Technical Vocational Education and Training (TVET) as a tool for National Growth and Sustainable Development in Africa

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Abstract

The paper focused on Technical Vocational Education and Training (TVET) as tool for National Growth and Sustainable Development in Africa. Vocational and technical skills expose students to career awareness by exploring usable options in the world of work, thereby enabling citizens to have an intelligent understanding of the increasingly complexity of technology and stimulate creativity. This paper made attempt to x-ray sub-topics like concept of TVET, roles of TVET in nation development, challenges militating against TVET missions among others. Conclusion was drawn and useful recommendations were made which include among others, that African governments should incorporate TVET programme for their citizens, ensure total overhaul of all the educational systems in Africa, and review with urgency the national philosophy, goals and curriculum of education in order to incorporate workable policies towards attaining quality education, social harmony, sustain economic growth and national security.

Keywords: Technical Vocational Education and Training (TVET), Vocational counselling, Educational systems

1.0 INTRODUCTION

Africa is the world's second largest and second most-populous continent. At about 30.3 million km² including adjacent islands, it covers 6% of Earth's total surface area and 20% of its total land area, With 1.2 billion people as of 2016 (IMF, 2017). Africa remains the world's poorest and most underdeveloped continent and often nicknamed third world. Africa remains deeply rooted in scientific deficit which is the major bane of kills her development. Africa is suffering from mind boggling poverty, dilapidated infrastructure, low GDP and declining per capita income. Her problem is not geographical location, abled body workforce or colour of the skin but mental

poverty and untrained mind. According to the United Nations' Human Development Report (2013) and World Bank (2010), the bottom 24 ranked nations of the world (151st to 175th) were all African. Africa needs to be more inventive and innovative in a way she can proffer solutions to her internal problems, especially unemployment. TVET offers such opportunity

TVET refers to "aspects of the 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 occupants in various sectors of economic and social life" (UNESCO and ILO, 2001; UNESCO, 2015). In addition to technical knowledge and aptitude, increasing emphasis is on "softer" skills like communication, negotiation and teamwork. TVET is dispensed in public and private educational establishments, or other forms of formal or informal instruction aimed at granting all segments of the society access to life-long learning resources. TVET takes place in formal, non-formal and informal settings, and is linked to the world of work. It develops knowledge and skills from the basic level to the most advanced level in a wide range of institutional and labour settings, and in different socio-economic contexts.

Skills are essential for economic recovery and sustainable development. The promotion of TVET is encapsulated in goal 3 of the Education 2030 agenda: "ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university. According to United Nations (2013), education that Africa needs is one that is skills-based, technologically grounded and globally competitive. For Africa to be competitive there is a need to invest in reinventing its education and research systems.

One major problem that plagues Africa in her effort to produce the needed competent manpower for the rapid socio-economic development is how to train people for the right jobs. A majority of African youth who graduate from schools are not employed today due to inadequate technical skills. That is why some people who studied engineering are not able to do engineering feat. Some other people who studied computer science are not able to understand anything or diagnose computer language. This is because Africa educational system is an expired one (Gamalier, 2018). Africa cannot afford to overlook the critical situation of unemployment and mismatch qualities of our school graduates at this stage of her development.

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Technology is advancing far more slowly in Africa than it is in the rich world and the gap has been widening in recent years. The poverty gap is a technology gap, which is also a knowledge and education gap (Kwabena, 2017). Agenda 2063 recognises that the future of the continent, in part, rests on the skills, knowledge, talents and commitment of its young people. The aspirations therein "reflect our desire for shared prosperity and well-being, for unity and integration, for a continent of free citizens and expanded horizons, where the full potential of women and youth are realized, and with freedom from fear, disease and want."

TVET programs for African youths are deemed central to the effort to foster sustainable development and attain MDG-1 which is based on eradicating extreme poverty and hunger in Africa". There was a strong positive correlation between a country's skills base and its economic development. David (2017) opined that a one percentage point increase in a country's score on its engineering index correlated to a 0.85% increase in GDP per capita. A well-developed TVET system in Africa will offer a chance to those students who are more comfortable with practical and will also be an alternative to those who drop out of the general academic cycle. In general, TVET gives individuals the skills to live, learn and work as productive citizens in a global society.

