

# Understanding Work-Based Learning in Technical and Vocational Education and Training in Nigeria

Rabiu Haruna, Yusri Bin Kamin, Yahya Bin Buntat

**Abstract:** Work-based learning in technical and vocational education and training (TVET) is a separate pedagogy that strengthens the delivery of vocational education and training, and requires students to maintain balance in being a student and a trainee. While the concept of work-based learning is overwhelming, its practice in Nigerian Institutions is relatively low. This paper, therefore, investigates the awareness level of work-based learning in TVET in Nigerian education system. The study participants are 150 TVET Lecturers in Tertiary Institutions that have TVET departments. Mixed method research was adopted because of its ability to provide in-depth discussions into the investigation; questionnaires were developed in a two-step revision stage. First, a structured questionnaire was designed to collect quantitative and qualitative data. Second, validity test was carried out in which the questionnaire was applied to ten TVET lecturers outside the area of study to obtain feedback about the clarity of the questions, the use of appropriate terminology, and the possible omission of important issues. In follow up to validate the responses a focus group discussion was conducted to clarify some pertinent trends captured from the survey. Data collected were coded and analysed with SPSS. Findings among others revealed that there is low level of work-based learning awareness in Nigeria, adopting work-based learning in TVET program will increase students' responsibilities related to acquiring new skills, which will expand their roles in contributing to nation's building.

**Key Words:** Work-based learning, Technical and Vocational Education, Nigerian education

## I. INTRODUCTION

Worldwide, work-based learning, particularly apprenticeships are being given high recognition, and it is on top of all levels of development's policy agenda.

**Revised Manuscript Received on 30 May 2019.**

\* Correspondence Author

**Yahya Bin Buntat\***, Department of Technical and Engineering Education, School of Education, Faculty of Social Sciences and Humanities, University Technology Malaysia, Johor Bahru, Malaysia

**Yusri Bin Kamin**, Department of Technical and Engineering Education, School of Education, Faculty of Social Sciences and Humanities, University Technology Malaysia, Johor Bahru, Malaysia

**Rabiu Haruna**, Department of Electrical and Electronic Technology, SOSE (Technical), Federal College of Education (Technical) Bichi, Kano State, Nigeria

© The Authors. Published by Blue Eyes Intelligence Engineering and Sciences Publication (BEIESP). This is an [open access](https://creativecommons.org/licenses/by-nc-nd/4.0/) article under the CC-BY-NC-ND license <http://creativecommons.org/licenses/by-nc-nd/4.0/>

The majority have recognized the potentials of the work-based learning and its contributions in terms of reduction of capabilities confound, fulfilling the aptitudes need of a quick evolving workforce, giving cost effective preparing, advancing private sector improvement and smoothing advances to the universe of work [1]. The emphasis on skills in the implementation of the technical and vocational education (TVET) programmes requires that mindful and concerted efforts are made to ensure that there are adequate strategies to that would guarantee hand-on-learning (work-based) experiences. The work-based learning (WBL) that involves the formation of the positive relationships among the TVET system, the business and the labour market and the institutions' host communities-based resources. This study investigates the awareness level of work-based learning in the Nigerian TVET system, and how WBL in TVET can improve the graduate employability in Nigeria and other developing countries.

## A. Work-based Learning

Work-based learning (WBL) is a different instructional method that supports the conveyance of foundation degrees and it demands that the students should be able to balance the requirements of being students and trainees while continuing to fulfil the roles for which they are engaged in a work [2-4]. The WBL suggests to all types of discovering that happen in a genuine workplace. Apprenticeships (formal and casual), entry level positions/traineeships and hands on preparing are the most well-known sorts of work-based learning [5]. In most cases, the work-based learning is a combined element of learning in the workplace with classroom-based learning. WBL requires close collaborations between the TVET institutions, the labour market, and the curriculum planners. According to Okon [6], the WBL is an experiential learning programme which uses the workplace as an essential constituent of the curriculum. WBL gives organized learning experiences to the students through the community-oriented endeavours of the workplace (ventures or the industry) and the TVET establishments. The course of action offers the students the chances to increase different of aptitudes upon introduction to the thorough academic exercises all the while with hands-on vocation development experiences [7, 8]. WBL, as defined by Johnson, Sword [9], is an institutional course of action in which the students are simultaneously presented to both work and learning situations.

