54% of all jobs in 1980 to nearly 70% in 2010. Of these jobs, 84% were in developing countries. China and India accounted for 44% of these jobs. There was an increase of 245 million college graduates in the labour force. Foreign-born workers contributed 40% share of the labour force in advanced economies. It was estimated that by 2010 there would be 75 million unemployed youth between the ages of 15 and 24 years.

The MGI report estimated a total global labour force of 3.5 billion in 2030 up from 2.9 billion in 2012. It also projected a potential shortage of 38-40 million college educated workers by 2020. It was estimated that India, South Asia and Africa will contribute 60% share in global labour force growth. There is also an estimated potential shortage of 45 million workers with secondary education required to work in labour intensive manufacturing and service industries in developing economies.

From the above study, several observations can be made on trends in the new emerging global labour force:

1. There will be a gradual slow growth in the global labour force and more so in advanced ageing economies.
2. There will be increased demand for high skilled (college) workers as economies go for high productivity levels with a correspondingly lower demand for low skilled workers.
3. Developing economies will be the dominant source of supply for high skill and low skill workers in the new global economy.
4. Low skilled workers will increasingly experience stagnating wages and unemployment.

In view of the above trends it is most likely for the entire global labour market to experience a shortage of high skilled workers across the board and stagnating wages and unemployment for low skill workers. Unskilled youth will be most affected in this regard.

Most countries in Africa had a colonial influence in education and training where social stratification in western countries was adapted setting apart academic and practical education. Vocational education was meant for the working class while the arts and languages were for aristocrats. It has not been easy to pull out of this quagmire though considerable progress has been made to embrace TVET as an integral aspect of general education as advanced by UNESCO.

In Nigeria, for example, Dike (n.d.) observed that the design of Nigeria's educational system is flawed and the neglect of technical education is an obstacle to national development and further observed that technical degrees are regarded as inferior to regular academic degrees. A similar trend is common in many African countries where white collar jobs are still preferable to vocationally oriented jobs.

However, TVET has over the years, taken a more central position as a strategy in national development planning and continues to gain more prominence in both developed and newly industrializing nations of the world (Kerre, 1999; Park, 2009). It has become the proverbial rejected stone that has now become a corner stone in nation building.

With this magnitude of challenges, Africa must be ready to invest in her vast youthful human resource. Education, often regarded as the great socio-economic equalizer in society. It is now even more evident as most countries bring their citizens to tertiary levels of education in response to the demands of the modern labour force. However, for much of Africa education is mainly conceived of as a cognitive process that entails acquiring of knowledge and conceptualisation of ideas without much application of it (book knowledge as is often referred to in conversations). A certificate is merely a passport or sufficient evidence to get a job. It has, thus, fuelled the so called paper chase as a rite of passage to various political, socio-economic and employment rights little regard for the knowledge, skills and attitudes required at this desired positions.

There is a need for a paradigm shift in Africa's approach to human resource development in tandem with the demands of her developing economies.

Human Capital Formation and Economic Development. Basic human capital theory recognises the pivotal role of a nation's workforce. Through knowledge, skills, attitudes and innovativeness, the workforce produces wealth for the nation. Critical workforce productivity factors can be measured or experienced through the following: Higher quality knowledge and capacity building- more knowledgeable and able to use equipment that is more productive than earlier versions; Capital deepening- has ability to use equipment that is more productive than earlier versions; Technological innovation- has ability to create, distribute, share and use the new knowledge and skills.

The above workforce productivity factors constitute the major link between education and economic development. They also constitute the key attributes of Technical and Vocational Education and Training as reflected in the following definition advanced by the United Nations Scientific and Cultural Organization (UNESCO).

Technical and Vocational Education and Training (TVET) referred to as:

“...A comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of Knowledge, Practical Skills, and Attitudes relating to occupations in various sectors of economic and social life...” (UNESCO, 2001:2).