The missions of technical and vocational education and training is to Provide trained manpower in applied science, technology, and business particularly at craft, advance craft and technical levels. Also, the Provision of technical knowledge and vocational skills necessary for agriculture, commercial, industrial and economic development and to groom people who can apply scientific knowledge to the improvement and solution of environment problems for the use and convenience of man. It also includes giving training and impact necessary skills to individual to be self-reliance economically, enables graduates secure employment or set up their own business and foster rapid national development through production of sufficient trained man power in technology and science.

This vision of TVET is attributable to the crisis that Africa countries are experiencing. The serious economic and financial crisis that the continent is passing through have generated far-reaching

changes in the production system and the labour market, and contributed to increasing graduate unemployment. The principal objective of TVET is to train youths and adults alike, thereby readying them for the labour market.

One major problem that plagues Africa in her effort to produce the needed competent manpower for the rapid socio-economic development is how to train people for the right jobs. Government at all level must consider it necessary to help her citizens acquire basic skills that suites the demands of modern industries. In this paper, attempts would be made to x-ray the impact of Technical and vocational education and training' (TVET) on National Growth and Sustainable Development in Africa. Indeed, the purpose of this paper is to deliberate on TVET as a tool for National Growth and Sustainable Development in Africa and discuss the appropriate policy options that would create new dynamics for technical and technological training in Africa.

Statement of the problem

Africa remains deeply rooted in scientific deficit which is the major bane of her development. Technology is advancing far more slowly in Africa than it is in the rich world and the gap has been widening in recent years. The AU has only 2% of the world's international trade. Still today, over 40% of people living in sub-Saharan Africa live in absolute poverty. African Union's economy totals US**$**1.515 trillion, ranking it 11th after Russia. At the same time, they have a combined total debt of US$200 billion. Africa cannot afford to overlook the critical situation of unemployment and mismatch qualities of our school graduates at this stage of her development. Inadequate skills and poor knowledge economy cripples the economy as there is no skilled labor to drive the nations. This paper attempts to discuss the impact of TVET on National Growth and Sustainable Development in Africa.

2.0 CONCEPT OF TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET)

TVET is defined by UNESCO (2015) as "those aspects of the educational process involving, in addition to general education, the paper of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to

occupation in various sectors of economic life". TVET thus equips people not only with vocational skills, but with a broad range of knowledge, skills and attitudes that are now recognized as indispensable for meaningful participation in work and life. Examples of the benefits include self-awareness and self-esteem, and strengthened interpersonal, citizenship, communication and entrepreneurial skills. This definition highlights the importance of the acquisition of practical knowledge, skills and attitudes in any training offered by TVET providers.

TVET is a training and education that relates to a specific trade in which the learner participates and directly develops the society in a particular group of techniques. It is an education that gives individuals the skills to live, learn and work as a productive citizen in a global society. It provides skills; knowledge, attitude and value needed for work place, and prepares learners for career, based on manual and practical activities.

The promotion of TVET is encapsulated in goal 3 of the Education 2030 agenda: "ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university". Training and capacity building for both men and women is a key for poverty reduction. Basically, if people lack in technical skills, knowledge and entrepreneurial skills, the natural resources will tend to remain unutilised or underutilised

Basically, if people lack in technical skills, knowledge and entrepreneurial skills, the natural resources will tend to remain unutilised and underutilised.

TVET offers skills aimed at rural development like farm related skills and knowledge, establishment and sustenance of small and medium enterprises directly related to rural needs and demand. This can go a long way in curbing rural-urban migration in Africa, as individuals would have skills to keep them occupied in the rural areas. TVET also has the potential to curb high rate of unemployment, especially among the youth and women, as it offers the much needed skills to develop the informal sector in Africa. Through TVET, individuals are being positioned to actualise self-employment, thereby reducing pressure on the few available jobs in the formal sector. Key community, professional and industrial leaders should,

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therefore, engage constantly in TVET, as this will lead to higher performance and productivity of TVET trained graduates and enhance wages and job opportunities.

The only veritable and potent instrument needed to add value to both human and material resources is technical education and training. This has been affirmed by (Benson, Lawrence and Bashiri, 2008) that technical and vocational education and training have been recognised in the world over as tools for alleviating poverty and enhancing technological development.

Therefore, the salvation of a developing country like Nigeria particularly in this 21st century depends, to a great extent, on sound, relevant, modern and functional technical and vocational education and training.

