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# Technical and Vocational Education and Training as a Tool for Creating a Production-Oriented Economy in Nigeria

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## Abstract

The views of 45 lecturers and 155 students randomly selected from the Federal Polytechnic, Ilaro and Moshood Abiola Polytechnic, Abeokuta were sought after and used in qualitative research to ascertain whether or not TVET could be a tool for the creation of a production-oriented economy in Nigeria. A validated (Cronbach  $\alpha$  0.83) structured questionnaire on a four-point Likert-type rating scale was used as an instrument for harvesting the respondents' opinions. Data collected were expressed as per cent frequency and subsequently, the favourable and challenging factors were ranked according to the degree of importance using relative importance index, RII. The results indicated that TVET could be a means of transforming the economy to a production-oriented economy because it would equip trainees with technical skills for creativity, innovation, entrepreneurship and job creation and technical skills to support industrial development of the country. However, such problems as government policy that encourages disparity and discrimination against the teachers and students in the TVET sector and poor funding of the TVET institutions must be addressed. Improvement of the remuneration and conditions of service for TVET instructors, the cause of incessant industrial action in the sector must be addressed by the Government.

**Keywords:** Vocational Training; Technical Training; Economy; Polytechnic.

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## 1. Introduction

In the recent past, the Nigerian economy has witnessed a myriad of challenges occasioned by huge reliance on oil and imports of essential goods for both domestic and industrial consumptions. Oil and gas sector remains a potent driver of the Nigerian economy, which accounted for about 95% of the export earnings of the economy and 85% of government revenue (Ndudechinyere, Eze & Nweke, 2018). According to Focus Economics (2019), GDP has consistently fallen since 2015 as a result of a consistent fall in manufacturing productivity. Growth in the non-oil sector has been falling for quite many years and remains weak till date. Improving labour productivity, according to Uniprojects.net (2019) may be required for economic recovery and growth. Labour productivity and modern economic growth that is production-oriented, according to Ndudechinyere *et al* (2018), is largely based on improvement in the production processes, methods and strategies that are capable to transform the economy into a system of modern mass production necessary for sustained economic development and growth. According to the International Labour Organisation (2011), the higher production capacity of the future generation can only be achieved through quality basic and higher education that is complemented with skill acquisition through training programmes such as technical and vocational education training (TVET). This is the reason why TVET is seen in

most developing and developed nations as a strategic programme necessary for developing professionals who are skilled in their various disciplines to drive a nation towards economic and technological development (Oviawe, 2018; Iro-idoro & Jimoh, 2018).

The current economic challenge facing the country, no doubt, is rooted in the state of the educational system and policies. This state of education is inundating the society with graduates that are not well trained with the mind of contributing to the economic growth of the country in terms of relevant manpower in the mainstream sectors such as science and technology, engineering, mining, construction, agriculture, and so on. There is a large number of unemployed, underemployed or unemployable youths whose lack of productive engagement threatens the security and stability of the nation (Iro-Idoro and Jimoh, 2019). Human capital expertise and specialization are acquired through the process of education in two ways. First, is through a general education programme where people get general knowledge in different subjects to prepare them for greater educational challenges in the future and secondly, through a technical oriented educational programme such as TVET, which offers the student the opportunity to learn skills and that are required to be fit in specific job roles in the labour market (Hanushek, Woessmann, & Zhang, 2011).

Oyenuga, Odunaike and Wahab (2015) identified areas of specialization in technical and vocational education to include animal production, ceramics and textile design, metalwork and fabrications, tie and dye, batik production, among others. Youths, through TVET, can assume the entrepreneurial position as, according to Alhasan and Abdullahi (2013), there is nothing that can surpass the effectiveness of hands-on training, which has been referred to as hand dexterity. Nwosu and Micah (2017) opined that TVET is a type of education that leads to the acquisition of vocational and technical skill and it is seen as one of the means to achieve economic development and self-reliance in a nation. This is the reason many countries recognize TVET as an important way of equipping their youths with skills that would enable them to live a productive life. Hence, in creating a production-oriented and dynamic economy, Nigeria needs to recognize, among other things, the place of Technical Vocational Education and Training (TVET) as a necessary tool.

Okoye and Okwelle (2013), defined TVET as a result-oriented form of education that requires intelligence and dexterity on the part of the learners. Nwosu and Micah (2017) posited that the term Technical and Vocational Education is a combination of two forms of training, that is, technical education and vocational training, that offers the opportunity for skill acquisition and development, competence in scientific engagements, vocational skill development and enhanced productivity of labour force.

United Nations Educational Scientific and Cultural Organization (UNESCO) (2015) sees TVET as the form educational process comprising education, training and skills development relating to a wide range of occupational fields, production, services and livelihoods. TVET includes work-based learning and is expected to equip learners with the technical skills needed for industrial and economic development (Ansah & Kissi, 2013; Iro-Idoro & Jimoh, 2019). It is concerned with the production of manpower who will apply scientific skills to environmental and economic problems. Hence, TVET can be regarded as a formal or non-formal programme meant to develop competent and demand-driven manpower for the industrial sector, leading to industrial and technological advancement.

