

Re-strategizing Technical and Vocational Education and Training for Sustainable Socio-economic Development in the Developing Countries

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Abstract

Technical and Vocational Education and training (TVET) plays a vital role in the socio-economic development of any nation. TVET has become a driving force of change in the modern world of galvanizing resources for national transformation, because it is founded on the idea of creating a platform for the youth to acquire the necessary skills needed to fit in properly to technical family and also become self-reliant. The recurring issue today however, is not so much about the value or importance of TVET, but how to ensure its relevance, responsiveness and value in an increasing global economy, especially in developing countries, which are facing serious unemployment problems coupled with a declining standard of living. It is in this context, that this paper examines ways of re-strategizing TVET for sustainable socio-economic transformation in developing countries. To approach the issue, concepts of socio-economic development, roles of TVET in socio-economic transformation, the state of TVE in developing countries were also discussed. Identified ways of re-strategizing TVET for sustainable development includes: increased funding, improve quality and relevance of TVET program delivery, encouraging the participation of industry and private sector, integrating entrepreneurship training both in theory and practice, introducing a workable insurance scheme for the victims of accident during practice session to cover both the trainees and the trainer, among others.

Key words: *Re-Strategizing, Technical Vocational Education and Training, Socio-economic Development, Developing Countries*

Introduction

The hope of achieving accelerated socio-economic transformation in the developing nations is hinged on Technical and Vocational Education and training (TVET). As a concept, TVET is an action based programme of study with the ultimate goal of preparing individual for employment through practical skills acquisition. Olaitan in Keshinro and Ogunbote (2007) described TVET as education designed to encompass knowledge, understanding, attitudes, work habit and information needed by a worker to enter and make progress in employment in a useful productive basis. TVET is regarded as one of the main factors that provide countries all over the world with proficient and competent human resources through skill acquisition, which facilitate socio-economic transformation. TVET has also provided many countries with their own brand of technology. This reason underscore why TVET is given different definitions and attention by various countries.

Federal government of Nigeria, for instance adopted the definition and understanding of TVET by United Nation Educational Scientific and Cultural Organisation (UNESCO) in her National Policy on Education (2013) to mean: comprehensive term referring to those aspects of educational process involving in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupation in various sectors of economic and social life. While Ghana Education Service in Boateng (2012) described TVET as two separate but interrelated subjects leading to skill acquisition for national development. In Ghana's mainstream educational system, technical include trades such as industrial, engineering while vocational course are visual arts and home economic subjects. In Zambia, technical and vocational education and entrepreneurship training are integrated into a broader concept (Konayamu, 2011). This is apposite considering the fact that entrepreneurship training is required to market the finished products of TVET.

The monitoring and regulation for TVET are made by various countries to ensure that the purpose of TVET is accomplished. The purpose of TVET has been the provision of occupational skills for employment. The demographic, social, technological, economic and political forces, however have expanded and varied expectation of TVET (Akyeampong, 2002). The main proposes of TVET based on UNESCO's recommendation concerning TVET, identified three broad dimensions which include: TVET as an integral aspect of general education; TVE as a preparation for an occupational field, and TVE as an aspect of continuing education. As an integral aspect general education, TVE is expected to contribute to society's goals for greater democratization, social and economic development. Regarding preparation for an occupational field, TVET is designed to offer educational options corresponding to the needs of the youth which include employment training and preparation for higher education at tertiary level. And as a continuing education, TVET is expected to address personal and professional needs development of individuals for sustainable socio-economic development.

The growth that meets the needs of the present without compromising the ability of the future generation to meet their own need is referred to as sustainable development, Wikipedia (n.d) stated that development that optimizes the economic and societal benefits available with present, without adversely affecting the likely potential for similar benefit in the future. A primary goal of sustainable development according to Blewitt (2005) is to give a reasonable and equitable distributed level of economic and social wellbeing that can be perpetuated continually for many human generation. The socio-economic development on the other hand is the process of social and economic development. It is measured with indicators such as gross domestic product GDP, life expectancy, literacy and levels of employment. Socio-economic development encompass two distant aspects of development, under separate meaning, social development could be describe as a process which result in the transformation of social institutions in a manner which improves the capacity of the society to fulfill its aspiration. It implies a qualitative change in the way the society shapes itself and carry out its activities, while economic development is the development of economic wealth of countries. Economic growth refers to the increase of a specific measures such as real national income, gross domestics product or per capital income. These indicators groups countries in to the level of developed or developing.

