

Holistic Approach to Technical and Vocational Education and Training (TVET) in Nigeria for Human Resource Development; The Roles of the Public and Private Agencies

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Abstract

No nation develops beyond the human resource it possesses, this is because the human resources of a nation, not its physical capital or its natural resources, ultimately determine the character and pace of its economic and social development. In the context of economic and social growth, Nigeria is not alone in its search for relevance in global competitiveness. As human resources are presumed as the life bloodstream of any nation to unlock the doors to modernization, development, and global competitiveness. As a result of this, Technical and Vocational Education and Training (TVET) is acknowledged as the propellant influence that will assist any nation to be revolutionary in decoupling its growth and its resources by engaging in technological innovation and human capital development. Therefore, this paper is centered on Technical and Vocational Education and Training (TVET) in Nigeria and the roles of the public and private agencies in the development of the Nigerian human resource. This study also looked at the history of Technical and Vocational Education and Training (TVET) in Nigeria and its current state. The paper further argued that Nigeria does not seem to give Technical and Vocational Education and Training (TVET) the attention it deserves. The study concludes that public-private partnerships (PPPs) should be extended to the expansion of infrastructure gap and the growing demand for Technical Vocational Education and Training (TVET) while recommending that Periodic staff and students exchange programs between TVET institutions and the industrial sector should be frequently implemented towards providing students and staff with relevant and contemporary technical experiences, which also benefit the industries from the theoretical understanding of TVET personnel and students will benefit from practical experiences from the industries.

Keywords: Technical and Vocational Education and Training (TVET). Human capital resource, Human capital development, Skill acquisition, Public-Private Partnerships (PPPs).

Introduction

Nationhood is propelled around the ideological concept that every nation is desirous for the development of its manpower resources and sustains its development within the context of being politically and economically independent. This fact is inevitable in the sense, that Technical and Vocational Education and Training (TVET) is considered a starring factor for the adherence of industrial, manpower growth and the attainment of socio-economic advancement in any society. Nsiah-Gyabaah in Ansah and Ernest (2013) prognosticated that the link between Technical and Vocational Education and Training (TVET) and national development subsists in the training, educating, and development of national capacity towards applying science and technology solutions to socio-economic problems. While Akpomi in Okwelle and Deebom (2017) also argued in the same direction that no nation can advance either in terms of technology, industrial, and economy without

developing a strong inventiveness in sustaining the aim and objectives of Technical and Vocational Education and Training (TVET) towards the creation of wealth reduction of poverty and employment generation. This is because Technical and vocational education and Training (TVET) is associated with the supply of skilled labour in the labour market, increases in employability and availability of skilled workers, and the promotion of citizens in the participation of socio-political activities.

Furthermore, Technical and Vocational Education and Training (TVET) has the possibilities to create jobs, generate income, reduce poverty, technologically transform society and assist in the minimization of insecurity which unemployment and poverty usually breed. Yet, Nigeria as a nation is bedeviled with many socio-economic, developmental, and security challenges. These challenges are issues that would have been mitigated through the holistic application of Technical and Vocational Education and Training (TVET) which impart upon its recipients with competencies and entrepreneurial spirit that are needed to create wealth and enhance the economic development of the nation only if Technical and Vocational Education and Training (TVET) is adequately funded and re-emphasized in the Nigerian education system (Tiamiyu and Babalola, 2013 in Obidile, et al. 2020). Moreover, the most effective process of revamping Technical and Vocational Education and Training (TVET) in Nigeria as suggested by Makinwa et, al. (2019), Adebayo and Ayegbusi, (2017), Adiele and Ibietan, (2017), and Umar and Tubosun. (2016), is the aspect of incorporating Public-Private Partnership (PPP) in Technical and Vocational Education and Training (TVET) in the development of the human capital resource in the nation.

Therefore, this study shall discuss the roles of the public agencies and private corporations in the context of the role of Public-Private Partnership (PPP) in Technical and Vocational Education and Training (TVET) and how Technical and Vocational Education and Training (TVET) can influence human capital development in Nigeria.

Conceptual Statement on Technical and Vocational Education and Training and Human Capital Development

Technical and Vocational education and Training (TVET) is perceived as the total experiences of a recipient that's acquired over a range of training that is geared towards the learning of new techniques and processes for surviving in occupation and also equipping the recipient with appropriate skills, abilities, and competencies for self-employment. The National Policy on Education (1981 revised) explained that Technical and Vocational Education and Training is an aspect of educational training that encompasses the acquisition of practical and applied skills as well as basic scientific knowledge and training. Similarly, Technical and Vocational Education and Training (TVET) is comprehensively attested to be a formal or informal curricular program, in addition to general education, the study of technologies and related sciences, the acquisition of practical skills, attitudes, understanding, and knowledge relating to occupations in all the sectors of economic, communal life and granting all segments of the society access to lifelong resources (UNESCO and ILO in Akinyele and Bolarinwa, 2018). Technical Vocational Education and Training (TVET) is organized as a series of learning methodologies aimed at both preparing people for employment and ensuring their well-being later in life. Technical Vocational Education and Training (TVET) can also make a substantial contribution to skill development as well as human resource plans and policies that are tailored to meet the needs of national and global labour markets demands (Igberaharha, 2021).

Furthermore, Technical and Vocational Education and Training is, therefore, a fundamental element of training that brings about manpower and national development due to its characteristics of allowing its recipients and the societies to unlock their potentials, expand their horizons and adapt to the changes in the dynamic world (Nsiah-Gyabaah in Ansah and Ernest, 2013). Some of the missions of Technical and Vocational education and Training (TVET) are:

- The provision of trained manpower in applied science, technology, and business, particularly at craft, advanced craft, and technical levels.
- The provision of technical knowledge and vocational skills necessary for agricultural, commercial, industrial, and economic development.
- To groom people who can apply scientific knowledge to the improvement and solutions of environmental problems for the use and convenience of man.
- To give training and impart necessary skills to individuals for self-reliance economically.
- To enable graduates to secure employment or set up their businesses and become self-employed and be able to employ others.
- To foster rapid national development.
- For the production of sufficient trained manpower in technology and science.