WBL is an endeavour to extend the walls of the classroom to incorporate the network as a learning asset. WBL provides the opportunity to narrow the gap that exists between the theory and practice thereby making the learners acquire positive and meaningful learning possibilities [1, 10]. WBL creates positive links between the classroom teaching and learning, the labour market and the graduate employability. WBL which can take place either as school-based learning or at the workplace, assuring the occurrence of the suitable knowledge to the extent of enabling quality graduate outcomes and improving graduate employability [11, 12].

### B. WBL Programmes in TVET

The WBL can offer a quality learning condition and guarantee that there is interest for the gained abilities in the workplace. The industries gain by utilizing the WBL as an enrolment device and furthermore, a method for profiting by the efficiency output of the students. Through WBL programme in the TVET system, the developing countries benefit from an increasingly skilled labour force with little or no heavy investments on the side of the government, since the learners and the employers will be sharing the cost of the programme. The TVET learners will benefit from the workplace significant preparing, yet in addition, from the improved occupation prospects, social incorporation and a smoother progress from the TVET institutions to the labour market which may not have been possible [13, 14]. However, despite the perceived benefits of the WBL as captured in the literature [2, 4, 11, 12], evidence have shown that it has not been effective in use by the Nigerian TVET institutions or educational system. This, therefore, necessitated the need to investigate the needs TVET teachers' awareness of the WBL and how WBL in TVET can improve the graduate employability in Nigeria and other developing countries.

### C. The TVET Context and Why WBL in the Nigerian TVET System

Each year, Nigerian tertiary institutions produce thousands of graduates who roam the streets in search of white collar jobs that are somehow unavailable [15]. Among the graduates are those who studied technical and vocational education training (TVET) courses, who are expected to have gained relevant skills to either be gainfully employed or self-employed. However, many researchers have found that majority of the TVET graduates are unable to establish themselves because they do not possess relevant skills to be employed in the industries, be self-employed, create jobs and employ others [16, 17] hence, they are not competent. Nigeria currently has debilitating graduate unemployment, which has several implications such as psychological, occupational, social and financial consequences [15]. The graduates who have no jobs and relevant skills to establish themselves feel inferior, irrelevant and rejected by the rest of the society. The results of such feelings could be criminal activities and violence [18]. According to Ayonmike, Chijioke [19] majority of youths involved in oil pipeline vandalization, oil theft, militancy and so many other social vices in Nigeria are unemployed graduates who feel that they are not relevant in the society in which they live. The National Bureau of Statistics [20] stated that the unemployment rate in Nigeria rose from 14.2% in 2016 to 18.8% in the third quarter of 2017, and the majority of the unemployed persons among this number are tertiary institutions graduates, which include TVET graduates [21].

Therefore, to limit the chances of TVET graduates getting involved in criminal activities due to unemployment, there should need to improve and strengthen the TVET system by introducing WBL training in the Nigerian TVET system, as well as other developing countries facing challenges of a high number of unemployed graduates.

### D. TVET in Nigeria

The TVET in Nigeria has been recently embraced by several tertiary institutions in a bid to train graduates who'll create jobs, become employers of labour and assist the nation by absorbing the unemployed youths [22]. However, the educational programme has been highly misunderstood by educators, policymakers, parents and students in the larger society. Many Nigerians believe that TVET is for the non-brilliant never-to-do-well students who are unable to pursue normal academic programmes in the higher education institutions [23]. This belief negatively affects TVET progress in Nigeria from its earliest times till date. For clarity purpose, TVET is a skilled-based educational programme that focuses on developing quality technological human resources directed towards the nation's pool of skilled and self-reliant crafts-trainers, technicians and technologists [24]. TVET aimed to offer learners competency-based skills acquisition, quality scientific and technical knowledge to cope with the requirements of fast developing economy, gear up employment and meet the globalization challenges [25]. TVET is well-planned courses and learning experiences which starts with exploring career options; it also supports basic education, life skills and enables learners to achieve good academic standards, develop leadership qualities as well as preparing learners for industry-defined work.