The term 'developing' countries according to Wikipedia (n.d) generally denotes countries that have not developed in terms of per capital income, industrial growth, literacy, transportation and communication. Most of the developing countries were former colonies, and having gained independence, many of these countries, were faced with the challenges of nation and institution building on their own. Due to the common background, many of these nations are striving to

develop in economic terms, but are weigh down by lack of requisite manpower to work in industries. They also lack trained technical work force in agriculture, engineering, telecommunication, etc. Because of the slow pace of development, these countries are often at the mercy of developed countries who are members of Organization for Economic Cooperation and Development (OECD). The member countries of OECD assist developing economics in terms of financial aid or technical assistance such as in the area of donating TVET infrastructures, tools, machines and facilities required to train technical workforce expected to boost technological growth. This technical assistance are provided by OECD member countries with the view of promoting its stated objectives of achieving sustainable growth and employment and a rising standard of living in developing nations as a contribution to the development of world economy (Wikipedia, n.d).

Foreign aids and technical assistance are donated to the developing countries to help kick start industrialization and economic growth. However despite decades of receiving technical support in terms of infrastructure, machines, tools and equipment needed for TVET, many of these countries remained underdeveloped and deep in debt. The developing countries are still characterized by low economic development and high rate of unemployment, poverty and diseases, because of lack of skilled manpower. This means, TVET in these countries has not fulfill its expectation of equipping individuals with practical skills as means of livelihood and source of skilled workforce for industrial and economic development. It is against this background that this paper examine the state of TVET in developing countries and how to re-strategize for sustainable socio-economic development.

Role of TVET in Socio-Economic Development in Developing Countries

Technical and vocation education and training are vehicles for skills acquisition and manpower development aimed at equipping the learner with tools, culture and values necessary to function in the society. TVET is also, perceived to be the greatest weapon that can be used to achieve quick desirable socio-economic transformation in developing countries. Gambo (2002) stated that socio-economic development is not only achievable through the provision of relevant and functional TVET but will also assist in the development of skilled manpower required by the developing nations in laying solid foundation for technological and industrial development as well as source of income generation for individuals and the nation which will invariably serve as a catalyst and facilitator for realizing the true perspective for socio-economic development.

The training that leads to the development of manpower to provide skills that enable individual secure employment opportunities and ultimately work efficiently in the society is an important part of productivity. Productivity is a measure of the efficiency in which resources are converted into commodities and services. Higher productivity is a means to better the level of economic well-being and greater national strength and resourcefulness which Adenle and Shobowale (2007) stated is the main role TVET plays in the process of nation building. This mean that, the technological progress of any nation depends on the level of resourcefulness by her people which in turn is a direct reflection of TVET in that nation. The mere fact that TVET is indispensable for productivity and growth, coupled with the indisputable fact that productivity is a key factor for national development, implies that TVET plays an invaluable role in socio-economic development.

Notable roles played by TVET in the socio-economic development includes; generation of employment / creation of job opportunities, industrial development, alleviation of poverty, promotion of nation's economy, culture and identity. For developing countries, the most critical

question is how to create quickly hundreds of millions of jobs for the poor with limited capital for investment. The idea that most of these jobs could be created in the corporate sector or by government sponsored activities has been put to rest. Currently, the focus is on self-employment and entrepreneurship with emphasis on small firms in the informal sector. Employment strategies for developing countries (2012) stated that generation of employment, absorbing new technology, raising productivity, improving the quality and competitiveness of export all depend on the skills of the workforce. The document further stated that labour productivity in East Asia increased by 10 percent setting pace for industrial development. This is attributable to investment in education and technical skills.

It is widely recognized that industrial development is the process of shifting from agriculture to manufacturing, hardly any country have developed without going through this process. In other words, industrial development is the structural change least developing countries experience in the developing process from agricultural to an industrial economy (Guadagno, 2012). This process is accelerated by TVET which offer skills acquisition training in various trades, of metalwork, fabrication and welding, electricity / electronics, carpentry, civil / building technology, among others, necessary for industrialization. Mustapha (1999) explained that TVET assumed major roles in industrial and economic development in Malaysia. Learning from the experience of Malaysia and other Asian Tigers, the hope of attaining industrialization among the developing nations is built on TVET. This become obvious because of the rapid development witnessed in some developing economies, where there is constant and increased demand upon available industries for more and better production of goods and services. Thus, TVET is needed to meet the increasing demand of trained workmen.

