PRIVATE-PUBLIC PARTNERSHIP AND TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET) IN A DEVELOPING ECONOMY

Professor K.R.E. Okoye  
Vocational Education Department  
Electrical/Electronic Unit  
nnamdi Azikiwe University, Awka, Nigeria

Okwelle P. Chijioke, Ph.D  
Science & Technical Education Department  
Rivers State University of Science and Technology, Port Harcourt, Nigeria

ABSTRACT
Technical Vocational Education and Training (TVET) system is widely recognised as education system expected to produce a competent workforce who can compete and excel in a rapidly changing environment and improves a country’s economy. That TVET system in Nigeria and many other countries are in crisis or in immediate need for intervention, are often heard. Private Public Partnership (PPP) is viewed as an alternative strategy put forward to address the challenges confronting this all-important education system. Therefore, this paper attempts to add to the available literature on PPP in TVET by examining; conceptualizing PPP and its relative importance in economic growth, revamping TVET for technological advancement and economic growth in Nigeria through PPP collaboration. Constraints on TVET as a measure for economic development in Nigeria were also highlighted. The paper concludes by recommending for a proper PPP involvement in TVET system in Nigeria to enhance its economic potentiality.

Keywords: Private Public Partnership (PPP), Technical Vocational Education and Training (TVET)

INTRODUCTION
Worries about the indigenous peoples’ occupational capacities, unskilled workforce, demands of work environment coupled with concerns about educational achievement, are driving an unprecedented demand for good and quality services derived from personnel who are vocationally skilful. But it is only a good academic programme that could actually contribute to this skills acquisition and healthy development by providing opportunities for positive learning and growth.

Learning is positively imparted if learners could practice what they were taught in character, implementation and production. Hence, there was a search for good educational system to inculcate these learning attributes in Nigerian youths. In the search, various committees, commissions and academic boards were inaugurated by the Federal Government of Nigeria dating back from 1976 through 1985. Conclusively, the system of education which falls within the domain of technical and vocational education and training (TVET) was widely acclaimed and
recommended at several fora as the provider of these performance attributes in character, implementation and production. This is so because TVET encourages skills acquisition, knowledge and attitudes needed for professional careers (UNESCO, 2011) and through its orientation (UNESCO, 2004), the social and economical inclusion of the rural population and the marginalized communities are addressed.

Even so, one of the factors that foreign investors consider is the skills and technical competencies of the local labour force. Besides, it is an established fact that the economy of any nation does not solely depend on the educated population, but partly on having a large pool of skilled workers that can handle the rapidly changing demands of the labour market. In response, 1985 and beyond witnessed massive importation of machines and equipment for introductory technology instruction at college level in Nigeria.

Unfortunately, TVET has long been neglected in Nigeria. For instance, the bold step to introduce introductory technology instruction at college level has long been poorly managed and currently nearly abandoned. UNESCO (2000) noted with regret that less than 1% of secondary education in Nigeria is oriented towards technical and vocational skills. Worse still, workshops for TVET at tertiary education level are in this time bracket the showcases of dumps of outdated and obsolete machines, equipment and tools. These ugly situations could be attributed to inadequate funding of education by the government at all levels in Nigeria. As Okuwa (2005) put it, the Nigerian educational system has been witnessing an explosion in the context of declining resource inputs particularly from the government.

Since poor and inadequate funding have been a long standing issue facing technology and vocational education and training in Nigeria, one would therefore try to suggest other possible measures to circumvent the problem in favour of TVET. This has necessitated the present day search for yet better measures which currently are traced to private public partnership (PPP) strategy. Measures to ensure adequate TVET provision in Nigeria is important because the belief is that adequate TVET provided to individuals will help to attract and motivate youths who are likely to be more dedicated, more focused, more innovative, and more productive (Deich, 2001). In this awareness, this paper is discussed under the following guides;

- *Conceptualizing PPP and its relative importance in economic growth.*
- *Revamping TVET for technological advancement and economic growth in Nigeria through PPP collaboration.*
- *Constraints on TVET as measure for economic development in Nigeria.*

**Conceptualizing PPP and its relative importance in economic growth**

When something is personal to someone, it is said that, that issue is private to such person. For instance, opinion can be personal. That means, the opinion is private. Hence, one could describe such opinion as private opinion. Privacy is an attribute used to describe the state of belonging to or for the use of one particular person or group of persons only. For instance, private income describes money earned not as a salary but money realized from one’s personal property, investment, creative outputs or belongings. That is to say, personal property or investment implies private property such as motor/car or private investment such as school.
Public on the other hand is used to describe an issue which is made known to two or more individuals without restriction to its privacy. In this case, the issue is said to be a public matter. That is, an issue of public or general knowledge. Service can be provided for the use of individuals in general or publicly. For instance, public place, public school, public convenience (toilet), public limited company (plc), and so on. That is a public service is a provision made for the use of everybody.