The Technical and Vocational education and Training (TVET) principal objective is to train its recipients and prepare them for the dynamic evolution of the labour market, concerning technical revolutions and innovations in science and technology towards meeting local and international markets demands. (UNESCO, UNEVOC in Akinyele and Bolarinwa, 2018). Ojimba (2012) in Hassan (2018) asserted that Vocational and Technical Education and Training is primarily designed to prepare persons for employment or self-employment opportunities in recognized occupations and institutions. Vocational and Technical Education and Training encompasses various fields of study as Agricultural education, Fine and applied arts education, Business education and vocational trade in soap making, hairdressing, Computer training among other aspects of endeavours.

The term Technical and Vocational Education are usually used interchangeably as identical terms, but Okoye and Onyenwe (2016) augured that these educational programmes are distinct in terms and perceptions. Vocational education is centered on skill acquisition programmes that are designed to equip and inculcate specific entrepreneurial, trade, creative and commercial competencies values in its recipients at the lower level of education for entry into a circumscribed workplace. While Technical education is a multiple designed educational program for the provision of general technical knowledge which prepares its recipients at a higher level of education but frequently lower than the first degree for entry into a recognized occupation.

Human resource stems from the fact human beings are the most important factor in any organisational structure, this postulation is because human resources are endowed with unrestricted decision-making power that serves as a competitive advantage over other resources (Chukwuma, 2015). Human resource development is the process of optimizing, developing, and unleashing human expertise through organisation development and personnel training and development to improve performance and the employment of personnel to achieve organisational goals. The concept of human resource development is concerned with:

- (a) Staffing: employment of personnel, deployment based on level of care, type of establishment, and gender;
- (b) Education and training: coherence between competencies and needs of the services, programs and curricula, learning strategies, availability of competent teachers and trainers, of adequate infrastructures;

- (c) Performance management: preservation and development of the quality of services, standardization, information and management control, management practices;
- (d) Working conditions: recruitment and posting, job and workload definition, promotions and upgrading, mode of incentives, fringe benefits and remuneration, improvement of the conditions of service, and management of personnel and labor relations. (Swanson and Hoblton. Dussault in Mahidy-Alhalboosi, 2018).

Furthermore, Technical and Vocational education and Training (TVET) is a means of preventing social exclusion and the problems that come with it. It can help to alleviate international inequities through debt restructuring and financial transfers, boost national economic growth, contribute to institutional development, thereby enabling favorable conditions for innovation, assist in meeting basic needs and strengthening the socio-economic sector and social welfare, develop human capital, empower communities, and encourage social integration, inclusion, and freedoms and liberties (including gender, ethnic, and age-based approaches) (UNESCO-UNEVOC, 2019).

Brief Historical Background of Technical, Vocational Education, and Training in Nigeria

Proceeding to the introduction of western education in Nigeria by the colonial masters, there exists a chequered history of an informal system of occupational training that has been practiced for thousands of years. This indigenous system of training includes the training of skills and proficiencies in fishing, craft carving, cattle, goat, sheep rearing, animal husbandry, carpentry, farming, etc.

"During the pre-colonial era, the traditional training of skills depends on the various ethnic nationalities in then Nigeria, as arts and crafts of various types have existed on their expression of vocational training. The traditional agricultural practices then were developed to suit the cultivation of agricultural species predominantly produced in the different eco-geography areas of the community. While the instructional method then was observations and imitation of the master by the apprentices. During the colonial era, the child was trained in the family trade through direct apprenticeship by either the parents or relations" (Sofoluwa and Olumade in Okolocha and Baba 2016 pg. 232). Fafunwa, in Bolaji, Gray, and Campbell-Evans (2015) also acknowledged the efforts of the British colonial masters in the introduction of Vocational education in Nigeria through the establishment of The Hope Waddell (HIVTI) training institution, Calabar in 1895. Then in 1935, the Yaba Higher College (Yaba College of Technology) was founded to teach technical and engineering courses, this effort towards the establishment of the Yaba Higher College lead to the early perceptible emergence of Technical and Vocational Education in Nigeria.

In the quest for further development of the Nigerian manpower resources through technological and vocational training, The Yaba Higher College was converted and upgraded into a Technical institution based on the recommendations of the Asquith and Elliot Commission of 1943 and implemented by the Commission of Higher Education in West Africa in 1945. Similarly, in 1949 there was the establishment of the Nigeria College of Arts, Science and Technology with branches in Ibadan, Enugu, and Zaria. The Banjo Commission In 1961 was set up to reappraise the Western Nigeria educational system and the need for the introduction of middle manpower cadre and technician's curriculum in the educational system. The Dike Committee In 1962 was also set up by the Eastern government of Nigeria to review the system of education in Eastern Nigeria alongside the Ikoku Committee which was also set-up by appointed by the Western Nigeria government in 1962(Ejiogu in Akinyele, and Bolarinwa, 2018).

Some years after the Nigerian civil war, the Nigerian government enacted the first, free and compulsory education policy which was called the Universal Primary Education (UPE) Policy launched in 1976, to restructure the Nigerian educational system toward the attainment of the desired goals of inculcating basic vocational skills and technological competencies on its recipients, the improvement of the Nigerian education system and its coherence in knowledge generation. The UPE policy according to Fafunwa in Akinyele and Bolarinwa (2018) was of different proportions and objectives, as against the pre-independence or colonial master educational policies which were literary content designated and do not give adequate focus to the scientific and technological needs of Nigerians. The UPE policy encapsulates a system of 6-5-2-3 which signified 6 years for primary education, 5 years for Secondary education, 2 years for Higher school Certificates, and 3 years for University education). Despite the objectives of the Universal Primary Education (UPE) policy, implementation of the policy was immersed in contentious, pandemonium policy execution and topsy-turvy in the creation of the educational development gap of school-aged children. (Bolaji, Olufowobi, Oluwole and Bolaji in Bolaji, Gray and Campbell-Evans, 2015).