Even as the world struggles to solve poverty problems, some developing countries remain below extreme poverty lines. The three identified poorest countries are Haiti, Zimbabwe and Republic of Congo. Haiti has a poverty prevalence rate of 77 percent with unemployment rate stand at an estimate of slightly over 40 percent. In Zimbabwe poverty rates has climb to 72 percent, while Congo's poverty level stand at 71 percent, with a rise in unemployment to un-presented levels (poverty in developing countries, 2015). Two major solutions proffered by interweave solution (2015) for reducing poverty in developing countries are provision of quality education and provision of self-sustaining programmes. This can be achieved by functional TVET, which provide training that leads to provision of self-sustaining business programmes or enterprises. TVET through formal, informal or non-formal system equips individual with skills to conquer poverty. Skills acquisition for instance, in welding, fabrication, motor vehicle servicing, radio repair, air conditioner repair, block moulding, masonry, among others, is adequate to conquer poverty and by extension improve the economic growth of the society.

It cannot be over-emphasized that TVET is the engine room for economic growth. A functional TVET promote the economy of developing nation through foreign exchange earning by exporting finished products from the local industries. Adequate and quality production of goods and services also discourage importation of goods, products and services from developed economies. This help in many ways in strengthening the local economy of developing nations which is a market driven economy. Millions of Dollars which would have gone into the importation of all sorts of finished goods will be invested into the local production and manufacturing sector. By implication, the economy of developing countries will receive boost which will definitely give sense of value, culture and identity of the nation and her citizens. Akwara, Udaw and Onimawo (2013) asserted that national identity is achieved when the citizens of a nation identified their common goals and the challenges and resolve to overcome the perceived obstacles which impede

national growth. Achieving national growth means the citizen will put in high productivity to turn round economy for good. TVET has the potential of engaging the citizens, especially the youth to transform the economy through skills acquisition in various trades, and keep the nation on the path of industrialization and sustainable economy where every citizen will be proud and strive to attain higher levels of development.

State of Technical Vocational Education and Training in Developing Countries

The present situation of TVET in developing countries is far from being satisfactory. This aspect of education is mainly be-deviled by lack of adequate funding, which has resulted in high rate of unemployment because of its poor delivery in terms of effective skills acquisition among the youth. A close look at the state of TVET in developing countries present common condition. Uthman and Tsado (2015) summarized the state of TVET in Nigeria to include: TVET lacks effective delivery and relevance to the reality of the workplace. Even in those occupational fields that show high demand for skilled workforce such as construction sector, TVET graduates remain unemployed because they have not acquired relevant practical competencies; inappropriate management of TVET institutions which is the missing link with the potential employers and lack of school monitoring and performance evaluation, which is responsible for the schools insufficient contribution to the development of human capital; there is shortage of qualified teachers and instructors, which is a severe constraint to the quality improvement; underfunding of TVET, the budget allocated is still relatively low compared to needs and priorities required to effectively implement TVET, gaps in equipment, workshops and teaching materials are common in TVET institutions and low participation of private sector investment in TVET, which has hinder a demand – driven programme of action in TVET in meeting the required competent workforce.

In Lesotho and Uganda, the state of TVET also present the common condition. Mbizvo (2001), stated that the thrust of funding of TVET in Lesotho has been a limiting factor to the development of TVET system and subsequently, to the supply of skilled manpower to the national economy. The sources of funding in Lesotho are private funding, public funding and donor financing. In private funding, institutions bear the full cost of training and they do not receive any government assistance. In this regard, the company's budget fund the full fees, public financing comes from public revenue generated with the support of international community which provide physical facilities, training and technical assistance. International donors are African Development Bank, World Bank and Skill Share Africa. Mbizvo further revealed that TVET in Lesotho lack coherent and consistent training policies in terms of funding. Also inherent in the system are weaknesses in the curriculum and design resulting in low morale of the staff. There is also lack of incentives to encourage industrialists to finance TVET programmes and general low enrolment characterizes TVET institutions in the country.

The situation in Uganda is not in any way different. The privatization and retrenchment of the public sector has reduced the formal sector jobs and the country faces critical shortage of skilled manpower in the categories of artisans, technicians and associated professionals (Mbizvo, 2001). TVET in Uganda has not been able to fill this gap. The education system in Uganda comprises of primary, secondary and tertiary levels. TVET falls in the category of tertiary, which aim to address an outlet for school dropouts and school leavers who fail to proceed to the university. The thrust of funding in TVET in Uganda is similar to that of Lesotho. However, there are varied training approaches and those have a bearing on the type of funding in Uganda. In polytechnic centres, they rely on fees paid by the trainees, government grants, donor funding and cost delivery systems. There are few technical colleges in Uganda, which are government sponsored institutions. The

colleges charge fees, which constitute between 50% to 60% of their funding. In the trade testing sector, they've revolving fund where candidate pay a fees which is used to pay the expert panel members. GTZ provide funds for equipment, training materials and building. The Private Vocational Training Centres, fall under Uganda Association of Private Vocational Institution (UGAPRIVI), these do not get any government funding. UGAPRIVI source funds from donors. Mbizvo (2001) also explained that TVET are being run in Uganda without an approved policy framework on issues concerning financing, which had led to poor funding of TVET with its attendant consequences of not meeting the required skilled manpower.