The above definitions on TVET underscore the importance of the programme to creating a production-oriented economy. Okwelle and Deebom (2017) asserted that the technological development of a nation can be seen in its ability to make use of its resources for economic independence and sustenance as most countries referred to as advanced or developed countries such as China, the USA, Japan, France, inter alia practised a unique but home-

tailored TVET capable of utilizing their resources to meet its socio-economic needs with a view to creating jobs. These countries made productivity the focus of their economy with emphasis on TVET. They achieved remarkable development in industrialization through huge investment and commitment to vocational skill acquisition and technical education. This not only results in enhanced economic self-reliance of the citizenry but also contributes to the nation's gross domestic and national products.

According to Okwelle & Deebom (2017), despite the benefits of TVET as indicated in several studies, inadequacy of training facilities poses a major challenge to TVET curriculum implementation. It was argued that many equipment for training in technical skills may be out of use for long time pending order and delivery of damaged parts from country of manufacture. Masaruf (2015) observed that TVET curriculum is based on foreign model and lacks uniformity, which could be a curriculum defect. This makes TVET to always battle against the misconception of producing citizens who can only work with their hands.

In Nigeria, TVET has a very low patronage to the extent that members of public, including TVET teachers do not encourage their wards and siblings to apply for TVET programmes. This has always led to low students' morale, which consequently affects skill acquisition and productivity. Other challenges of TVET in Nigeria, according to Okwelle and Deebom (2017) include gross neglect and acute shortage of qualified teachers which shows poor attention of government towards the training programme. These and other factors such as poor remuneration of teachers, poor funding, etc. have been militating against the implementation of TVET in Nigeria. Therefore, the objectives of this study are to determine how TVET contribute to development of skills acquisition necessary for production-oriented economy and also to identify the factors militating against its effectiveness in making Nigeria a production-oriented economy.

## **2. Methodology**

A descriptive research design involving survey method employed the use of a structured questionnaire to gather data from the lecturers and students of two polytechnics in Ogun State, Nigeria - The Federal Polytechnic Ilaro and Moshood Abiola Polytechnic, Abeokuta. A total of 200 respondents comprising 45 lecturers and 155 students were samples selected from the population. Stratified random sampling technique was used in sample selection. A structured questionnaire on a four-point Likert-type rating scale (i.e. Strongly agree = 4, Agree = 3, Disagree = 2, and Strongly disagree = 1) was adopted in the instrument for data collection. The questionnaire was validated by two experts in the field and its reliability was determined by the test-retest method. Pearson Product Moment reliability test yielded 0.83, which was considered high enough for the study. The factors working for and against the impact of TVET on the transformation on Nigeria economy to the production-oriented economy as expressed by the respondents were harvested and ranked using Relative Importance Index to identify the driving factors in the order of importance.

## **3. Results and Discussion**

The results in Table 1 shows per cent frequency responses of the teachers and trainees of TVET to factors believed to support the perception that technical training impacted skills required for the transformation of Nigeria economy to the production-oriented economy. The majority of respondents ranging from 85.3 to 90.0% either agreed or strongly agreed that TVET equipped trainees with technical skills for creativity, innovation, entrepreneurship and job creation and technical skills to support industrial development of the country. Indeed education that support hands-on practical exercises and skill acquisition in such trades as welding and fabrication, metal works, tie and dye making, art work, and commerce, among others has been advocated by several authors as the panacea to the problem

of underdevelopment of the country (Alhasan & Abdullahi, 2013; Okwelle and Deebom, 2017; Iro-Idoro & Jimoh, 2019). Nwosu and Micah (2017) averred that TVET leads to the acquisition of vocational and technical skills necessary for economic development and self-reliance in a nation. Ansah and Kissi (2013) opined that TVET is expected to equip learners with the technical skills needed for industrial and economic development. Also, the results corroborated observations of Oyenuga, Odunaike & Wahab (2015) that identified areas of specialization in technical and vocational education to include animal production, ceramics and textile design, metal work and fabrications, tie and dye and batik production, among others. Perhaps, it was the reason for the establishment of Polytechnics in the country (Federal Polytechnic Act 1990). The object of the Polytechnic are to provide courses of instruction in applied science, engineering, management and commerce for agricultural and industrial development of the nation, among others. Furthermore, the aims of the curriculum for TVET supports skill acquisition for entrepreneurship and industrial development.