Subsequently, to effectively tackle the issues of unemployment, high poverty rate, and meeting up with the expectations of the Millennium Development Goals (MDGs) by 2020. The Universal Primary Education (UPE) school system was serendipitously changed to a 9-3-4 educational system, called the Universal Basic Education (UBE), and also referred to as the 6-3-3-4 system in 1989. In 1994 the Nigerian ministry of education and youth development and (United Nations Education, Scientific and Cultural Organisation) UNESCO empathically reviewed the state of the Nigerian educational system in the context of the attainment of the objectives of Technical and Vocational education in nation-building. The outcome was that the lack of Vocational and Technical Education policy implementation, funding, and adequate monitoring of the programs are the resistive and impervious characteristics that deviate employment creation and entrepreneurship development in Nigeria (Bolaji et al 2015, Akinyele, and Bolarinwa, 2018). Drawing on the insight from the inherent crises in the proper implementation of the Universal Primary Education (UPE) Policy. Olufowobi, Oluwole, and Bolaji in Bolaji et al., (2015) posited that due to these challenges, in 1999, the Federal government of Nigeria re-launched the Universal Basic Education (UBE). This policy was to provide free, compulsory, and uninterrupted access to basic education for every Nigerian child of school-age and the introduction and acquisition of the rudiments of information and communication technology literacy and life skill values for useful living.

From all indications, the life skill value for useful living that is enshrined in the Universal Basic Education (UBE) policy is concentrated on the teaching and learning of Technical and Vocational Education and Training (TVET) in higher institutions of learning, Innovation Enterprise Institutions (IEIs) and Vocational Enterprise Institutions (VEIs) Technical Colleges and Secondary Schools in Nigeria. Oviagele (2015) further stressed that despite the great emphasis attached in policy documents in the National Policy on Education and the Universal Basic Education (UBE) on the teaching and learning of Technical and Vocational Education and Training (TVET) for national development, there palpably exist two-fold criticism of the Nigerian educational system. Because, firstly, the Nigerian education system is not employment-oriented and insufficient for the realities and demands of the global and local labour market. Secondly, there is a meager application of the system's facilities and manpower towards resolving Nigeria's most pressing problems in science and technology.

Table 1: Budgeting trend for the education sector (2010-2019)

Year	Total Budget (N Trillion)	Allocation to Education (N Trillion)	Allocation %	Recurrent (N Billion)	Capital (Billion)
2010	4,608.68	339.6	7.37	198.1	97.2
2011	4,226.19	393.6	9.32	304.3	35.1
2012	4,749.10	463.3	9.75	345.1	55.1
2013	4,924.60	509.0	10.21	360.8	71.9
2014	4,698.19	565.8	12.05	444.08	51.3
2015	4,493.36	551.6	12.28	459.7	23.5
2016	6,060.68	557.4	9.17	444.8	35.4
2017	7,441.18	540.9	7.41	398.9	56.9
2018	9,120.33	651.2	7.14	439.3	102.9
2019	8.33	620.5	7.05	N.A	47.29

Source: Federal Budget Office and Budget Research (2019)

Ghana, Côte d'Ivoire, Uganda, Morocco, and South Africa, for example, allotted 31.0 percent, 30.0 percent, 27.0 percent, 26.4 percent, and 25.8 percent to education in 2012. While Nigeria only allocated an insignificant percent of her allocation to education (World Bank, 2012). If these countries, which are ranked lower than Nigeria, can meet or exceed the benchmark criterion, it is incumbent on Nigeria to live up to its moniker of African behemoth (Ojeleye, 2020). Odigwe and Owan (2020) asserted that the stifling of education in Nigeria can also be blamed for the country's poor economic growth and development problems. Nigeria was ranked 24th out of 54 African countries and 157th overall in the Human Progress Index released by UNESCO in 2018, lagging behind numerous African countries such as Ghana, Cameroon, and Kenya in terms of educational development. Nigeria also has a low level of human development, compared with other countries like Seychelles, Mauritius, Algeria, Tunisia, Botswana, Libya, and Gabon, which are at the top of the list with high levels of human development figures.

Despite the Nigerian government's plans to tackle Nigeria's youth unemployment crisis, through the Nigerian Youth Employment Action Plan (NIYEAP 2021-2024) in the attempt to create 3.7 million jobs annually to achieve sustainable economic growth in the country. Bailey and Ayodele (2021) augured that Nigeria's unemployment rate is projected to increase to 40 percent by the end of 2021. Varrella (2021) explained that in the fourth quarter of 2020, 38.5 percent of the Nigerian labour force aged 15 to 24 years are unemployed, showing an increase compared to the previous quarters. In the same period, the total unemployment rate in the country amounted to 17.5 percent.

Notwithstanding, the Nigerian government's plans to address the country's young unemployment crisis through the Nigerian Youth Employment Action Plan (NIYEAP 2021-2024), which strives to establish 3.7 million jobs per year to accomplish the country's long-term economic growth. Nigeria's unemployment rate is expected to rise to 40% by the end of 2021 Bailey and Ayodele (2021). According to Varrella (2021), 38.5 percent of the Nigerian labor force aged 15 to 24 years were unemployed in the fourth quarter of 2020, an increase from previous quarters. During the same

period, the country's overall unemployment rate was 17.5 percent. The government's assessment of Nigerian youths as a group targeted for periodic empowerment programs rather than a feasible investment yielding positive dividends in all aspects of our socio-economic advancement is to blame for the cyclical fall in youth employment. The economic and social effects of youth unemployment in Nigeria are far-reaching. It has also resulted in the nation's economic possibilities being ignored (Azeez, 2021).