The Role of Technical Vocational Education and Training (TVET) In National Growth and Sustainable Development in Africa

(i). Poverty reduction: ***Sacks*** (2002) statement on poverty and alleviation is worthy of consideration:

> *"Poverty, for the rabbis, was a curse, with no saving graces. Poverty does not ennoble; it demeans. Therefore, the poor must be helped to escape from their poverty—through education, training, the creation of employment opportunities, and help in starting their own businesses"*

This assertion presents a 'blueprint' for global action against the scourge of poverty today, particularly in Africa. The AU has only 2% of the world's international trade. Still today, over 40% of people living in sub-Saharan Africa live in absolute poverty.

(ii). Employment and wealth creation: Vocational and technical education provides ample employment opportunities for the teeming unemployed youths in Africa. Vocational education is capable of creating millions of jobs for African youths. This will lead to sustainable economic development for Africa. From 1993 to 2008 the average per capita income of sub-Saharan African economies barely budged—it increased from **$742** to **$762** per year (Nkechi, 2017). GDP per capita determines the level of economic development of the country: the higher the GDP per capita in a country the higher the economic wealth of its citizens. By measuring

GDP by purchasing power parity (PPP), the African Union's economy totals US$1.515 trillion, ranking it 11th after Russia. At the same time, they have a combined total debt of US$200 billion. TVET can help change this downward trend. Table one below indicated the List of African countries by GDP (nominal), and List of African countries by GDP (PPP). Egypt has the highest GDP (PPP) (1,292,745) by African standard followed by Nigeria (1,168,399), and lastly Tanzania with GDP (PPP) of 176,465. Sub-Saharan Africa countries have a total GDP (PPP) of 3,847,602.54 (**World Bank, 2018).**

Table 1:

Economy of Africa, List of African countries by GDP (nominal), and List of African countries by GDP (PPP)

Rank	Country	GDP (PPP, Peak Year) millions of USD	Peak Year
1	Egypt	1,292,745	2018
2	Nigeria	1,168,399	2018
3	South Africa	794,706	2018
4	Algeria	666,960	2018
5	Morocco	314,742	2018
6	Ethiopia	222,258	2018
7	Angola	198,821	2018
8	Sudan	198,356	2018
9	Libya	187,842	2010
10	Tanzania	176,465	2018

Source: World Bank (2010)

(iii). Increase pace for technological innovations: A well-coordinated TVET programme equips a nation with the requisite manpower required for her technological transformation. The technical knowledge, skills and competencies acquired would increase the pace of technological innovation and improvement in the service, and industrial sectors of the national economy, which will subsequently boost service deliveries, facilities maintenance and product development.

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(iv). Improvement of living standards of citizens: TVET seeks to assist African nations to improve her civilization by enabling individual keep pace with the rapidly changing industrial and technological development. In the course of the technological and economic transformation of a nation, skills acquired through vocational and technical education programmes, on a massive scale, will boost development in all sectors of the nation's economy. As agricultural productivity is increased, medical science is developed, and the transport, building and construction industries and public amenities are adequately maintained, there will be a commensurate improvement in the standard of living of the citizenry.

(v). TVET Promotes political stability in Africa: Beneficiaries from TVET programme are often self-employed, and work towards self-actualization. This help in curbing rise in crime and other social vices. As the citizens engage in meaningful and productive socio-economic activities, the gap between the rich and poor tend to close, and the people are less likely to become restive, but rather, are more peacefully and favorably disposed to civil authority, create the conditions of political stability of nations (Robinson, 2016).

3.0 CHALLENGES OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING AS IT AFFECT NATIONAL GROWTH AND SUSTAINABLE DEVELOPMENT IN AFRICA

The capability of technical and vocational education and training for job creation is not doubted but however, constrained by several challenges among which are poor funding, lack of training personnel and facilities.

(i). There is a general misconception of TVET as an education for those that are academically incapacitated. TVET system in Africa is not demand driven because of poor societal value attached to it. Attachments and linkages to industry are fragile, poorly planned and inadequately supervised.