In Nigeria, students enrolled in higher TVET institutions or departments have opportunity to be trained at sub-professional levels in electrical and electronic technology, metalwork and fabrication technology, building technology, woodwork technology, automobile technology, agricultural education, business education, home economics, food, and nutrition; clothing and textiles etc. also, at the technical colleges, pre-vocational education subjects such as carpentry and joinery, painting, masonry and bricklaying etc. are taught, thereby preparing students for gainful or self-employment upon graduation [25]. However, despite the overwhelming opportunities that abound in TVET, it still has enormous challenges and problems such as; misconception of nature of the programme [26, 27], poor curriculum development and implementation [1, 28], inadequate training facilities and equipment [16], lack of trained qualified staff [29], poor funding [30], poor incentives for trainers [19], poor institution and industry relationships [31], etc, which affects extensively the advancement of the TVET programme in Nigeria as well as the quality of graduates. These situations have made TVET in Nigeria to fail in the aspect of producing competent graduates capable of contributing to economic growth and development of the nation. It, therefore, calls for the WBL that encourages connectivity between institutions and industries in Nigeria as this may enhance the employability of the TVET graduates.

### E. TVET Curriculum and Challenges

Despite the numerous Nigerian governments' intervention programmes such as National Directorate of Employment (NDE), National Poverty Alleviation Programme (NAPEP) and the most recent N-power Scheme of the present administration of the Federal Republic of Nigeria to reduce the high rates of graduate unemployment, it still remains unabated in Nigeria.

Adetayo, Oke [32] stated that the problem of graduate unemployment should be blamed on the hard-wired execution of the intervention programs and non-comprehensive methodologies received combined with the feeble institutional system and vulnerability emerging from continuous policy changes and irregularities of government. However, to reduce graduate unemployment in Nigeria. Bassey and Atan [33] noted that the current unstable labour market calls for good government's policy that must be linked to education and to the world of work. This can be achieved by producing college curriculum content that goes beyond hypothetical information or explicit specialized abilities yet transversal aptitudes that incorporate thinking and relations [17, 34]. Obviously, numerous college curricula in some countries mostly developing particularly Nigeria contain no or little practical importance to the requirements to meet the high demands of the national economy [35]. This may be why many industries prefer to employ foreigners instead of Nigerian graduates. However, to solve the severe problem, Poletaev and Robinson [36] recommended that tertiary institutions should establish tangible partnership [35] with employers to develop result oriented curriculum that can be attainable through WBL [37] that will deliver graduates with significant abilities [26] appropriate for industrial development in Nigeria.

### F. Philosophical Framework for WBL in the Nigerian TVET System

Several developed nations are adopting WBL by reforming their TVET systems. Nigeria and other developing countries may need to emulate this to combat the issue of graduates' unemployability. There have been enormous testimonies and success stories of the developed nations that have adopted and understood the WBL benefits in the areas of employment generation, the creation of wealth, industrialization and economic growth and development [1]. This is evidence that developing nations can invest in hard and soft skills development through WBL in the TVET for development of industries, sustainable development, and inclusive growth. Based on the giant strides of WBL in many developed nations, this study, therefore, presents a philosophical framework for the TVET system in Nigeria and other developing nations aspiring to develop their TVET system to adapt as follows;

- (i) Focus strictly on the skills the TVET students should be able to acquire;
- (ii) Offer flexible modular based system, which will enable students to obtain modules that lead to certification the industries require;
- (iii) Connect with the industries to identify, verify and make public the competencies acquired by the students;
- (iv) Assesses TVET students based on specific competencies and industries standard rather than curricular or classroom teaching assessment;

(v) Teaching and learning programme should be designed to assist the students to acquire specific skill adequately;

(vi) Take knowledge and attitudes into account when assessing students' competencies, and its primary source of evidence should be on the students' practical performances and not classroom performances;

(vii) Offer students opportunities to progress through the teaching and learning process at their own pace rather than course completion, which do not guarantee students acquisition of knowledge, skills, and competence;

(viii) Provide adequate training periods for learning concrete skills than abstract learning as seen in some of the courses developed for teaching in TVET institutions.