Zite and Okwelle (2018) argued the country's expanding unemployment crisis has contributed significantly to the country's growing poverty problem. This is because Nigeria's young graduates from educational institutions lack the necessary skills and competencies to utilize the country's abundant natural riches. Experts have criticized the curriculum of Technical and Vocational Education and Training (TVET) programs in Nigeria as futile and insufficient. Manabete and Umar (2018) argued that because Technical and Vocational Education and Training (TVET) programs are run thoughtlessly in educational institutions, it has resulted in the output of inexperienced and unemployable graduates, as most Nigerian graduates from traditional educational institutions graduate without the competencies needed to enter the workforce or any prospects for further training in the relevant field. While there is currently a disparity between Nigerian industry's needs and the country's output of trained technical output.

The training for knowledge and skills given to Technical and Vocational Education and Training (TVET) individuals must engender those individuals to propose and solve problems related to human needs and desire for better living. Majumdar (2011) and Aigbepue (2011) opined that the Nigerian Technical and Vocational Education and Training (TVET) programme is incapable to respond fruitfully to the needs of sustainable development strategies, as the Nigerian Technical and Vocational Education and Training (TVET) instructional practices do not include the concept of sustainability or the doctrines of 6R that is "Reduce, Reuse, Renew, Recycle, Repair and Rethink perspectives" (Ibrahim et al., 2018). According to Oviawe and Ehirheme (2019) the National Policy on Education, or the Technical and Vocational Education and Training TVET curriculum, in particular, was not horrible, but it was poorly implemented. Bad goal definition, lack of clear delineation of roles, over-ambitious policy goals, improper organizational structure, timing element, corruption, and political opposition/insensitivity to demands were among the problems of poor implementation. Ojimba (2012) further outlined six issues with Nigeria's Technical and Vocational Education and Training (TVET) curricula. Viz-a-viz:

- The curriculum is based on a western template that arose under perfect conditions (personnel, equipment, infrastructure, training chances, and so on) that are difficult to replicate in developing nations.
- There is a fundamental dearth of textbooks in Technical and Vocational Education and Training TVET and the majority of those materials that are accessible have a foreign background and are frequently illustrated using instances from outside the local environment.
- Typically, there is a scarcity of highly qualified indigenous teaching and support professionals with significant practical expertise with technologies.
- The courses contents and curriculum of Technical and Vocational Education and Training TVET have been deemed excessively academic and overburdened with conceptual substance in pure science and mathematics to the detriment of fundamental engineering and technology.
- Humanities, social sciences, business management principles, and the development of entrepreneurial abilities are all lacking. Some firms retain graduates to make them productive in their organizations due to inadequate student preparation for the industry.

- The teaching method is based on the traditional method of transmitting knowledge by lecturers reading to students, who then take notes. The educational system continues to place high importance on this form of instruction.

Holistic Approach to Technical, Vocational Education and Training in Nigeria Human Resource Development: The Roles of Public and Private Agencies

The public sectors are corporations and agencies owned and controlled by the state apparatus, while the private sector is part of an economic system that is run by individuals and companies, rather than the government. The difference between the public and private sectors is that the public sector is made up of institutions and agencies operated by the government to provide essential services to the public without the intent of profit maximization, while the private sector is made up of businesses or corporations established by individuals with the intent of profit maximization as well as non-profit organizations (Oviawe, 2018). Frequently, there exists an alliance or partnership between public and private sectors which is usually referred to as Public-Private Partnership (PPP) which is a generic term used to describe the relationship between the private sector and government organizations to introduce private sector assets and expertise to assist in the provision and delivery of public sector assets and services. Furthermore, Agence Francaise De Development (AFD) (2014) in Oviawe (2018), perceived the public-private partnership as the bringing together of public establishments, agencies or institutions, and private participants to plan, formulate fund, organize and manage a project or provide services to the public based on established term for the public interest.

Therefore, in this regard, Public-Private Partnership (PPP) in Technical and Vocational Education and Training (TVET) consists of the provision of multilateral agreements between the public and private sectors. Contextually, Public-Private Partnership (PPP) in Technical and Vocational Education and Training (TVET) refers to various agreements between the public and private sector partnership by which both sectors collaborate in the provision and delivery of infrastructures and services that are primarily aimed at providing opportunities for practical training and entrepreneurial competencies building of learners for skill development and acquisition. Grunewald (2008) then identified the following core areas for Public-Private Partnership (PPP) in Technical and Vocational Education and Training (TVET), which are 1. Identifying technical staff training requirements; 2. Establishing guidelines for vocational and technical educators; 3. Creating training programs and curricula for Technical and Vocational Education and Training institutions, 4. Technical teachers and workshop participants must be trained and retrained, 5. Qualifying and supplying teachers and instructors, 6. Developing teaching and learning materials, 7. Training measure planning and implementation, 8. Establishing and implementing testing and examination procedures, 9. Evaluating the importance, effectiveness, and efficiency, as well as the relevance, significance, and effectiveness as well as the impact of training and related activities; and 10. Financing and investment activities.

