



STRENGTHENING TVET TO MEET INDUSTRY NEEDS IN THE CHANGING WORLD OF WORK: IMPLICATIONS FOR COUNSELLING

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Abstract: Any country's socioeconomic life is significantly impacted by Technical, Vocational Education and Training (TVET). Changes in industrial needs have been sparked by the rise of digitalization and technical advancements, such as automation, robotics, and artificial intelligence (AI), which have defined the nature of labour markets and impacted socioeconomic life. This is a significant problem. *Hence, TVET should be considered to meet the rapid global socio-economic change, need and requirements.*

Nigeria prioritizes TVET through well-structured and defined objectives as enshrined in the 2013 revised edition of National Policy on Education. Despite these lofty objectives and prospects of TVET in Nigeria, it is worrisome that it does not have recognition when compare to general education. Literature has unveiled various problems bedeviling TVET, including underfunding, poor curriculum design and implementation, shortage of manpower, poor teaching pedagogies and weak public-private partnerships.

Counseling is considered a veritable tool as it can unlock, enable, direct and redirect inherent potentials, strengths and skills of individuals while considering the choice of technical and vocational skills among students and youths. These will make graduates of schools and youths employable and make them relevant to meet contemporary industry needs and changes.

Thus, the current study will critically examine the status of TVET and the place of counseling in achieving TVET objectives in Nigeria. Also, the role of TVET counselling in helping to ensure that the skills and knowledge acquired through TVET are applicable and desired by employers in the changing world of work.

Keywords: Counseling, Industry needs, Technical Vocational Education and Training.

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Introduction

The emergence of the fourth industrial revolution characterised with technological revolutions could be said to have influenced life culture globally. The effects could be seen on the socio-economic activities where improved technological products including hardware and software components have enhanced and fast track these activities. It is important to note that the way we define the roles of technological innovations and digitalization, like automation, robotics, and artificial intelligence (AI), will have a big impact on labour markets. It will affect people's work habits, the kinds of jobs they do, and the skills they need to perform new tasks efficiently (ILO, 2020). The long-term effects of the technological revolution are difficult to predict, but they start with the creation of a large number of jobs through direct, indirect, and induced effects. Additionally, the nature of work is changing as a result of the automation and augmentation of some job tasks by

technologies like artificial intelligence and machine learning (ILO, 2018). The report of the International Labour Organization (2021) estimated that an expected average shift of 42 percent of workforce skills is expected over the 2018–22 period, which will result in fundamental changes in job profiles and most probably will be further impacted by the crisis. Millions of people may update and improve their skills, move employment, or even change their occupations as a result of these improvements (MGI, 2017). Therefore, it is essential to strengthen the educational programme, such as TVET, to handle these changes and transitions.

However, the technological revolution has also contributed negatively wherein labour force is reduced and increased rate of unemployment thereby complicating existing inflated rate of unemployment in Nigeria. Thus, AFDB, (2018); Bolton, (2016), and Handel et al (2016) identified the existing labour force structure to be a major challenge with the employment

growth rate stagnating at 3 percent, the proportion of working poor averaging 43 percent, about 43 percent are in vulnerable employment, unemployment averaged 7 percent. Adedeji (2022) affirmed that the increasing unemployment rate of 33.3% is worrisome as this is a threat to national development owing to socio-economic implications.

More importantly, the ongoing trends of urbanisation and climate change in Nigeria present ample opportunities as well as transformational challenges (the move from lower to higher productivity sectors and raising within sector productivity growth). Fox and Filmer (2014) posited that the current urbanisation in many Africa countries is a platform for innovation and economic growth due to productivity and skills spillover. Hence, there is need to expose young ones to skills such as TVET to explore the opportunities and providing lasting solutions to these challenges. This justifies the position of MGI (2016) in Edward and Hellen (2018) that reveals the need to enroll 33 million young Africans in vocational and technical education.

Owing to the challenges of the current and future world of work, African countries are currently identifying the need to define and design strategies for the future of work despite the rapid technological revolutionary movement spurring current socio-economic activities (Baba and Umar, 2014). Transformational approaches that support the creation of jobs and increase productivity in labor-intensive industries, as well as ensuring that young people have the skills necessary for meaningful and productive work, are essential to this (Edward and Hellen, 2018). As a result, TVET is a systematic strategy to invest in skills that address all capabilities, from literacy and basic to post-secondary education, in line with changing demands from the labour market. This is essential for a change to be effective (Edward and Hellen, 2018). TVET is a crucial platform that has to be prioritised, but it doesn't appear like the government or other stakeholders are giving it any thought.