(ix) Integrate only relevant theories with skill practice

Following the above proposed philosophical frameworks, this study explores how the adoption of the WBL in the Nigerian TVET system can improve the connections between TVET institutions and the industries in Nigeria. It primarily focuses on the TVET system, which aims at empowering the students to participate actively in the growth and development of the society, acts as the intermediation between the labour supply and the demand. Umar and Ma'aji [25] affirmed that poor performance of TVET graduates and their inability to set up small businesses after graduation can be blamed on poor TVET system in Nigeria, which focuses on the traditional method of teaching and learning of classroom course works [38, 39]. Uwaifo [40] maintained that for TVET students to successfully acquire relevant skills required to be gainfully employed or be self-employed, there is a need for total reformation of TVET system in Nigeria and other developing nations. The authors maintained that with the current style of running TVET programmes in Nigeria, the country will continue to have half-baked graduates who are incompetent and unable to cope with the demands of industries in terms of skills and knowledge [25]. The TVET system in Nigeria pay more attention to classroom course works with enormous theories and few practical works [22]. Henceforth, this investigation adds to filling this hole. Given the poor TVET framework with massive difficulties in Nigeria and numerous other sister nations, there is an earnest need for additional empirical investigations on the way to improve the WBL in TVET.

Based on the reviewed literature, the research emphasizes on addressing two basic questions;

**Research Question 1:** What is the Awareness level of the Nigerian TVET Teachers and how it affects the learners' development of the graduates' employability skills?

**Research Question 2:** How can the WBL in TVET be used to prepare students for competence to be paid or self-employed upon graduation?

**Research Question 3:** What WBL instructional method should be adopted by the TVET system for utmost quality of competent graduates?

## II. METHODOLOGY

In this study, the focus is on how the WBL can be adopted into the Nigerian TVET system to improve connectivity between TVET institutions and industries as well as to improve the graduate employability. This investigation embraced a mixed techniques approach [41], which depends on the justification that a single strategy is deficient to give satisfactory and precise research results. Quality of research is often improved when studies use a combination of research methods [42]. The study also used a qualitative approach to merge the results of the quantitative study to facilitate triangulation. However, qualitative data was collected to get an in-depth understanding of the statistical findings [43]. The mixed-method approach was considered suitable for the study because it supplements each other by applying appropriate and sufficient data to address the problem stated in the five research questions.

The questionnaire was used to capture both qualitative and quantitative data. Focus group interviews were as well conducted and analysed through coding [44, 45] after the researcher, with the help of some assistants made transcriptions with NVivo, a qualitative program [46]. In the light of the stated research questions, the interpretations were gathered into themes [42]. Two-step revision stages were employed while developing the questionnaires; the first step was to develop a structured questionnaire, which was designed to collect qualitative and quantitative data. Then the second step was a validated test carried out by applying the questionnaire to 10 TVET experts outside the areas of the study to obtain feedback about the clarity of the questions, the terminology used appropriately and possible omission of vital WBL in TVET activities.

### A. Participants

The study began with identifying TVET departments of fifteen (15) long existing universities, ten (10) colleges of education (technical), and ten (10) key officials of TVET major association in Nigeria. The total population of the study was 145 TVET experts comprising 105 university lecturers, 40 lecturers of colleges of education (technical) and 10 officials of the TVET national association in Nigeria. These participants are 127 males and 18 female who were first contacted with a request to administer the study questionnaire personally and via emails.

The total population was used because the researcher was able to manage the entire population; hence, there was no sampling. Personal contacts were made to the participants in the tertiary institutions within the region the researcher reside while email and phone contacts were used to reach others outside the researcher's region. Through the annual national conference of all TVET experts in Nigeria, which usually publish a voluminous book of abstract containing all contacts of the numerous attendees, it was possible for the researcher to contact all participants in this study.

The questionnaire was administered both personally and via email posting. Within a period of 12 weeks, the researcher collected the questionnaire personally and via email. 61.4% of the study participants have 10-20 years of teaching experience, 27.6% have between 5-9 years of experiences while 11% of them have between 1-4 years of teaching experiences in the selected tertiary institutions. Also, 43.4% are Ph.D. holders, 44.8% are master degree holders, 8.30% have a postgraduate diploma (PGDE) in education while 2.40% hold Bachelor's degree while teaching in the TVET

institutions. Meanwhile, 6.90% of the participants are full professors, 64.80% are senior lecturers while 28.30% are junior lecturers.

The method ensures that there is a high rate of response and the sample size was considered suitable for the statistical analysis techniques [42, 44]. A follow up of focus group interview with seven TVET experts (among the selected 145 study participants) within the region of the researcher was conducted to capture some pertinent issues that were not captured in the quantitative aspect of the study, and to clarify some of the issues in the questionnaire [47]. The descriptive statistical analysis was employed to analyse the opinions of the respondents to explore how the WBL can be adopted into the Nigerian TVET system to improve connectivity between TVET institutions and industries as well as the graduate employability and other objectives of the study.