TVET in Ghana today is organized at all the three levels of education, primary level, secondary level and tertiary level. These are pre-vocational, vocational and technical. Like in other developing countries, the present situation of TVET in Ghana is far from being satisfactory, it faces a lot of challenges. Boateng (2012) stated that the commission set up to review the general educational system for strategic planning for the year 2003 – 2015 reported a serious neglect of TVET sub-sector which resulted in poor condition of the infrastructure and training facilities at the institutions, inadequate number of institutions and outdated training contents. The quantity and quality of the stock of trained national workforce have been affected out of over 500 high schools, only 21 technical and 29 vocational institutions are managed and resourced by the Ministries of Education, Manpower Development and Employment. This is far from been adequate. Despite the high cost required to run TVET only a partly 12% is being budgeted and spent on TVET. The government also has no significant involvement in apprenticeship training in Ghana (Boateng, 2012). Aside from inadequate financing and negative perception, socio-economic environment and the contextual framework within which vocational education is delivered in Ghana, there are other general factors such as huge number of poorly educated, unskilled and unemployed youth, uncoordinated, unregulated and fragmented delivery system, low quality gender and economic inequalities, weak monitoring and evaluation mechanism and poor management and ill-adapted organizational structure (African Union, 2007). These and other reasons, has made it difficult for the delivery of TVET in Ghana to meet her national aspiration of rapid technological growth.

The present state of TVET in Malawi is not different either. Saengpassa (2013) stated that there are problems with the quality of teachers and teaching techniques. The availability of teaching materials are also very limited in TVET institutions, which has made it difficult to arrange practice session for technical and vocational students. This has affected the quality of graduates from these institutions as they are unable to accelerate the country's drive towards industrialization. Similarly, TVET has not rightly taken its position as an agent of socio-economic development. UNESCO (2010) stated that TVET in Malawi offer limited access and is poorly funded. Malawi is one of the least developed countries in the world. According to the UNDP Human Development Index, it ranked 162 out of 179 countries in 2008. The present state of education, including TVET in Malawi has done very little to bring out the country from this impoverished state. Education in Malawi has not generated manpower for employment (Castel, Phiri and Stampini, 2010). The 2007 Business climate survey of the Malawi chambers of commerce and industry and the 2006 investment climate Assessment by World Bank (2006) rated availability of local skilled force as a major obstacle to doing business. The report further revealed that 62 percent of large companies and 58 percent of foreign companies identified lack of skill labour as a constraint. Even specific skills in engineering and sciences requested by the private sector are particularly scarce. Across the globe, the state of TVET in developing countries is far from being satisfactory, in terms of policy framework, funding, quality and relevance of the

training, among others, thus the need to re-strategize TVET in developing countries for sustainable growth.

Re-strategizing Technical and Vocational Education and Training in Developing Countries

From the foregoing review of the state of TVET in developing countries, it is evidence that this aspect of education is still striving to provide the requisite manpower with technical and vocational skills necessary for agriculture, commercial and economic development. In most countries, TVET has failed to meet its goals, hence the need to re-strategize its delivery approach in terms of funding, quality and relevance of the training and review of certain aspects of the policy framework. TVET programme is an expensive form of education and training because of its emphasis on equipment, both in workshop and laboratories and other teaching materials. All these come with huge cost implication, especially when the number of trainees increase, making it a challenge due to the budgetary constraints of TVET. A heavier financing system is critically needed if TVET is to be reformed in order to re-focus on the ever changing technological scenario and global demand. Government funding in form of capitalization of grant subsidies for procuring tools, machines and equipment in developing countries is no longer sustainable. A workable funding arrangement between the government, industries and other private companies must be instituted to solely fund or give special priority to TVET. Nigeria government experience readily come to mind, where taxes are collected from the industries and other private companies for funding education, through the agency known as Tertiary Education Trust Fund (TETFund), for funding education at tertiary level. A similar agencies can be created by the developing countries to give special funding to TVET because of its peculiar demand in terms of funding. UNESCO (2006) also observed that because of budget constraint, practice materials in TVET often reduce, which affects the quality of training. As a way of re-orienting TVET programme delivery for effective skills acquisition, UNESCO suggested that practice materials also known as consumable materials need to be eco-designed or use recycling to make them readily available for effective practice.