The private provider (e.g., individual, civil groups, organization) and public provider (e.g., government, community people, agencies) can partner to or jointly provide services such as education to the people. This mutual agreement to jointly provide service to people on established terms is referred to as private public partnership (PPP). PPP is viewed as a generic term for the relationships formed between the private sector and public bodies often with the aim of introducing private sector resources and/or expertise in order to help provide and deliver public sector assets and services (Education International, 2009).

As Deich (2001) puts it, a private public partnership exists when the private sector joins with the public sector in pursuit of a common goal. The personnel composition and structure of any private public partnership is unique. However, all effective partnership shares the following characteristics in common.

1. The public sector appoints representatives who are authorized by their sector (say federal or state government) and the private sector (say civil groups or organization) will elect or appoint representatives.
2. Both partners usually work together to achieve common objectives or goals.
3. Each partner contributes money, technical expertise and time for the success of the partnership.
4. Administrative/management responsibilities and decision-making rights/privileges are shared among the personnel composition.

Although, these four characteristics are essential in partnership, the structure, organization, and goals of member partnership may vary to a reasonable extent. For instance, each partner, in case of group partnership, contributes resources, but the type and amount may vary according to ability. If their contribution of resource is not done on equal ratio but according to ability, then it affects the extent of shared decision-making privileges, proportion of shared dividends, provisional consideration in case of employment, proportion of shared assets and other practicable considerations.

These attributes differentiate PPP from private practice (PP). Private practice is more or less sole or group proprietorship. In PP, an individual gets himself gainfully engaged in a private job to earn a living. Paid employees also get involved in this kind of practice. For instance, a paid employee could after his official work engagement find himself a job that is remunerating for livelihood. He also does this to augment the paid pocket in order to meet the demands of the home. For private practice, the individual or group of people could seek for loan using collateral. In which case, if the agreement on reimbursement of the loan is not fulfilled, the financing agency could confiscate any property pledged as collateral in the agreement. PP does not involve partnership but condition is established for fulfilment of agreement between groups. In this regard, Egboh and Chukwuemeka (2012) maintained that PPP involves a contract between a
public sector authority and a private party, in which the private party provides a public service or project and assumes substantial financial, technical and operational risk in the project.

Private public partnership is of great importance to economic growth of any nation. It has important implications for the role of the state vis-à-vis the private sector as a provider of public services, including education systems (Education International, 2009). For instance, the challenges facing the Federal Government in respect of universal basic education at primary and one-half of secondary education levels in Nigeria become noticeable in a number of areas. For instance, the failure of both state and federal government to provide adequate schooling has persuaded many parents to seek alternative education providers in the private sectors. Unfortunately, there is a variation in the standard of education provided by the private sector education providers in Nigeria. This calls for the need to regulate the private education sectors. To achieve this demands that the private and public sectors should come in partnership to device new paradigm for the management of schools at primary and college levels of education. It is possible through a sharing of personnel between the both sectors (Fannell, 2007) thereby bringing about a shared set of incentives and common culture. Private-public partnerships (PPPs) in education were introduced in USA in the 1990s, and the developing countries like Nigeria could embark on these ventures to improve on educational access and quality in their school sector (Patrinos, 2005).

It is also acknowledged that because of growing pressure to find new and better ways to succeed in the innovative field of the labour market and to reach the poorest areas of the society, the public sector (government) is looking up to the private sector (civic group, organizations or philanthropists) for leadership, technical expertise, and innovative ways to finance vital societal projects and services.

Furthermore, partnerships permit governments to improve on their services and programs by offering complementary services, such as vocational training, occupational and career education, workplace training/education, technical assistance, and public programs to encourage public support.

**Revamping TVET for technological advancement and economic growth in Nigeria through PPP collaboration.**

The sophisticated nature of the labour market demands human resources adequately prepared in technological know-how to tackle with the situation. This demand has placed much emphasis on technology (technical) and vocational education and training (TVET) worldwide.

Technology is the scientific study and the application of scientific methods to practical tasks in industry for production of material wares for the good and services of human-kind. It is a way of applying methods, tools, technical knowledge, machines and systems in the solution of human problem (Ezeji, 2011).