The contribution of technology to development and empowerment at individual level is tremendous when considered in both historical and modern development perspectives. However, the study of technology and technical and vocational education and training (TVET) have not been as well grounded in our education systems as those of the arts, social sciences and the natural sciences (Kerre, 2006).

Early Recognition of TVET in Africa. Fortunately, the importance of TVET in national development has all along been recognised by African governments from early independence in the sixties. African leaders at an education conference in Addis Ababa in May, 1961 recognized that education was a basic factor in economic and social development and in particular observed that:

“...The African countries, in a century characterized by technological progress, should embark on a very broad expansion of technical and vocational education and specialized training in the interests of their own development and especially for their industrialization...” (ECA/ UNESCO 1961:9.37)

For three decades following the above declaration, Africa was thrown into turmoil as political coups, famine, environmental degradation, civil strife and natural calamities reigned. The impact on education and economic growth was debilitating.

African Union Recognizes the Role of TVET

In its Plan of Action for the Second Decade of Education (2006 – 2015), the AU recognised the importance of TVET as a means of empowering individuals to take control of their lives and recommends therefore the integration of vocational training into the general education system. The AU also recognised the fact that vast numbers of young people were outside the formal school system, and consequently recommended the integration of non-formal learning methodologies and literacy programmes into national TVET programmes. (AU, 2008)

It is within this framework that the African Union Commission spearheaded the development of a new strategy to revitalize TVET in Africa. The objectives of the strategy were: a). to revitalize, modernize and harmonize TVET in Africa in order to transform it into a mainstream activity for African youth development, youth employment and human capacity building in Africa; b). to position TVET programmes and TVET institutions in Africa as vehicles for regional cooperation and integration as well as socio-economic development as it relates to improvements in infrastructure, technological progress, energy, trade, tourism, agriculture and

good governance; c). to mobilize all stakeholders in a concerted effort to create synergies and share responsibilities for the renewal and harmonization of TVET policies, programmes and strategies in Africa.

TVET: The Master Key

If education is indeed the key to knowledge and understanding of our conditions, our problems and our environment then TVET is the master key because it provides us with the capacity to use our knowledge and ideas to provide for our needs and wants. It unlocks our potential to face our challenges that may come our way.

TVET is a critical tool in the provision and enhancement of human capability. As demonstrated in workforce productivity. It provides the skills and innovations required for the production of goods and services needed by society. Beyond our needs it also caters for our wants which provide us with quality lifestyles including recreation, travel, entertainment and communication amongst many others.

Exploiting the Potential of TVET for National Development. Many national policy frameworks and strategies in TVET have been contemplated, discussed and published in the African region. Thanks to UNESCO's support and promotion of TVET through its international project, UNEVOC. However, its implementation has been a major challenge. Some of the key factors hindering the exploitation of the full potential of TVET in national development have been identified in many forums debated by both TVET expertise and stakeholders (UNESCO-UNEVOC e forum 2013; 2015). These include:

1. The lack of commitment to the full implementation of TVET by governments due to its prerequisite considerable financial commitments
2. Lack of participation in curriculum review and training by business and industry Low wages and poor work environments that have discouraged bright youth from pursuing vocationally oriented careers.
3. Lack of clear pathways of progression to higher levels of education and training for those with ability and interest.
4. Lack of clearly articulated national qualifications frameworks that can harmonize and promote quality training and certification.
5. Lack of an articulated national policy for the determination and award of salaries/ wages commensurate with the qualifications, experience, work environment and the demand for services given in the public and private sectors.

In order to take full advantage of TVET's contribution in nation-building several major considerations will have to be undertaken including the following:

Government Policy and Legal Frameworks. The government of the day has primary responsibility for the provision of policy and legal frameworks to establish and implement an effective TVET sector. It is only through an Act of Parliament that the recognition and establishment of TVET as an integral aspect of general education can take root. Within such a legal framework, strategic plans can be developed and executed. Kenya's TVET Act of 2013 is one such example

(Kenya, 2013). Specific guidelines and commitments can be made including the following:

Curriculum Reviews. The type and nature of curricula at basic and post secondary levels of education and training can be specified. Various types of examinations and certifications within the confines of a national qualifications framework should be identified. There is dire need to embark on serious curricula reviews in order to effectively respond to the ever changing demands for new knowledge and skills in the modern workplace. Most TVET curricula are still traditional in content and in presentation. This should be carried out in collaboration with practitioners in business and industry.