Based on the fact that Technical Vocational Education and Training (TVET) is necessary for the socio-economic and human resource development of every society, mostly as it creates an alternative path for the training of its recipients to be self-reliance, inculcating entrepreneurial culture and at the same time provide skilled manpower at all sector of the economy. International agencies and intergovernmental organisations like the European Union, UNESCO, ECOWAS, Africa Union, United Nations, etc. have recognized the importance of utilising the Technical Vocational Education and Training (TVET) program as a concrete step in achieving and sustaining its organisational objectives

and policy agenda. This is evident as Technical Vocational Education and Training (TVET) has been reinvigorating linked to the Sustainable Development Goals 2030 agenda, as Technical Vocational Education and Training (TVE) is a significant factor and an obvious solution in actualizing Goal 4 (quality education) and Goal 8 (decent work and economic growth). Shaorshadze and Krishnan (2015) averred that in the last decades, Technical Vocational Education and Training (TVET) has become an accessory in the reduction of the likelihood of threats associated with demographic transition (i.e. decreased infant mortality and increased life expectancy) youth unemployment, and the increase in the global competitiveness of industrial pursuance for technology advancement.

On the recognition that the technologically and industrially development of Nigeria hinges on developing a strong partner initiative for the participation of intergovernmental organisations, private organisations, and governmental agencies in sustaining the core values of Technical Vocational Education and Training (TVET) that revolves around human resource development in the creation of wealth, employment generation and skill acquisition. Intergovernmental like UNESCO in its effort in sustaining human resources development, embraced and aligned with a policy action towards strengthening Technical Vocational Education and Training (TVET) developed a public-private partnership strategy called TVET strategy for (2016-2021). The TVET Strategy for (2016 – 2021) was structured to synchronize around three thematic areas, which are fostering youth employment and entrepreneurship, promoting equity and gender equality, and facilitating the transition to green economies and sustainable societies. This policy by UNESCO on Technical and Vocational Education and Training (TVET) is basically to enhance the relevance of Technical and Vocational Education and Training (TVET) in equipping youths and adults with the prerequisite training and competencies required for employment, decent work, entrepreneurship, and lifelong learning through collaborations of the public and private sector stakeholders.

The non-successful implementation of TVET policies and programs by successive Nigerian governments has led to low enrolment in TVET in the Nigerian tertiary institution. Oviawe, Uwameiye, and Uddin (2017) described the roles of workplace-school collaboration as a perfect connection that links the cognitive, affective and psychomotor dynamics of TVET curricula taught in the various training institution to meet the current trends and demands of the industry. The workplace collaborative training and learning are the training or learning outcomes that are undertaken in the place of work, which is usually on the job training, and are also the form of training based on the philosophy of learning by doing, demonstrations on job experienced employee, performance under supervision, and coaching, job rotation and participation in specific projects. (Australian National Training Authority 2003, European Centre for Development of Vocational Training (CEDEFOP) 2011 in Oviawe, Uwameiye and Uddin 2017). For example, Oloyo (2019) identified the National Board for Technical Education and The Federal Polytechnic, Ilaro training of technical staff of LAFARGE (WAPCO) Cement Plc. On specific performance improvement skills in cement technology through a Public-Private Partnership (PPP) with LAFARGE (WAPCO) Cement Plc. and DANGOTE Cement Plc. As one of the institutions and industry collaborate through the philosophy of learning by doing. These linkages are also programmed to improve capacity development and possibilities for industry workers to be innovative in the sphere of Technical and Vocational Education and Training (TVET).

The dimension of Workplace training is of many forms, this includes the formal apprenticeships program that lasts a year or more involve the use of experts from the public and private sectors who play a leading role in inculcating the needed competencies and skills in the learners or workers in the various organisations, this training enables the recipients the opportunity for immediate application

of the acquired knowledge and skills in a real-life situation. These learners are usually students, youths as well as new employees. A critical example of the workplace program is the Student Industrial Work Experience Scheme (SIWES). Uwameiye (2010), described SIWES as a Workplace-School collaboration in which exposes the recipients to vocational experiences learned in school and the workplace. The Workplace-School collaboration such as the Student Industrial Work Experience Scheme (SIWES) which are organized by both government and private institutions as a Public-Private Partnership (PPP) has gained increasing acceptance due to the colossal benefits that such program always brings in the development of skill acquisition and human resource development in both the public and private sector.

From the shreds of evidence on the ground, the majority of Technical and Vocational Education and Training (TVET) institutions are publicly owned and are situated in environments that are characterized either by low-quality training that is an incongruity between training supply and labour market demand, where facilities like ultra-modern workshops spaces, relevant textbooks, classrooms, machines, stimulation, and computer rooms, audio, and visual instructional materials are inadequate or obsolete. The Private sector is the biggest employer of these graduates. Saleh et al.(2020) asserted that Public-Private Partnership (PPP) in Technical and Vocational Education and Training (TVET) role is in this aspect is establishing strategies of inculcating action plans for the teaching and research of relevant skills and competencies for new ventures creation and acquisition of relevant skills that will make Nigerian students functional and productive in their society. Public-Private Partnership (PPP) can also assist developing economies to sustain or close the gap with more technologically advanced societies, as it will enable its graduates to be cognizant of new technologies and applications. Oladejo (2010) explained that an example of this type of Public-Private Partnership (PPP) is the establishment of the Dangote Academy (DA) in Nigeria, a technical educational institution that is geared at boosting Nigeria's human capital resource through the learning system of utilizing modern technologies to impact and improve competencies and the maintenance of skilled manpower for Nigeria industrialization. Similarly, Dangote Petroleum Refinery and Petrochemicals, in collaboration with the National Directorate of Employment (NDE), has also involved itself in developing capacities and training for young adults through vocational schemes that are aimed to provide immediate entrepreneurial values to the recipients and their communities.