## III. RESULTS / FINDINGS

The analysis focused on the major key areas of the study to ascertain how WBL in TVET can improve the graduate employability in Nigeria and other developing countries. The study results were analysed and presented in themes as follows; (i) WBL awareness level of the Nigerian TVET Teachers; (ii) preparing students for competence and employability; (iii) instructional method adopted WBL in TVET.

### A. WBL in TVET Awareness Level

From the focus group, the participants pointed out that the WBL is not simply a chance to experience the work environment and gain some knowledge with it. Or maybe it is the primary method of learning for the learners who have contracts, composed or oral, with an employer instead of being enlisted full time with a training provider. They agreed that even though that they have a literary meaning of the WBL, but there is a lack of an in-depth awareness of the programme and how it can be used to improve graduate employability and foster acquisition of relevant skills based on the demands of the labour market. The respondents recommended training and re-training of the TVET teachers to enable them to develop the WBL skills to be able to impart the saleable skills to the students;

[...] the concept of work-based learning is not new but we do not practice it in my institution. I am sure that this may have its negative effects on our TVET students in terms of the development of employability skills (Participant 4).

The participants were of the views that the WBL in the TVET can assist the student to acquire the technical know-how according to the requirements of the industries that will employ them, assist them to have self-sufficient skills to practice outside the school, but the awareness and acceptance is very low in the Nigerian TVET system;

...I am of the view that the curriculum developers be educated on the need for adoption of the work-based learning, which has the ability to building stronger relationships between the labour market and the TVET institutions in Nigeria. This will certainly increase the awareness and adoption of the work-based learning in Nigeria (Participant 5). 'In my school, students prove their competence through scoring high during the end of the semester examinations.

In fact, we are pleased to have them make first class grades. We pay little or no attention to their practical skills mastery based on the demands of the labour market (i.e. through work-based learning). Everything is done through written tests (Participant 1). The respondents were of the views that the TVET system and methods of assessment currently, does not support the WBL, rather the acquisition of certificates with little or no employability skills mastery, which enables the graduates to contribute to the society in which they live.

‘We usually send our students out for the students’ industrial work experience scheme (SIWES) once in four or five years before graduation. But we do little or no investigations on whether the industries we send the students to offer them the actual training they require to be employable. The students are often not well supervised, many of them use the 6 months period for holidays. At the end of the 6 months, they return to the institution with no skill mastery because of poor supervision and monitoring (Participant 4).

The assertions of the focus group respondents are in line with Ayonmike, Chijioke [19], that the method of TVET delivery system in Nigeria is very poor. The Authors further proved that the assessment of the TVET students should be based on the labour market required skills mastery, which is possible through the WBL. The focus group respondents recommended that there is an urgent need to raise the awareness of the WBL among the TVET teachers, the curriculum planners, and the TVET administrators and the policymakers; incorporate the WBL in the TVET system such that the competence of the students can be confirmed based on the demands of the labour market [48].

### B. Preparing students for competence and employability

The study participants from the focus group noted that the WBL can foster the connection between TVET institutions and labour market and therefore enhance the competence of the learners to develop employability skills mastery. They, therefore, recommended training and retraining of the TVET teachers to facilitate the adoption of the WBL in TVET as well as the awareness of the benefits of the WBL to national development;

[...] I strongly believe that the work-based learning program inclusion in TVET system will improve the skill and provide speedy learning process for both the students and the teachers. it will also offer opportunities for innovative teaching methods, including small group learning, self-directed learning and collaborative learning (Participant 5).

The respondents noted that through the WBL in TVET, it can be possible for the production of specific projects or products by the students as evidence of skill mastery, which should be the benchmark for ascertaining relevant employability skills mastery;

‘Our TVET system has witnessed poor practices; it seems we have not truly understood what we are required to do. Some of us think the TVET programme is similar to Arts and Humanities programmes, where students are made to read literary works. We need a total orientation in TVET system to be able to deliver effectively. Above all, the graduates with little or no skill mastery suffer it all. I strongly agree that the WBL in TVE is paramount (Participant 1). WBL as an approach to TVET, in which skills, knowledge, and attitudes are specified in order to

define, steer and help to achieve competence standards, should be innovative to ensure that the learners are well equipped to move into the labour market. This study, therefore, proposes a national qualification framework through WBL if the TVET system must improve. From the quantitative data analysis, the respondents showed that WBL no doubt has proven to be a means of approaching TVET that puts much accentuation on what the students can do independently because of the training, and all things considered speaks to a move far from an emphasis on the procedure associated with the training [19]. The pattern of responses of the participants suggested that there is need to involve the industries when designing the WBL in TVET curriculum to adequately prepare the students for relevant employability skills and to ensure quality graduate outcomes (see table 1).