TVET in Nigeria

TVET is an important component of education recognised by Federal Government of Nigeria with the aim of improving economic and social development sectors. TVET can be defined as instruction and training intended to provide individuals with the information, expertise, abilities, and/or competencies needed for specific jobs or, more generally, for the labor market (CEDEFOP, 2014). It is education, training, and skill development for a variety of professions, industries, services, and means of subsistence. TVET is available at the secondary, post-secondary, and tertiary levels as a component of lifelong learning. A vast array of chances for skill development in both national and local contexts are included in TVET. TVET includes learning how to learn, developing literacy and numeracy abilities, transversal skills, and citizenship skills (Park, 2005). To build a workforce that can increase productivity and maintain competitiveness in the global economy, technical, vocational, and economic training (TVET) is the methodical and structured transfer of knowledge, skills, and values.

TVET is an umbrella term used by UNESCO and ILO (2002) to refer to all aspects of education that include general education, studying technologies and related sciences, and acquiring practical skills, attitudes, knowledge, and understanding related to a variety of occupations in the social and economic

spheres. As a result, TVET might equip human resources for the rapidly evolving workplace. Adopted as the answer to all of the problems with the labour market, this educational system is being marketed as a magic bullet. According to the United Nations Educational, Scientific, and Cultural Organization (UNESCO) (2009), TVET could also be strategically positioned to address issues such as poverty alleviation, low productivity and weak economic growth, social inequality, instability, and insecurity, the threat of environmental decadence, and a lack of awareness of green practices.

Objectives of TVET

Thus, the Federal Republic of Nigeria, or FRN, (2013) said that TVET's goals are as follows:

- In particular, at the craft, advanced craft, and technical levels, provide skilled labour in applied science, technology, and business;
- provide the technical know-how and vocational skills required for agricultural, industrial, economic and commercial development;
- Provide instruction and training that will enable people to become economically independent;
- Recruit individuals who can apply scientific knowledge to the improvement and resolution of environmental issues for human use and convenience;
- Provide an introduction to professional studies in engineering and other technologies.

More so, the International Labour Organization (ILO) recommendation of 2000 and the United Nations Educational Scientific and Cultural Organization (UNESCO) on TVET for the 21st century described TVET as a:

- Techniques to help reduce poverty;
- Mechanisms to support the environment for sustainable development;
- A component of lifelong learning and preparation;
- A means of becoming ready for the workforce and various career paths; and an essential component of general education (Umunadi & Uwameiye, 2015).

The aforementioned summaries suggest that the main objective of Technical and Vocational Education and Training (TVET) is to cultivate the appropriate mindset and skills necessary for entering and advancing in the workforce. As a last point, Technical and Vocational Education and Training (TVET) provides participants with the skills and information they need to contribute to their community. It is abundantly evident from the aforementioned objectives that the primary function of TVET is to facilitate the economic emancipation of individual citizens, hence fostering national wealth and growth.

Importance of TVET

The roles of TVET can never be overemphasised in creativity and job creation. This stems from the level of achievement of TVET objectives in a particular context. It can be said to provide job-specific skills for work (Hanushek et al, 2011). It is not out of place to state that TVET is often considered as a major platform for unemployed youths, the students with poor academic achievement in regular schools as well as for middle-level technicians wherein it enables them to acquire basic vocational skills that helps them competitively in the labour market

(Psacharopoulos, 1997). Forster et al, (2016) and Verhaest, (2018) posited that individuals with vocational skills have a higher chance to be qualified and employed in the labour market in relation to their skills. When compared to people with a general education, vocationally educated individuals have the advantage of having occupation-specific skills and a lower probability of skill mismatches (Verhaest, 2018). However, their higher employability decreases because they are limited to technical and vocationally related sectors (Forster et al, 2016).

The capacity to move from school to work more smoothly is noteworthy, yet it might only be used to adjust to future technological development (Hanushek et al, 2011). They are likely to pick up less new skills than those who are overqualified, even while they are overqualified for their initial employment (Verhaest & Omei, 2012). From the discussion so far, it is apparent that the importance of TVET is overwhelming owing to both implicit and explicit opportunities, hence, government and relevant stakeholders at all levels are expected to provide a thriving platform for the programme.

Contemporary problems of TVET in Nigeria

Despite the overwhelming importance of TVET in Nigeria, it is saddening that it is bedeviled with various challenges and as such limit the chance of achieving the defined objectives. For instance, ILO (2017) identified under-investment as a major obstacle for TVET as it is also characterised with the problems of a lack of clear strategies with poor accountability and financing systems (UNESCO, 2015). More so, the trainers do not have either industry and practical experience required or a lack of understanding of effective and efficient pedagogical skills.