Vocational education is a study on programs that skilfully prepare people for effective performance on practical tasks. It involves the acquisition of skills and competencies that can help individuals to function productively in industrial and commercial occupations (Wapmuk, 2011). Thus TVET is an integral part of all inclusive education for all initiative which helps an individual to become active citizen and who contributes positively to his well being and to
economic growth of his society. This implies that TVET gives attention to the development of both material and human resources. *It is the education for those who need it, those who want it, and those who want to progress by it.*

For these good yields of TVET programs, it is obvious that no nation will adequately develop her technological base if that country neglects the development of skilled workforce. Thus it becomes necessary that adequate attention should be given to TVET and more imperative as Nigeria was ranked 158th out of 177 countries, below the average for sub-Saharan Africa in human development (UNDP, 2008). This advocates greater coherence between private and public sectors (WEF, 2004) and also calls for effective collaboration of private and public sectors (Wikipedia, 2011) as well as stakeholders in TVET for adequate technological advancement and human development (Ezeji, 2011).

To achieve this objective, a little inference drawn from steps taken by foreign but developing countries like Malaysia may give clues on what the Nigerian governments should do to revamp TVET in Nigeria for improved economy.

In Malaysia, the innovative strategies devised to revamp TVET for effective PP are categorized into what that country captioned; national dual training system (NDTS), human resource development fund (HRDF) and vocationalization of tertiary institutions (VTI) (Zain, 2008). In that country’s NDTS program, 70-80% of the technical and vocational training are done in the industry, while the remaining 20-30% are carried out in training institutions, utilizing curriculum developed by the board saddled with that responsibility. In this program plan, students/apprentices are meant to be exposed to actual situations in the industry in respect of technical and vocational competencies. Emphasis is also placed on team work, self monitoring, shouldering of common responsibilities, and the likes. In Nigeria, the activities of National Board for Technical Education (NBTE) appear to be replica of what National Occupational Core Curriculum (NOCC) does in Malaysia in this respect. It is possible that NBTE could adopt this system and try it in Nigeria. In the Malaysian HRDF, the government was able to introduce a training levy-reimbursement scheme. In this scheme, the companies that participate in certain apprentice training programs qualify for tax incentives. These industries and companies also collect 1% part of the training cost from the government plus other hidden user charges. These incentives motivate healthy competition and improved performance among companies in the technical and vocational training offered to the students. The students/apprentices are (1) assured of employment, (2) eligible for total reimbursement of training cost and (3) are given insurance protection, among others. Through this scheme, accelerated industrial training is provided. The scheme also offers opportunities and avenues for companies, industry associations and public/private industrial training institutions to contribute to more responsive and relevant skill development. It is possible that the management of industrial training fund (ITF) in Nigeria could adopt and modify this system and make it a trial in Nigeria. In their vocationalization of tertiary education agenda, it is a practical-oriented approach whereby students undergo intensive practical sessions (Zain, 2008).

These innovations were borne for effective TVET revamping in that country based on what the authors of this paper call *borrowed system approach*. For instance, available document shows that the task force charged with the responsibility to suggest strategies for revamping TVET in
that country made their recommendations based on models such as “Fachhochscule” found in Germany and the Polytechnic University System in Hong Kong, and some other fruitful systems adopted from other countries. In these systems, user fees were noted as among the best strategies to achieve success. User fees are charges which the users of services contribute towards the cost of providing such services. The message here is that Nigeria as a nation should learn to adopt, modify to suit the environment, emulate and implement useful systems good for the country’s economy. This way, skilled work force competent for the world of work will be produced.

**Constraints on TVET as measure for economic development in Nigeria.**

TVET in Nigeria have been constrained by many factors but a few of the major ones are highlighted below.

**Value system and quality standard**

TVET is capital intensive. As a result the response from the private sector to industrial (Technical and Vocational) training is lukewarm. In most cases, private training institutions struggle in vain to secure adequate financial support and students too. If success is achieved in obtaining financial support through loan facilities from finance agencies, the interest rate is always on the high side that the struggle to pay back becomes almost impossible. To save cost, poorly qualified personnel are hired for instruction. The end result is poorly prepared products in both human resources and material services. Consequently, quality standard is most often violated. Inferior goods and services are thus introduced into the market. Under this condition, most people in the society would want to patronize the foreign and imported goods in preference to the locally made goods. Even when some locally made goods compare favourably with the foreign made goods, the value system and orientation of the population still cajole the local made goods with the slangs as; Igbo-made or Aba-made (meaning – inferior goods).

**Image of TVET**

Much more attention and resources are given to academic (literally education) rather than to technology and vocational education and training. The local society and even foreign environment categorize TVET as education for the academically disadvantaged. Feinberg & Horowitz (1990) cited in Zain (2008) and OECD (2008) pointed out that TVET suffers image mockery that it is only for those who do not do well academically. This false public image against TVET restricts many Nigerians to enrol in programs of TVET. Available document also confirm that because of this snob, UNEVOC-UNESCO contemplates on changing the name TVET to something as “skill and knowledge development for employability”.