Table 1: Preparing Students for Competence

SN	Items	Mean	SD
1	Developing WBL in TVET based curriculum that offers students clear suggestions of quality of performance and standard required of them	3.28	0.96
2	Incorporating workplace components to enable students to learn from TVET institutions and industry supervisors	3.19	0.99
3	Enforcing students to show acquisition of specific skill through assignments completion and assessment	3.19	1.03
4	Ensuring that only the WBL in TVET curriculum covering the demands of the industries are studied by TVET students	3.14	1.04
5	Ensuring that the students’ graduation from the TVET institutions is not based on the end of the semester classroom examinations rather through practical evidence of skill mastery for employability	3.17	1.01

Additionally, the focus group respondents affirmed that the WBL is a training that is performance, and standards-based, which is related to realistic workplace practices. I also focus on the learner, and it is based on the demands of the employers with the teachers as coaches or facilitators.

### C. Instructional method to be adopted for WBL in TVET and challenges

In all, teaching methods have a lot of impacts on students. For the WBL in TVET to achieve its aims in the TVET system; there is a need to investigate the current teaching styles of the TVET teachers to enable recommendation of an appropriate instructional method to impact the students. One of the focus group participants confirmed that the TVET system in Nigeria has a poor teaching and learning method; ‘We’ve been used to the traditional teaching method where the students sit for hours listening to the lecturer teach them theories. We have discovered that many a time, the students’ loose interests and are unable to assimilate what is been taught. We need to adopt some teaching methods that focus on skill mastery’. (Participant 2)

[...] work-based learning approach in the TVET system is highly required to expose the students and teachers to the real practical task and skills required for quality learning outcomes (Participant 5). From the quantitative data, the respondents recommend direct instruction method, discussion method, small group teaching method, research method and problem-solving method as best teaching methods that should be adopted to ensure students acquire the relevant skills for gainful or paid employment upon graduation. Meanwhile, using the traditional method of teaching the TVET students was discouraged by the respondents (see table 2).



Table 2: Responses on the WBL in TVET instructional method

SN	Items	Mean	SD
1	Direct instruction method	3.15	1.02
2	Discussion method	3.25	0.92
3	Small group teaching method	2.97	1.04
4	Traditional Teaching Method	2.06	1.11
5	Research method	3.28	0.94
6	Problem-solving method	3.25	0.94

Many researchers have described WBL in TVET as an industry and result oriented education and training which depend on an industry made benchmarks (word related principles). From the focus group discussion, the participants identified several challenges TVET institutions face, which hampers the success of the programme.

‘There are enormous challenges with those who design our curriculum or those who make policies for us. Industry experts should be allowed to design curriculum for us since our target is to produce competent graduate to be employed by them. We should seek partnership with the industries; we must not wait for them to look for us’ (Participant 4).

Helyer [4] stated that the industries standard or demands should be the premise whereupon the TVET program, appraisal and learning materials be structured and developed. To achieve this, there should be a good connection between the industries and the TVET institutions. From the quantitative analysis, the respondents agreed to all the items as the mean scores were above 2.50 (see table 3).

Table 3: WBL in TVET connection to the TVET institutions

SN	Items	Mean	SD
1	Involving industry managers and production supervisors in the design of TVET curriculum and implementation	3.35	0.89
2	Investing in group discussions and seminars by industries and TVET institutions for a clear understanding of competency approaches	3.23	0.96
3	Raising adequate awareness by publicizing the benefits of WBL in TVET	3.35	0.87
4	Introducing the internship programme for TVET students in industries to establish links	3.34	0.88

In Nigeria, it is a known fact that TVET is seen as a programme for those who cannot be admitted in professional courses like Law, Engineering etc. there is a need for total re-engineering of the TVET system in Nigeria. The participants, therefore, suggested that there is an urgent need to promote the TVET programme to reduce the stigma associated with the programme. The government should take the lead.