**Table 1: Per cent frequency of responses on contributions of TVET to skills acquisition necessary for creating a production-oriented economy**

Item Statement	Responses (%)			
	Strongly agree	Agree	Disagree	Strongly disagree
TVET contributes to acquisition of productive technical skills like welding and fabrication, metal works, tie and dye making and art work among others	68.0	17.5	10.0	4.5
TVET equips learners with skills for industrial development	68.0	19.5	9.0	3.5
TVET equips learners with entrepreneurial skills, making them productive and employers of labour	69.5	20.5	8.5	1.5
TVET contributes to production-oriented economy by equipping learners with practical skills and scientific competence to enhance labour productivity	66.5	23.5	5.5	4.5
TVET equips learners with creativity and innovativeness necessary for productive contributions through practical industrial training.	68.5	18.5	5.5	3.5

The perceptions of the research respondents shown in Table 2 indicated that the majority ranging from 81.0 to 98% either agreed or strongly agreed on the factors militating against the effectiveness of TVET in the turning around of the national economy to a production-oriented economy. The respondents opined that government neglect and low involvement in TVET through poor funding and inadequacy of TVET teachers and training facilities for curriculum development, poor remuneration and condition of service for teacher, and inappropriate and unfavourable policy on technical education militate against the functionality and effectiveness of TVET as an agent of economy transformation for industrial development. These findings support the earlier report of Okwelle and Deebom (2017) that gross neglect and acute shortage of qualified teachers which shows poor attention of government towards the training programme.

**Table 2: Per cent frequency responses on factors militating against the effectiveness of TVET in creating a production-oriented economy**

Item Statement	Responses			
	Strongly agree	Agree	Disagree	Strongly disagree
Neglect and low government involvement	60.5	20.5	10.0	9.0
Poor funding and inadequate training facilities	70.5	25.0	2.5	2.0
Unfavourable policy (disparity and discrimination) and poor public perception	76.5	21.5	1.5	0.5
Acute shortage of qualified teachers and poor training delivery	59.5	24.5	11.0	5.0
Poor remuneration and condition of service for instructors leading to brain drain	59.5	22.0	9.5	9.0

In order to establish the degree of importance of the factors supporting TVET as agent of change in mode of economy of the country, and the militating factors according to the ratings of the respondents, the relative importance indexes were computed. Consequently, the factors were ranked, and the results is presented in Table 3. Topmost in the ranking are the assertions by the respondents that TVET equips learner with skills for entrepreneurship that make them employer of labour, and for industrial development. Also, they are confident that TVET impact skills that enhance labour productivity. The least in the order of importance is the impact of creativity and innovative skills derived from TVET. On the other hand, unfavourable government policy that encourages disparity and discrimination against the teachers and students in the TVET sector and poor funding of the TVET institutions appeared to be the most serious militating problems against the technical education. Poor remuneration and conditions of service for TVET instructors were of the least concern of the problems. These findings agreed with the views of Masaruf (2015) who noted that TVET has very low image and has always had to battle against suspicion that they provide second-class education. Besides, Okwelle and Deebom (2017) posited that gross neglect and acute shortage of teachers, as well as inadequacy of training facilities militate against effective implementation of TVET curriculum. By implication, unless the challenges are decisively dealt with, students of TVET would not be able to acquire the required skills to be self-reliant and productive for the much-desired production-oriented economy. The disparity in conditions of service and discrimination against the sector compared with the University sector had always been the cause of incessant industrial actions and low student enrolment in the Polytechnics and Colleges of Technology in the country.

**Table 3. Ranking of the contributing and militating factors according to relative importance**

	Relative Importance Index
<b>Supporting factors for TVET's role in economy transformation to a production-oriented economy</b>	
1. TVET equips learners with entrepreneurial skills, making them productive and employers of labour	0.90
2. TVET equips learners with skills for industrial development	0.88

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| 3. TVET contributes to production-oriented economy by equipping learners with practical skills and scientific competence to enhance labour productivity   | 0.88 |
| 4. TVET contributes to acquisition of productive technical skills like welding and fabrication, metal works, tie and dye making and art work among others | 0.87 |
| 5. TVET equips learners with creativity and innovativeness necessary for productive contributions through practical industrial training.                  | 0.86 |

**Factors militating against the TVET effectiveness in the transformation of economy to a production-oriented economy**

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|--|------|
| 1. Unfavourable policy (disparity and discrimination) and poor public perception     | 0.94 |
| 2. Poor funding and inadequate training facilities                                   | 0.91 |
| 3. Acute shortage of qualified teachers and poor training delivery                   | 0.85 |
| 4. Neglect and low government involvement  | 0.83 |
| 5. Poor remuneration and condition of service for instructors leading to brain drain | 0.83 |

**4. Conclusion**

It may be concluded that TVET could be an instrument for the transformation the economy to a production-oriented economy because it would equipped trainees with technical skills for creativity, innovation, entrepreneurship and job creation and technical skills to support industrial development of the country. However, such problems as government policy that encourages disparity and discrimination against the teachers and students in the TVET sector and poor funding of the TVET institutions must be addressed. Improvement of the remuneration and conditions of service for TVET instructors, the cause of incessant industrial action in the sector must be addressed by the Government.

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