Conclusion

Presently, there is a disconnecting drift around the Nigerian educational system, this is due to the fact that the desired learning outcomes of Technical and Vocational Education and Training (TVET) graduates in Nigeria and the requisite skills for these graduates to meet prospective employer's prerequisites ensnared a gap. This gap is because; the demand for technologically skilled experts in the global labour market is changing the borderline and expectations in the labour market economics. Unfortunately, the educational systems, especially those in developing countries like Nigeria, are not adequately preparing their youths for the emerging changes globally (Bandura and Grainger, 2019). Similarly, the International Labour Organisation (2019) posited that 145 million young workers are living in poverty while about 64 million young adults worldwide are unemployed, therefore youth unemployment and underemployment have become a global challenge and a top policy concern. Barton, Farrel, and Mourshed cited in Bandura and Grainger (2019) reported that more than 20% of the global youths are out of school, training, or employment as millions of job opportunities are unoccupied due to the fact, that most young-adult do not possess the germane

work experiences, adequate training, and technological competencies to meet the present demands of the labour market.

This study has emphasized and recognized the fact that Technical Vocational Education and Training (TVET) plays a vivacious and indispensable role in human resource development owing to its multifaceted, multidisciplinary, and pragmatic field of study towards equipping an individual with requisite skills which will enhance their relevance and functionality in the society. Technical Vocational Education and Training (TVE) generally provide a positive contribution to the promotion of social equity by leveraging human capital globally. It also empowers its recipients by increasing their opportunities for employability and revenue generation while contributing to the well-being of susceptible groups of people, such as women, persons with disability, and youths in conflict, by narrowing education and employment gaps thereby reducing the risks of marginalization and breaking the cycle of intergenerational poverty (United Nations, 2020). To achieve and sustain this huge task as the public sector alone cannot shoulder this enormous task alone, Technical Vocational Education and Training (TVET) must be strengthened through public-private partnerships (PPP) which is a strategic alliance for the attainment and actualization of Technical Vocational Education and Training (TVET) recipients to catch up with the dynamism in a fast-growing technological world and the world of work.

In light of these concerns, Okoye & Chijioke (2013) suggested that public-private partnerships (PPPs) should be extended to the expansion of the infrastructure gap, growing demand for Technical Vocational Education and Training (TVET), insufficient government funding, inadequate facilities, and a deteriorating educational standard. Because of the expanding economic and financial issues that have made it impossible for many governments to pay for the relatively high cost of Technical Vocational Education and Training (TVET), public-private partnerships (PPP) are unavoidable. This postulation aligned with Oviawe (2018) argument that Technology support in terms of training and retraining of Technical and Vocational Education and Training (TVET) staff and students, investment and expertise through participation in curriculum planning and design, provision of modern industrial machinery, software, hardware, and technical know-how are some of the ways the private sector can help revamp Technical and Vocational Education and Training (TVET).

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Recommendations

1. Periodic staff and student exchange programs between TVET institutions and the industry should be frequently implemented towards providing students and staff with relevant and contemporary technical experiences, this will also benefit the industries from the theoretical understanding of TVET personnel and students.
2. Public-Private Partnership (PPP) partnerships between public and private sectors will draw the necessary attention and resources to Technical and Vocational Education and Training (TVET). This will help to improve the public's perceptions of TVET, which is caused also by the inconsistency in government policies and poor funding.
3. In a competitive context, TVET private sector partnerships should be leveraged to solve global poverty and new venture partnership between TVET institutions and organisations through the periodic curriculum innovation and implementation in responding to the demands of the industries. The new curriculum should infuse modern skills and industrial research that will promote innovations.

4. Stakeholders and policymakers in Nigeria's TVET sector should concentrate on TVET quality assurance and industrial practice guidelines that will benefit the recipients. By providing enough facilities, equipment, consumable materials, and hand tools; providing trained TVET personnel; providing adequate instructional materials; and providing in-service training for TVET personnel.
5. Sustainable development strategies and instructional practices such as the doctrines of 6R that is Reduce, Reuse, Renew, Recycle, Repair and Rethink perspectives should be incorporated into the Nigerian Technical and Vocational Education and Training (TVET) course content.

References

- Adebayo, F. A, and Ayegbusi, E.T. (2017). Public-Private Partnership as Mechanism for Employment Creation in Nigeria. *Journal of Education and Practice*. www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.8, No.9, 2017.
- Adiele, G.N. and Ibietan, J. (2017). Manpower Training and Productivity in the Nigerian Public Sector: An Appraisal and Human Capital Discourse *International Journal of Innovative Development & Policy Studies* 5(3):1-15, July-Sept., 2017.
- African Economic Outlook (2008). Nigeria. Retrieved on 6th April 2013 from <http://www.oecd.org/document/33/0,3343,en2>.
- Agence Francaise De Development (2014). Public-Private Partnership in vocational training: Taking stock of AFD's experience and strategic recommendations. Retrieved on 8/10/2017 from www.afd.org.
- Aigbepue, S. (2011). Revitalization of vocational and technical education. *Interdisciplinary Journal of Research in Business* Vol. 1, Issue. 10, (pp.26- 31) November 2011 JORIND 9 (1).
- Akinyele, T. A. and Bolarinwa, F. F. B. (2018). Prospects, Issues and Challenges of Technical and Vocational Education and Training (TVET) in Revamping Nigeria Depressed Economy *International Journal of Vocational and Technical Education Research*. 4(1), Pp. 1 – 18
- Ansah, K.S and Ernest, K. (2013). Technical and Vocational Education and Training (TVET) in Ghana: A Tool for Skill Acquisition and Industrial development. *Journal of Education and Practice* www.iiste.org ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.4, No.16, 2013.
- Aroge, S. T. (2012). Employee's Training and Development for Optimum Productivity: The Role of Industrial Training Fund, Nigeria. *Developing Country Studies*, Vol. 2(3), pp 79- 88.
- Azeez, W. (2021, September 15). FG launches action plan to tackle youth unemployment. *The cable*. <https://www.thecable.ng/fg-launches-action-plan-to-tackle-youth-unemployment>.
- Bailey, B, and Ayodele, M. (2021, September 21,). Nigeria unemployment could hit 40% by year-end. *Businessday*. <https://businessday.ng/business-economy/article/nigeria-unemployment-could-hit-40-by-year-end>.
- Bandura, R. and Grainger, P. (2019). Rethinking Pathways to Employment: Technical and Vocational Training for the Digital Age. <https://t20japan.org/wp-content/uploads/2019/03/t20-japan-tf7-7-rethinking-pathways-to-employment.pdf>.
- Bolaji, D.S. Gray, R.J and Campbell-Evans, G. (2015). Why do policies fail in Nigeria? *Journal of education & social policy*. Vol. 2, No. 5; November 2015. Published by European Centre for Research Training and Development UK (www.eajournals.org) ISSN: 2059-1187(print), ISSN 2059-119(online).
- Chukwuma, E. M. (2015). Human resource management Challenges in Nigeria under a globalized economy: A study of Innoson Vehicles Manufacturing Company Nigeria Limited. *Journal of Policy and Development Studies* (J.P.D.S) Vol. 9, No. 4, August 2015. ISSN: 157-9385. Website: www.arabianjbmr.com/JPDS_index.php.