Additional literature, such as studies by Alfred & Kayoma (2012), Okoye & Okwelle (2013), and Onyesom & Ashibogwu (2013), also identified issues plaguing TVET in Nigeria, such as inadequate funding for the field, inadequate infrastructure, inadequate power supply, a lack of qualified instructors and teachers, inadequate supervision of TVET programmes, and inadequate planning and implementation of curricula. Thus, the challenges of TVET were identified by Okafoafor (2010), Nwogu and Nwanoruo (2011), Olaitan (1994) in Odu (2011), and others. These challenges included inadequate educational resources in terms of quantity and quality, underfunding of TVET, a deficit in infrastructure, poor lesson preparation by TVET teachers, and social vices. According to Ayonmike (2013), one of the issues with TVET in Nigeria is the dearth of motivated teachers. Furthermore, Ekpenyong (2011) in Ayonmike (2013) proposed that a variety of reasons have impeded the successful execution of TVET's aims in varying degrees. The TVET sector faces several fundamental challenges, as highlighted by the National Board for Technical Education (NBTE, 2011). These include outdated facilities, inadequate funding, insufficient staffing, weak connections to industry, and a general lack of quality. Low societal recognition leads to low enrollment and a workforce with insufficient skills. Thus, Sylvester (2021) explicitly identified the major challenges of TVET and discussed below:

1. Curriculum of Technical Vocational Education: It is expected that the curriculum of vocational and technical education should be practical and focused with a theoretical basis. However, Nigeria's curriculum is characterised by broad contents and theory thereby limiting the ability of students to explore, experiment, and discover

realities on their own. The inability to structure a curriculum that is practical-based and learners centered inhibits the creativity and innate potential of learners.

2. Access and Equity: According to FME (2009), 84 percent of junior secondary school dropouts are potential TVET students, and 16 percent of them are enrolled in senior secondary school. This should be considered an opportunity that should be leveraged on by the government and stakeholders. Unfortunately, TVET is faced with a limited number of TVET institutions in the country thereby disenabling accessibility of students. The available institutions cannot accommodate 10 percent of the potential population. The high cost of training fees in specialized schools such as Technical University, Ibadan, Oyo state, as well as the high cost of tools and materials, make poor children to be disadvantaged to access quality TVET programme. More significantly, access for kids from rural areas is restricted because most technical and vocational schools are found in large cities. The richest 20% of students finish 9.7 years of school on average, while the lowest 20% complete 3.5 years on average (UNESCO, 2010). This shows that there are still gaps between rich and poor and urban and rural areas.

3. Public perception/Estimation: Generally, there seems to be a negative perception towards TVET making it subject of inferior when compared to general education. This is evident as the programme is considered to be for average or low intelligent students who are backward academically.

4. Inadequate Provision of Funds: The achievement of every educational aim, vision, goal and objectives is premised upon the availability of funds. Little wonder nations across the globe are saddled with the responsibilities of achieving Education for All Goals in 2015 implies that government should commit a high percentage of human and financial resources as well as seeking for financial aid for the course

In Nigeria, the provision of TVET, and especially TVET financing, is quite expensive (Nnaji, 2014). Estimates indicate that Nigeria spends less than half of its GDP (2.3 percent) on education, compared to the average GDP of the 19 sub-Saharan African nations (FGN, 2009). The NBTE, the official body in charge of TVET in Nigeria, reportedly received 20.9 percent, 7.1 percent, and 13 percent of all education expenditures in 2003, 2004 and 2005, respectively, according to Okoye and Arimonu (2016). Of these, the actual expenditure for NBTE in those same years was 39.2 percent, 83.6 percent, and 78.4 percent of the annual budget appropriations.

5. Non-Utilisation of ICT in Technical and Vocational Education: The use of ICT cannot be undermined in the contemporary teaching-learning processes as literature has unveiled overwhelming significance. This is thus expected to be leveraged by TVET educators and learners. However, one of the current challenges in TVET is the delivery of teaching and learning activities using ICT (Information Communication and Telecommunication). Utilization of ICT in TVET is associated with ample benefits in the following ways:

- ❖ Tool to communicate and disseminate information online
- ❖ Tool that supports and helps to improve teaching and learning activities
- ❖ To motivate and interest students and Learning system that provides greater flexibility.

These days, ICT technologies play a bigger role in the growth of technical vocational education and have a lot of promise to raise the standard of vocational education (Ministry of Human Resources 2008; UNESCO 2008).

The strength of TVET in Germany and Malaysia

TVET assumes a better position and this is evident in its impact on the labour market in Germany. An approach of Dual TVET wherein their schools and firms jointly share the responsibility of providing training (two-fold education) was a major platform for successful TVET programme (Remington, 2017). The German dual system has made significant progress in supplying highly skilled workers to meet the demands of the highly technologically advanced economy. This has facilitated the quickest possible transition from school to the workplace, resulting in a low rate of youth unemployment (Remington, 2017; 2018). This is demonstrated by Germany's low unemployment rate of 3.1%, per Trade Economics (2019). One could argue that TVET improves Germany's labour market and economy.