For TVET graduates to be relevant in the job market curricula development and reviews must involve stakeholders in business and industry, after all, they are the consumers of the TVET products. The latest skills and innovations are found in industry and not in TVET institutions.

The TVET curriculum must also be synchronised with general education to facilitate vertical and horizontal movements in career paths. This will not disadvantage those who wish to proceed with higher education and training and are able to do so.

TVET Teacher Education. It is now a well known axiom that the quality of TVET is inextricably linked to the quality of its teachers, instructors and tutors. Unfortunately, for the most part of Africa no meaningful attention has been given to the development and training of TVET teachers. Besides, due increased technological innovations and the demand for higher education and skills in the modern workplace, much more is demanded of a TVET teacher today than ever before. Careful attention must be given when determining the type of curriculum, the levels of training and the competencies expected of the TVET teacher trainees.

TVET teachers/trainers are called upon to take advantage of ICT and introduce flexible and blended learning (FaB). This teaching mode combines face to face teaching with computer mediated activities so that learning can take place any time anywhere. Zambia has adopted this mode in collaboration with the Commonwealth of Learning (COL) project named INVEST Africa. Enrolments in TVET institutions have gone up since the introduction of FaB learning in Zambia.

Business and Industry Linkages. Successful TVET programmes cannot operate outside or without the support and contributions of business and industry. Linkages between TVET institutions and the employment sector will be beneficial to both in terms of experiences gained and research support to institutions and industry respectively. Since TVET graduates look forward to engagement in business and industry, field attachments would give experiences of the latest practice in their different occupational fields.

Financing of TVET. The cost of TVET programmes is comparatively much higher than that of programmes in the social sciences and quite often more expensive than that of the physical and biological sciences because of the technological equipment and tools required besides the infrastructure and facilities. The legal

provisions must include financial commitments from the national budget alongside the provisions for general education. Quite often, donor funding is sought but plans must be in place for future sustainability.

There is a minimum level of cost below which effective TVET cannot be given. Policy makers, planners and implementers of TVET must have a common knowledge and understanding of this minimum threshold.

The TVET sub-sector of education has numerous options and opportunities for income generation to augment government and donor financing. Successful automotive shops, bakeries, building construction units and smart farming entrepreneurs besides the main education and training programmes have emerged over the years.

Labour Market Information System. There is need for a comprehensive labour market information system that provides both trainers and industry with accurate information and data on labour demand and supply and other data that will be useful to educational planners, employers and students in making decisions about training, employment and careers choices and occupations. Unfortunately, voluntary or optional data collection has not worked in most situations. Due to the critical role such data plays, it must be legally binding on concerned parties to provide such data on monthly or quarterly basis.

Making TVET a Career Choice. The above concerns alone cannot make TVET an attractive career choice for the youth today. They must be informed by specific individual considerations if their impact is to be realised in the long run. Such considerations include:

1. **Career path.** Career paths should be direct, non-discriminatory and flexible.
2. **Career returns.** Remunerations and other benefits must be attractive and competitive with other careers
3. **Work environment.** Must be descent, safe and attractive
4. **Individual endowment.** Talents and passions should be accommodated
5. **Parental and others' influences.** These are often ignored yet they are common everyday experiences that children and youth encounter in their lives outside the school or learning environment.

Traditionally, occupational training was perceived to be skill oriented and preparation for job entry. Further education and training were not anticipated. Since it was often short term and at times single skill orientation, it did not require much academic rigour and those in employment were at the lowest rank in remuneration. This trend discouraged bright youth from pursuing TVET programmes because there were no pathways for advancement in their education and training to higher levels.