(ii). Failure to formulate sustainable TVET policies that will move TVET programmes from grass to grace. The Heads of State and Government Summit of the African Union held in Malabo in June 2014 adopted the Technical Vocational Education Training (TVET) Continental Strategy. It is based on the fundamental principle that there is a need for a paradigm shift in the perception

of technical and vocational education and training. The educational is characterised by outdated curriculum, a mismatch between skills taught and those demanded by the industries, inadequate quality assurance mechanism, inadequate physical and learning resources and low participation of private sector. Changes in curriculum without keen effort for proper implementation of the stipulations will result in failure.

(iii). Deficient TVET equipment and machines

There are wide spread insufficient equipment and machines in institutions that should facilitate acquisition of necessary skills. TVET is faced with the problem of how to establish technological infrastructure, how to upgrade existing materials and how to train resources available in TVET sector. For TVET to be more market driven, it is necessary for the government to involve private organisations in the formulation of the curricular and in the certification of skills offered. Government should also encourage organisations to participate in providing on-the-job training by creating incentives for companies.

(iv). providing broader competencies alongside specialist skills

Skills for economic development include a mix of technical and soft skills. Empirical evidence and TVET policy reviews conducted by UNESCO suggest that TVET systems may not as yet sufficiently support the development of the so-called soft competencies. (UNESCO. 2013: UNESCO. 2013c, UNESCO, 2013d).

(v). Gender disparities

Recent years have seen rising numbers of young women enrolling in TVET programmes, especially in-service sector subjects. At times the challenge is to bring more males into female-dominated streams. However, beyond number games, the real gender parity test that TVET systems are yet to pass is balancing the gender participation in programmes that lead to employability, as well as to decent and high-paying jobs. Gender disparities in learning opportunities, and earnings, are a cause for concern. The persistent gender-typing of TVET requires concerted attention if TVET is to really serve a key facilitative

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role in shared growth, social equity and inclusive development (Marope, ; Chakroun, ; Holmes, (2015).

(vi). Globalization

Globalization of the economy and the consequent reorganization of the workplace require a more adaptable labour force, requiring countries to rethink the nature and role of TVET. Globalization intensifies pressure on the TVET sector to supply the necessary skills to workers involved in globalized activity and to adapt existing skills to rapidly changing needs. As a consequence, there is an increasing requirement for more demand-driven TVET systems with a greater focus on modular and competency based programmes, as well as on cognitive and transferable skills, which are expected to help people adapt to unpredictable conditions (Marope, Chakroun, ; Holmes, 2015)

(vii). Labour market demands and trends

Following the global financial crisis in 2008, labour markets across the world experienced structural changes that influenced the demand for skills and TVET. Unemployment Worsened and the quality of jobs decreased, especially for youth. Gender differentials in labour force participation placed men ahead of women, and skill mismatches deepened. The crisis impacted labour markets adversely and led to deepening uncertainty, vulnerability of employment, and inequality (Bacchetta, & Jansen, 2011).

(viii). Short falls in TVET funding

Poor funding is another major constraint that faces TVET sector, which culminate into poor quality of technology skills acquisition. Africa Government's budget on TVET sector is always limited. There is need for increased funding toward TVET sector in Africa. The fund should be directed towards research and development, acquisition of appropriate and up-to-date equipment and tools, general maintenance and management of TVET institution. The government should strive to meet up with the UNESCO (2000) recommended standard of 26% of the annual budget to education and contribute 0.42 percent of their GDP on research development

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(ix). Incompetent resource personnel

There are also many challenges for TVET sector in Africa in terms of systematic professional development of instructors and teachers. TVET instructors and teachers are posed with problems on how to use new technology and keep up with teaching methods of various vocational educations. The assistance of analogical TVET teachers to understand and cope with the new digital generation calls for adequate resource investment. This is becomes the core issues as to why TVET centres in Africa are not able to employ trained trainers or support them in updating and upgrading their skills, and as well purchase most appropriate training facilities, aids and technology for practical on-the-job training.

In order to ensure a TVET system that truly contributes to national development or a system that is demand driven, it will be necessary to create a system that is flexible and have a high rate of participation of all concerned parties. This is necessary since the demand for skills is difficult to predict, as technology develops at an ever-increasing rate, and some skills accordingly become obsolete, and others in more demand.

(x). Poor mindset and values of people

It has always been a challenge to change the mindset of parents, the community and industries about vocational education and training being second choice to academic education. Most parents want to see their children becoming engineers, doctors, lawyers etc. just because they believe that this will give their children better job opportunities. This challenge is vital to development of TVET sector and it is apparently one of the major obstacles to improve the social status of TVET.