In Malaysia, the current increase in employment opportunities can be attributed to TVET programme which made the unemployment rate to be reduced to 3.4%. The three models that underpin Malaysian TVET are the bureaucratic model, in which the government retains authority, the liberal model, in which industry set the standards for knowledge and skills, and the dual system, which is characterised by collaboration between institutions and industries. This allows relevant stakeholders to define the purpose of TVET and such helped them to revolutionalise the production or manufacturing sector.

Place of Counselling in TVET

Baba and Nasir (2014) viewed Guidance and counselling as a platform for individuals to access vital and relevant information for both teachers and students in the course of career pursuit and not limited to what they are made of. It was elaborated upon as a means of enabling an individual to gain a deeper comprehension of themselves, their surroundings, and the others they must engage with. Stasny (2001) thus viewed awareness to be a significant tool for any progressive society as it enhances the interactions between and or among members of society. To this end, for

Nigeria's objectives of TVET to be realised as earlier identified, guidance and counselling should be regarded as the fulcrum towards such realization. Hence, counseling should be considered an integral and principal component of Vocational Technical Education and training programming. Baba and Umar (2014) and Manfred and Jennifer (2004) are of the opinion that Guidance and Counselling in Vocational and Technology are highly important.

Since Vocational and Technology Education (VTE) focuses on the development of the nation, economy, and individual, it is impossible to overstate the roles that TVET plays in improving the calibre of work and its graduates' calibre, as well as in boosting productivity and job satisfaction and worker motivation. It can be attested that both TVET and Guidance and Counselling are indispensable as they help to create job opportunities, reduce the crime rate, quality labour force, and creativity among others. The assertion made by Baba and Umar (2014) that vocational and technology education helps people adapt their knowledge and abilities to the ever-changing needs of society

establishes this. Through guidance and counselling, vocational and technology education, and the acquisition of skills and knowledge along with social values, a person can manipulate the natural and physical environment, improving sustainable scientific, technological, and economic development and making life more useful (Kennedy and Hains 2008).

According to Baba and Umar (2014), a nation's standard of living rises when its residents have easier access to goods and services, which is why guidance, counselling, vocational training, and technology education are important. The availability of goods and services can be said to be premised on quality choice and TVET training wherein level of creativity is elated. The industrial revolution has led to a shift in the nature of work. Artificial intelligence has displaced direct labour, increasing the unemployment rate. To address this, countries worldwide are implementing measures such as the French law on social modernization, which includes significant provisions for employment rights, vocational and technology education, guidance and counselling, and education. The same can also be said of the government of Denmark that increased the number of TVET training centres as the emphasis would be on social and practical skills development (Alexandrou, 2009).

Despite the significant contributions of counselling to education, it is worthy of note that it is faced with myriads of challenges thereby limiting effective service delivery in schools. Among them are inadequate, limitation of skilled administrative manpower and inadequate training facilities, lack of public interest, and outdated or inaccurate information (Mercy, et al. 2022). From the foregoing, counseling is the heart of every education process and product. Hence, Nigeria Government should as a matter of urgency reposition counselling for effective service delivery like what is obtainable in Germany, Denmark, and France among others.

Conclusion

The emergence of the fourth industrial revolution characterised by technological revolutions could be said to have influenced life culture globally. The effects could be seen in the socio-economic activities where improved technological products including hardware and software components have enhanced and fast track these activities. The overwhelming effects of these can be seen in socio-economic life where labour force is modified. A veritable tool to adjust and adapt to these changes is TVET and it has been used to strengthen countries like Germany and Malaysia. In Nigeria's context, TVET seems to be backward owing to identified and peculiar challenges limiting the attainment of the lofty objectives of the programme. Hence, government and other stakeholders should consider TVET as a veritable tool to adjust to changing world of work.

Recommendations

These suggestions are offered in light of the evaluated literature:

- In Nigeria's context, adequate funding should be made available for TVET programme.
- Government should collaborate with other stakeholders to review the existing TVET curriculum and practices in training centres.
- More Technical and Vocational Education Training centres should be established, funded and situated in central locations for easy accessibility.

- The government alongside other stakeholders could subsidise or make available students' loans to procure necessary gadgets and tools.
- German and Malaysia models should be critically considered and possibly adopted.
- Counseling should be reinforced for effective service delivery through adequate funding and the employment of competent personnel.
- Government should embark on public sensitisation against negative perceptions towards TVET as it is usually considered to be meant for poor academic students.
- Emphasis should also be on training and retraining TVET teachers to expose them to contemporary TVET teaching pedagogies.

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