**Poor Revitalizing Agenda**

TVET offerings are integrated into the economy’s demand for skilled workforce. For instance, the industrial training fund (ITF) was established to provide TVET trainees with actual work practice in both private and public sector organizations (OECD, 2008) but because of inadequate funding and poor management agenda, the plan has almost failed (Okuwa, 2005). The one-year student work experience (SIWES) required for higher national diploma (HND) and B.Sc in technology education is virtually in principles. Most TVET students end up without reasonable work experience before graduation. The national economic empowerment and development strategy (NEEDS) which is commissioned to accelerate economic growth, reduce poverty and
achieve the millennium development goals (MDGs) with TVET as an integral part appears to be redundant.

Many other brokerage institutions have also been established in the past to function in the same capacity, but they ended up as channels for pumping funds into unintended activities (Editorial; Tribune, 2011). For instance, the Nigerian Industrial Development Bank (NIDB) and Bank of Industry (BI), African Development Bank (ADB), the Bureau of Public Enterprise (BPE) and a lot more are yet to accomplish the mission of organizing adequate industrial training for the trainees, finance vocational agriculture through some commercial banks and ensure effective private-public collaboration in wealth transfer procedure, respectively.

**Lapses in integrating principles into skills by teachers of technology**

The ideal situation in TVET programs is to prepare students for application – related studies in professions that require the application of academic knowledge and methods. In many cases, teachers of technology are nonchalant about this basic demand/requirement. Instructions are thus dominated by theories without integrating them to real life applications. Under this condition many scholars in the program tend to perceive ideas and trends presented in the program as abstract. Many TVET teachers solve and apply many mathematical problems and principles with little effort to translate or transform such principles into concrete issue of practical life usage. Let us demonstrate a simple example on how to integrate principles and theories into skills for real life application.

Suppose a teacher wishes to teach “electromagnetic torque in DC machines”. That is conversion of energy from one form to the other with cyclic force applied. We may begin like this;

\[
\text{Power} = \text{current} \times \text{voltage (IV)}
\]

Effective power \((P_{\text{eff}}) = \text{Input Power} – \text{Losses}\)
\[ I_t V_t = (I_a^2 R_a + V_t I_f) \]

As motor, \( I_L = I_a + I_f \)
and \( I_a = I_L - I_f \)

From \( P_{\text{eff}} = V (I_L - I_f) - I_a^2 R_a \)
\[ = V_I a - I_a^2 R_a \]
\[ = I_a (V_t - I_a R_a) \]

In motor, \( \tau = V_t - I_a R_a \)

Hence \( P_{\text{eff}} = I_a \tau \) or \( \tau I_a \) (mechanical power)

Work done \( (WD) = 2\pi r \times F \)
\[ = 2\pi F \]
\[ \tau f = \text{Torque (T)} \therefore WD = 2\pi T \]

if \( n \) = Number of revolutions per second; \( \therefore WD = 2\pi n T \)

\[ 2\pi n T = E I_a \]

\[ P = \frac{E I_a}{2\pi n} \, (\text{Nm}) = \frac{60 E I_a}{2\pi N} \, (\text{Nm}) \]

Where \( N = \text{rev/m} \)
Nm = Newton-meter (unit of measurement)
The teacher should go ahead to transform this result into concrete issue in real life application after having interpreted the components of the outcome as follows:

\[ 2\pi n T = \text{cyclic application of force} \]

\[ EI_a \] Indicates the electro-mechanical power

After the necessary manipulation, result is achieved as presented in the sketch.

It is possible that a student of electrical/electronics technology could settle with this construction as an alternative to cooking stove or cooking gas. People in both rural and urban areas could make use of this in absence of kerosene or gas and at a time when the cost of either kerosene or gas is very high. It could as well serve the scholar to establish private practice firm or workshop to earn a living.

**CONCLUSION**

Going through this work, one would acknowledge that TVET education has a lot of challenges and constraints facing it, not only in Nigeria, but world over. The image picture of TVET and inadequate funding of TVET are part of the major problems. The highlights in the work show that private public partnership (PPP) in the affairs of TVET will definitely make a difference should any nation embark on the system in favour of TVET. User fees were indentified as one of the remarkable strategy to achieve success in the management and revitalization of TVET in any nation. It is noted that TVET is very vital for technological advancement and economic growth of any country. Highlights also show that the long-term well-being of any country depends on the economic viability of her citizenry, and quality supports and good training given to youths in partnership collaboration between private and public sectors is an important element to enhance the economic potentiality of the nation. It is believed that partnership collaboration in providing technical and vocational education (TVET) will make the difference. Adequate education in
TVET ensures the production of skilled workforce who possesses knowledge and attitudes needed for professional career.

REFERENCES