4.0 ROLE OF EDUCATIONAL COUNSELLORS TOWARDS NATIONAL GROWTH AND SUSTAINABLE DEVELOPMENT IN AFRICA

Counselors have a plethora of activities to undertake to ensure that youths become intrepid skillful. Youths have the potential to excel in various activities when properly guided. Counselors should harness the latent vocational and technical spirit among African youths towards becoming technically competent in there careers by providing them with vocational guidance, career

counseling, assertiveness training, and by making information available to them.

(i). Vocational guidance

Vocational guidance is concerned with the world of work. It enables youths to make choices that are realistic with the needs of the society. According to Kolo (1992), vocational guidance is a process of helping individual to have a clear understanding of his aptitudes, ability, interest, ambition, resources and limitations in relation to the world of work. UNESCO (2005) viewed vocational guidance as the process of helping an individual to choose an occupation, prepare for it, and enter it and progress in it. Counselors should help youths to choose careers in relation to their aptitude and ability, develop reasonable plans, set realistic goals, and handle career related stress and discrimination. They should help youths to develop personality attributes like honesty, confidence, and perseverance. Counselors should assist youths to acquire knowledge of business management and intensify Vocational and technical education with the use of blended and solution- focused counseling strategies to help students acquire technological skills.

(ii). Career counseling

Career counseling is the process of helping individuals to prepare for their career choices and achieve success in them by developing their talents, competence and improve their personal inadequacies. Counselors should acquaint youths with the benefit of TEVT programme through seminar, conferences and workshop. Students should be trained in social skills, networking facilities, creative enterprises and cultural norms in relation to their careers.

(iii). Cognitive restructuring - Cognitive restructuring is a counseling technique that alters negative thoughts and believes into neutral or positive statements. Cognitive restructuring technique is designed to uncover dysfunctional and maladaptive thoughts that often accompany psychological distress and problems (Okoli, 2002). According to Okoli (2002), all behaviour whether deviant, adaptive or maladaptive, appropriate or inappropriate, are learned and maintained according to some principles. Counselors should organize orientation programme for youths to make them unlearn some thinking patterns and cultural norms that stall their technological aspirations.

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(iv). Information technology - Counselors should acquaint students with information in their areas of interest. Counselors owe it a duty to create public awareness on the use of information technology by encouraging them to access the internet, print and electronic media, and information about the labour market.

5.0 CONCLUSION

The mission of technological and vocational education and training is laudable and ambitious and worth pursuing for national development. But some factors have posed serious challenges to its missions and have almost rendered it a mirage. The importance of TVET cannot be undermined. Unemployed, juvenile delinquency, adult crime, unstable and unsatisfactory homes have been attributed to inadequacies of technical and vocational education and training. Some social reformers, professionals, sociologist, educators and writers have been so convinced of the broad social value of TVET and ascribed most of the social ills to vocational incompetence. Therefore concludes that TVET is the answer to societal menace. Specifically, this will be through strengthening the technical and vocational education and training through scaled up investments, the establishment of a pool of high-quality TVET centres across Africa, greater links with industry and alignment to labour markets, with a view to improve the skills profile, employability and entrepreneurship of especially youth and women, and closing the skills gap across the continent.

Recommendations

- Effort should be geared towards appointing somebody who is a true product of TVET and who has TVET skills in finger tips and blood to head and direct TVET institution and programmers.
- Ministry of education, science and technology should inspect all TVET institution to ensure minimum standard in terms of curriculum, TVET facilities used, methods of teaching and assessments and quality output
- Ensure that the staff providing TVET education must have relevant industrial experience, in addition to their qualifications.

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- Ministry of education should ensure that all teachers in TVET programme undertake annual professional development in the relevant TVET areas to ensure that they remain current with the best practice in the areas.
- Guidance counselors should be employed to guide and counsel the aspiring students on career choice so that they will match their abilities with job requirements.

References

Bacchetta, M. and Jansen, M. (eds). *(*2011*). Making Globalisation Socially Sustainable*. Geneva, ILO and WTO. Retrieved from https://www.wto.org/english/res_e/booksp_e/glob_soc_sus_e.pdf. on 12th July, 2018.