Another area of focus for re-orienting TVET for effective programme delivery in developing countries is to promote practicable and result yielding linkage with the industries through competency based training (CBT). CBT is an industry and demand driven education and training, its products have a high demand on the job market. Unemployment which other programmes are grappling with according to Kufaine and Chitera (2013) is not an issue because CBT approach target make the students acquire the skills needed by the industry. Anane (2013) also stated that having gone through CBT, the graduates of TVET either go into self-employment because they have acquired competencies to set up their own business or are absorbed by the industries whose skills requirement they have met by nature of their training. Experiences from other countries such as the Republic of South Africa, the Netherlands and Japan who have succeeded in making their education and training competency – based have shown that the graduates of TVET are not simply providing service in a working environment, but accomplish results in the world of work (Anane, 2013). Most of the emerging industries in developing countries are in dire need of expertise to run their industries, especially in telecommunication, oil and gas sectors, where proficient technical skills are required to surmount this challenge, TVET must re-strategize to actively involve industries through partnership in all aspects of TVET delivery, from the design and review of the curriculum to the practical training supervision and

certification of the graduates. In this regard, other countries should key in to Ghana and Malawi, who are now undertaking pilot study to make TVET programme delivery CBT.

Integrating entrepreneurship training into TVET will make more meaning and relevance for the graduates when confronted with realities of self-employment in the world of work. Entrepreneurship according to Okoli (2009) is a science of the mind that requires the willingness and capability to go into business enterprise. In the same context, entrepreneurship is the willingness and ability of an individual to seek an investment opportunities in an environment and been able to establish and run an enterprise successfully based on the identified opportunities. Any training that guide entrepreneurs to set up their business ventures for socio-economic transformation must be considered as an integral part of education received either through formal, informal or non-formal system. In this vein, Wushishi (2013) advocated for establishing institute of entrepreneurship on technical and vocational education (IETVET) in Nigeria, because Nigeria government has not shown much commitment to its policy statement of integrating apprenticeship scheme and entrepreneurship training into TVET. Wushishi further suggested that the proposed IETVET should be saddled with the responsibility of conducting professional examination for professionals and practitioners in TVET and also train artisans. It is instructive to note that some countries such as Zambia, Malawi and host of others have taken bold steps in integrating entrepreneurship into TVET. In Zambia the government through an act has issued and implemented a policy document known as Technical Education and Vocation Entrepreneurship Training (TEVET) (Konayama, 2008). Similarly in Malawi, a policy on Technical Entrepreneurial and Vocational Education and Training (TEVET) was introduced to broaden the conceptual focus on TEVET, comprising formal, informal and non-formal learning to create mechanism for an effective coordination and integration of the different TEVET sub-systems, with the view to develop a responsive and demand driven TEVET system, where graduates fits into industries or quickly set up the own business ventures with ease. A loan scheme can also be worked for the graduates of TEVET to enable them source fund for starting up their business enterprise.

Certain policies concerning TVET also need to be reviewed. The aspect of policies that hinder the effective programme delivery include policy statement on safety. In some countries, TVET national policy is silent on issues bordering on the safety of both the trainers and trainees, TVET involves working with sharp tools, machines and dangerous equipment. In the course of operating these machines, accidents can occur despite the instruction on safety rules, where such accidents occur, no clear statement is made on the TVET policy document of implementation. Consideration of safety should be given primary consideration in both TVET facility design and curriculum development. UNESCO (2006) stated that safety is of prime importance in TVET and at work place. Employers bear responsibility for the working condition and the wellbeing of the employees, employees themselves are responsible for act that might result in the production of dangerous or sub-standard goods or damaged property. This suggests that another aspect of safety which is the protection of TVET students / trainees and employees at workplace is important. The fact that policy issue on safety is non-existent in terms of treatment or compensation, scare away many students of TVET from practice session, which negatively affects the quality of such graduates as they plunge into the world of work. There is the need therefore to work out an insurance scheme for both the trainers and trainees in the field of TVET.

Conclusion

The developing countries are being confronted with the challenges of socio-economic transformation and the quickest way to achieve this is through TVET. Experience from the

developed economies has proved that, if a nation put emphasis on skills development through functional TVET, there will be sustainable development for industries and the nation as a whole. Therefore every effort must be made to re-strategize TVET for effective programme delivery in the area of increased funding, quality and relevance of the training, encouraging the participation of industry and private organisation, review of the curriculum to incorporate the concept of sustainable development, integrating entrepreneurship training with TVET both in theory or practice, introducing a workable insurance scheme for accident victims during practical sessions, TVET delivery should be competency based, among others. These areas of re-strategizing TVET, if taken seriously by the developing countries will guarantee sustainable socio-economic development in no distant future.

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