Today, TVET programmes are challenged to respond to higher demands for both knowledge and skills in the modern workplace. Furthermore, the rapidly changing technologies and products require skill upgrading and lifelong learning to keep up with these changes. To improve its image, TVET must be well planned and

organized and its quality must be scratch from its design to its implementation and to the quality of its graduates.

Young people are keen to learn about careers and occupations. They look for those that offer better remuneration and working conditions. They also look forward to advancing in their careers through further education and training to be competitive in the modern globalised workplace.

It is, therefore, necessary for government to initiate policies and regulations that would, in collaboration with business and industry, provide attractive wages and better working environments with more opportunities for career advancement in order to attract youth to TVET careers.

The Promotion of TVET in Finland

The Finnish model is one of the best in the promotion of TVET status (UNESCO-UNEVOC, e-forum 2013 p 19, 20). Its success is based on the following features:

Equivalence to general education institutions: In Finland, both TVET and general education tracks provide equal access to further studies at university level or applied sciences level. TVET institutions also benefit from generous basic and developmental funding on an equivalent basis to general education institutions.

Focus on employable skills: Finland's TVET curriculum emphasizes real-world competences and lifelong learning.

Public promotion of TVET: TVET schools across Finland promote their services to parents by arranging visits and parents' evenings on a regular basis.

The country's efforts have paid off: Over 50% of Finnish youth apply to TVET Programmes.

Parents no longer object to TVET as a first choice option, since students can complete the year-12 matriculation exam in the TVET track and have equal access to higher education. TVET programmes are more competitive than general education programmes.

TVET graduates and employees also have a major role to play in improving their own work conditions. They can organize themselves into professional practice groups or trades with strict quality service registrations with certain codes of conduct and practice to help them bargain for better wages in the employment sector. Electricians and plumbers, for example, must have recognizable certificates of practice to undertake contractual works.

TVET teachers and trainers are another group that can potentially organize themselves into professional groups like those in the medical and legal professions. This will give them a platform to lobby for recognition and better wages.

To a large extent, the responsibility for the promotion, development and quality assurance of TVET must rightfully belong to TVET professionals, and practitioners whatever their occupational calling and level may be. Lifelong learning and training apply here just as much as in other areas of specialization in general education.

Conclusion

Africa's development agenda, which essentially includes the pursuit of her basic needs as well as addressing the modern challenges of the 21st century, can best be addressed by her own sons and daughters who must choose and design their destiny. To do so successfully, they must be empowered with the knowledge and skills that can help them transform their economies and order a new quality lifestyle of their choice. In the emerging global labour market attainment of secondary education is basic and a must. It should also be capped with an appropriate high skill college education and training for one to be relevant and competitive in such a market.

It is through TVET that our creative minds, skilful hands and collaborative efforts bring to our enjoyment:

- A warm meal to nourish our bodies,
- A house to live in,
- A vehicle to travel in,
- Roads to travel on,
- Communication gadgets,
- The technology to transform:
 - Our minerals into useful products
 - Our waters, wind, sunshine, crude oil, coal into energy,
 - Our environment to sustain our planet

TVET is the answer, it is the Master Key. Our livelihoods will increasingly depend on it for our own survival. So we might as well make the best use of it!

Recommendations

From the above discussions and observations, TVET has a major role to play in Africa's development agenda. To augment this important role, several strategies must be adopted at national and regional levels to realise its impact in society.

- TVET must once more be regarded and implemented as an integral aspect of general education at the basic education level;
- At post-secondary level TVET must be adopted as a means for further training for occupational entry and/or preparation for further education and training for career paths with higher technical knowledge and skills;
- To give TVET the recognition it deserves in the education and training sectors, it must be firmly established within a legal framework with appropriate financial commitments from the national government through the existing exchequer or revenue disbursement establishment;

- National efforts must be expended to popularise TVET amongst youth and parents and to ensure that graduates of TVET institutions secure decent employment and remuneration to afford a reasonable quality of life.

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