Bokova, I. (2013). *Workshop on Women in Engineering in Africa and the Arab States, December et professionnelle au Benin*. Paris. Available at https://www.unaoc.org/2013/02/irina-bokova-unesco- /

David, W. (2017). *country's score on its engineering index correlated to a 0.85% increase in GDP per capita*. Retrieved on 22/05/2018 from *https://en.unesco.org/news/workshop-women-engineering-africa-*

Gamalier O. P. (2018). *People in Nigeria are getting expired education.* Retrieved from https://www.google.com/search?client=firefox- on18 May 2018.

Globalpolitician.com. (2010*). "Neo-Liberalism and the Economic and Political Future of Africa".). 19 December (2005). Archived from the original on 31 January 2010.* Retrieved 18 May 2018 from http://myengineers.blogspot.com.ng/2016/08/the-role-of-vocational-and-technical.html

Hull, Clark (1952). *A History of Psychology in Autobiography. Worcester, MA: Clark University Press.*

IMF (2017). Edition) GDP nominal per capita – international dollar. Available at https://www.google.com/search?client=firefox-b&source=hp&ei=- Y8.".

Kolo, J. (1992). *Vocational guidance and counseling*. Retrieved 12th July, 2018.

Amede (2019)

Kwabena F. B. (2018). *What technology can do for Africa.* Retrieved on 22/05/2018 from https://www.economist.com/special- report/2017/11/09/what-technology-can-do-for-africa.

Loo, S. (2018). Teachers and Teaching in Vocational and Professional Education. Abingdon, Oxfordshire: Routledge Ltd.

Marope, P.T.M.; Chakroun, B.; Holmes, K.P. (2015). *Unleashing the Potential: Transforming Technical and Vocational Education and Training (PDF). UNESCO.* Retrieved fromhttps://unesdoc.unesco.org/ark:/48223/pf0000233030 on 12th July, 2018.

Nkechi I. (2017). *Technological development, key to african transformation.* Retrieved from https://leadership.ng/2017/08/29/technological-development-key-african-transformation-

Okoli, C.E. (2002). *Techniques of behaviour modification*. Lagos, Nigeria: Behenu Press.

Robinson, E.(2016). Role of vocational and technical education. Retrieved from http://www.rcmss.com/2016/ijcbem/The%20Role%20of%20Vocational%20and%20Technical 20Educ on 12th July, 2018.

Sack, J. (2002). The Dignity of Difference published. It is awarded the Grawemeyer Prize for Religion (USA) in 2004. https://www.theguardian.com/books/2002/sep/21/highereducation.news1

Science *(2008). "Capitalism – Africa – Neoliberalism, Structural Adjustment, and the African Reaction".* Retrieved 1 https://www.google.com/search?client=firefox-

UNESCO (2005). State of education in Nigeria. Retrieved 12th July, 2018 from http://www.unesco.org/new/en/culture/themes/cultural-diversity/cultural-expressions/the-

UNESCO. *(*2011*).International standard on education.* http://www.unesco.org/new/en/social-and-human- Retrieved on 12th July, 2018.

UNESCO. (2013c). *Policy Review of TVET in Cambodia*. Paris, UNESCO. http://unesdoc.unesco.org/. Retrieved 12th July, 2018.

UNESCO. (2013d). *Policy Review of TVET in Lao PDR*. Paris, UNESCO. http://unesdoc.unesco.org/ Retrieved 12th July, 2018.

UNESCO. (2017) *"Technical and Vocational Education and Training (TVET)". www.unesco.org. Retrieved 1 April 2017.*

UNESCO-UNEVOC. (*2017*) *"What is TVET?". www.unevoc.unesco.org*. Retrieved 12th July, 2018.

United Nations *(*2004*).* Economic report on Africa 2004: unlocking Africa's potential in the global economy (Substantive session 28 June–23 July 2004), United Nations Retrieved 12th July, 2018.

United Nations (2013).*"Human Development Reports. United Nations Development Programme". hdr.undp.org.* Retrieved 12th July, 2018.

World Bank (2018). Economy of Africa, List of African countries by GDP (nominal), and List of African countries by GDP (PPP). Retrieved 12th July, 2018.

World Bank (2010). *"World Bank Updates Poverty Estimates for the Developing World". 26 August 2008. Archived from the original on 19 May 2010.* Retrieved 12th July, 2018.

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