- Dabesaki (2012). Revitalizing TVET in Nigeria. Retrieved from www.dabesaki.com/2012/03/12/revitalizing-tvet-in-nigeria.
- Edward, D. I., and Mkinebari, A. V. (2021) Funding of Vocational Education for National Development in the 21st Century. International Journal of Educational Benchmark e ISSN: 24890170 p ISSN:2489 4162. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2
- Fadipe, E.O and Obiana, U.V and Zangina, M.A. (2021). Creativity and Innovation Through Technical and Vocational Education for Sustainable Family Survival in Nigeria (May 1, 2021). European Journal of Training and Development Studies, Vol.8 No.1, pp.19-26, 2021, Available at SSRN: <https://ssrn.com/abstract=3837745>.
- Federal Republic of Nigeria FRN (2014). National Policy on education. 6th Ed. Abuja. NERDC Press.
- Grunewald, E. (2008). Public-Private Partnership (PPP) models in TVET and their impact on the role of Government. Journal of Association for the Development of Education in African.
- Hassan, H.H. (2018). Vocational and technical education: A tool for sustainable development in Nigeria. Nigerian Journal of Business Education - Volume 5 No.1, 2018 63 URL: <http://www.nigjbed.com.ng>
- Ibrahim, M. U., Aliyu, A. D. and Abdullahi, T. (2018). Strengthening Instructional Practices in Technical and Vocational Education to Achieve Sustainable Economic Development in the Declining Economy. ATBU, Journal of Science, Technology & Education (JOSTE); Vol. 6 (3), September 2018 ISSN: 2277-0011
- Igberaharha, O.C. (2021). Improving the Quality of Technical Vocational Education and Training (TVET) For Sustainable Growth and Development of Nigeria. Journal of Education and e-Learning Research, 8(1): 109-115.
- International Labour Organization. (2019). Youth Employment". <https://www.ilo.org/global/topics/youth-employment/lang-en/index.htm>
- Kazaure, M. A. (2009). Revitalizing TVET in Nigeria. Retrieved on 8th May 2015 from <http://www.portar.unesco.org/education/en/ev.p>.
- Mahidy-Alhalboosi, F.H A. (2018). Human resource development https://www.researchgate.net/publication/327546162_Human_Resource_Development.
- Majumdar, S. (2011). Teacher education in TVET: Developing a new paradigm. International Journal of Training Research, 9(1-2): 49-59.
- Makinwa, V., Etomi, G and Ollor, A. (2019) Public-Private Partnerships PPP in Nigeria. <https://www.lexology.com/library/detail.aspx?g=dabbe5fb-ffae-4504-9c55-b7b86e07207b>.
- Manabete, S. S., & Umar, B. (2018). Technical and vocational education and training for job creation in Nigeria. *International Journal of Business and Administrative Studies*, 4(1), 21-30.
- Mohammed, E. H. R. (2014). Effects of Public Service Reforms (1988 And 1994) on the Performance of Civil Service in Nigeria: A Study of Selected Federal Ministries and Extra Ministerial Departments and Agencies. (Doctoral dissertation). Ahmadu Bello University, Zaria.
- Obidile, I.J., Obi, C.O. and Ikpat, N.H. (2020). Technical, Vocational Education and Training (TVET): Tool for combating insecurity in Nigeria. International Journal of Vocational and Technical Education Research Vol.6, No.3, pp.21-28, June 2020 Published by ECRTD-UK Print ISSN: ISSN 2059-1187, Online ISSN: ISSN 2059-1195.
- Obidile, J. I. (2018). Strategies for improving Technical and Vocational Education (TVE) programme to reduce unemployment in Nigeria. NAU Journal of Technology and Vocational Education 3(1), 1-10.
- Odigwe, F.N and Owan, V. J. (2020). Trend Analysis of the Nigerian Budgetary Allocation to the Education Sector from 2009 – 2018 with Reference to UNESCO'S 26% Benchmark. International Journal of Educational Benchmark e ISSN: 24890170 p ISSN:2489 4162. chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/viewer.html?pdfurl=https%3A%2
- Ojeleye, J. A. (2020). The future of education in Nigeria: Budgetary allocation as an albatross. International Journal of Advanced Academic Research. Arts, Humanities and Education. ISSN: 2488-9849 Vol. 6, Issue 5 (May 2020).

- Ojimba, P.D (2012). Vocational and technical education in Nigeria: Issues, problems and prospects' Dimensions (IPP)Journal of Education and Social Research, Rome, Italy, 2(9), 23-30. www.mcser.org
- Okolocha, C.C. and Baba, E. I. (2016). The role of Vocational and Technical Education (VTE) in Nigeria democratic dispensation. International Journal of Capacity Building in Education and Management (IJCBE), Vol. 2, No 4, April 2016. Website: <http://www.rcmss.com>.ISSN: 2350-2312 (Online) ISSN: 2346-7231.
- Okoye, K.R.E. & Chijioke, O.P. (2013). Private-Public partnership and technical vocational education (TVET) in a developing economy. Arabian Journal of Business and Management Review 2(10), 51-61.
- Okoye, R, and Onyenwe, O.M (2016). Technical and Vocational Education in Nigeria: Issues, Challenges, and a Way Forward. Journal of Education and Practice.www.iiste.org.2222-1735 (Paper) ISSN 2222-288X (Online) Vol.7, No.3, 2016.
- Okwelle, P.C and Deebom, M.T. (2017). Technical Vocational Education And Training as a tool for sustainable empowerment of youths in Niger Delta, Nigeria. International Journal of Innovative Social & Science Education Research 5(1):29-38, www.seahipaj.org. ISSN: 2360-8978.
- Oladejo, T.M. (2010). Challenges of Technical and Vocational Education and Training in Nigerian History. Makerere Journal of Higher Education 11(1):67-81. December 2019. DOI: [10.4314/majohe.v11i1.6](https://doi.org/10.4314/majohe.v11i1.6).
- Oloyo, A.R. (2019). Cultivation of Polytechnic-Industry Linkage for Development and Delivery of Curriculum for Technical Education: A Case Study of The Federal Polytechnic, Ilaro. Journal of Educational and Developmental Psychology; Vol. 9, No. 1; 2019 ISSN 1927-0526 E-ISSN 1927-0534 Published by Canadian Center of Science and Education.
- Ovbiagele, A.O. (2015). Vocational Education for Socio-Economic and Technological Development of Nigeria. Global journal for interdisciplinary social science, Vol.4 (4):15-18 (July-August, 2015) ISSN: 2319-8834.
- Oviawe, J.I. (2018). Revamping Technical Vocational Education and Training (TVET) through Public-Private Partnerships for Skill Development. Makerere Journal of Higher Education ISSN: 1816-6822; 10 (1) (2018) 73 – 91 DOI: <http://dx.doi.org/10.4314/majohe.v10i1.5> © The Author(s) 2018 Reprints & permission: EASHESD <http://ajol.info/majohe>.
- Oviawe, J. I., & Ehirheme, P. E. (2019). Sprouting Sustainable Industrial and Technological Workforce through Technical Vocational Education and Training in South-South, Nigeria. Journal of Vocational Education Studies, 2(2), 113-126. DOI: <https://doi.org/10.12928/joves.v2i2.1192>.
- Oviawe, I.J, Uwameiye, R. and Uddin, S. P. (2017). Bridging Skill Gap to Meet Technical, Vocational Education and Training School-Workplace Collaboration in the 21stCentury. International Journal of Vocational Education and Training Research2017; 3(1): 7-14. <http://www.sciencepublishinggroup.com/j/ijvetr>. <https://doi.org/10.11648/j.ijvetr.20170301.12>. ISSN: 2469-8180 (Print); ISSN: 2469-8199 (Online).
- Saleh, H., Mahmoud, M.A and Azarema, A. (2020). The Role of Public-Private Partnership (PPP) in the Development of Quality Education Programmes in Nigeria for Self-Reliance and Economic Improvement. African Scholar Publications & Research International. VOL. 19 NO. 8. ISSN: 2359-1991 DECEMBER, 2020.
- Shaorshadze, I and Krishnan, P. (2015). Technical and Vocational Education and Training in Ethiopia. Paper for the International Growth Centre – Ethiopia Country Programme Technical and Vocational Education and Training in Ethiopia. <https://www.theigc.org/wp-content/uploads/2014/09/Krishnan-Shaorshadze-2015-Working-Paper.pdf>.
- The World Bank Annual Report 2012: Volume 1. Main Report <https://openknowledge.worldbank.org/handle/10986/11844?show=full>.
- Tiamiyu, R. and Babalola, Y.A. (2013). Vocational Education and Security Challenges in Nigeria: The way forward. Developing Country Studies 3(5), 97-100.
- Umar, A.H and Tubosun, V.B. (2016). Public-private partnership as an imperative in Nigerian education. International Journal of Current Multidisciplinary Studies Available Online at <http://www.journalijcms.com> Vol. 2, Issue, 5, pp. 175-181, April 2016.

- UNESCO (2017). Strategy for Technical and Vocational Education and Training (TVET) (2016-2021). <https://unevoc.unesco.org/up/tvet-strategy-infographic.pdf>.
- UNESCO-UNEVOC. (2019). UNEVOC Technical Vocational Education and Training (TVET) leadership programme. UNESCO-UNEVOC global learning forum on advancing learning and innovation in TVET was held on 2nd-3rd December 2019 in Bonn, Germany. Retrieved from: <http://www.unevoc.unesco.org>.
- United Nations (2020) Reforming technical and vocational education and training: a gateway for building a skilled youth workforce in the Arab region. <https://undocs.org/pdf?symbol=en/E/ESCWA/CL2.GPID/2020/TP.4>.
- Uwameiye, R. (2010). Essentials of technical and vocational education. Benin City: Ambik Press.
- Varrella, S. (2021) Quarterly youth unemployment rate in Nigeria 2018-2020. <https://www.statista.com/statistics/1119403/youth-unemployment-rate-in-nigeria-by-quarter/> Sep 23, 2021.
- Zite, B.N and P. Okwelle. (2018) "Revamping Technical and Vocational Education and Training in Niger Delta for Sustainable Development." *International Journal of Humanities Social Sciences and Education* 5, no. 3 (2018): 91-95.