#### D. The role the TVET Institutions can play to support WBL

To be competent simply mean to have suitable or sufficient skills, knowledge, experience & attitude [49, 50]. This is the role of the TVET institutions, to ensure that the learners acquired adequate skills to be competent in the world of work [51], and contribute to the development of the society [16]. From the pattern of responses, the participants recommend all the items (see table 4).

Table 4: Responses on the role of the TVET-Institutions in supporting the WBL

SN	Items	Mean	SD
1	Making the Industries be in charge of WBL instead of academic staff	3.40	0.82
2	Encouraging 70% training in the industry and 30% in the institution	3.41	0.81
3	Adopting industries’ developed curriculum instead of curriculum designed by some non-skilled TVET lecturers or policymakers	3.37	0.85
4	Building linkages with local and international industries to improve quality of graduates	3.45	0.78
5	Enforcing 70% practical lessons and 30% theoretical lessons	3.38	0.82
6	Adopting industries’ designed curriculum and basing competence on practices instead of classroom written examinations	3.43	0.81
7	Setting performance criteria that provide details of minimum competency level required of learners for graduation	3.29	0.51

From the focus group discussions, one of the participants states as follows;

‘There is a need to assist students define, plan and develop their career paths if we must get things right. I discovered that 70% of TVET students never wanted to study the course but they enrolled into the programme because they see it as the last option for getting into the tertiary institution. Hence, students must prove their interests for studying TVET as a course before they can be admitted’ (Participant 3).

#### E. Role of the Society in Supporting WBL in TVET

The TVET utilizing the WBL approach can react to the necessities of different enterprises, react to training needs of students from various socio-economic and academic foundations, and set them up for beneficial business and feasible employments [37, 52].

‘There are poor perception and acceptance of TVET in our society; we hardly encourage our wards to study TVET in the tertiary institutions. People prefer courses that will earn them office works, which may not be available upon their graduation. The society should change their attitude and embrace the TVET if the aims of the TVET will be achieved in Nigeria (Participant 2).

Therefore, the society has a lot role to play in ensuring that the aims of TVET are achieved. The respondents of this study recommended all the items in the questionnaire (see table 5).

Table 5: Role the Society

SN	Items	Mean	SD
1	Accepting TVET students for internship in the Industries and companies	3.40	0.88
2	Supporting TVET as a panacea for unemployment reduction in the society	3.46	0.80
3	Encouraging our wards to enrol in TVET programmes	3.42	0.82
4	Showcasing TVET as a professional course and discouraging stigmatization	3.39	0.84
5	Encouraging private sector partnership with TVET institutions	3.27	0.95
6	Promoting the concept of lifelong learning	3.37	0.86

## IV. DISCUSSION AND CONCLUSION

From the findings of this study, it can be deduced that WBL in TVET will be a great tool for improving the graduate employment in Nigeria and beyond. It also found that TVET institutions currently teach students skills that are different from what the industries require and this affects the graduates negatively and hinders their chances of getting employed by the industries.

If the government is serious about reducing the high rate of graduate unemployment in Nigeria, the study found that establishing WBL in TVET Quality Assurance Management System not only in the TVET, rather for every programme in the tertiary institutions is the way to go. There should be vocationalization of every course, and the curriculum should be designed strictly according to the requirements of the labour markets. One of the greatest challenges of the TVET system is that the majorities of the policymakers are not industry experts, and therefore have little or no ideas about what the labour market demands.

The study discovered also that with WBL in TVET, the students will be prepared effectively for real the industries [19], which means that it takes into account the exact requirements or competencies the industries require [32, 49]. In other words, the students will be on the training according to the guidelines and rules of the industries. The beauty of WBL in TVET is that it involves the industries in the development of the programme rather than teaching students' courses that may not be relevant to the requirements of the industries. Even if the students at the end of the WBL decide not to work in an industry, they will be able to start small businesses, effectively run and manage such businesses having been trained based on the industries requirements.

Also, the concept of WBL in TVET should be a national issue that should feature in all governments' events to reduce the high graduate unemployment rate. It should be well promoted and funded by the developing countries governments since it centers on 'performing' rather than just 'knowing'. The study also illustrates that the WBL can offer footholds for analyzing the connectivity between learning in school and learning in the industries [52]; therefore, the policymakers should take into account the benefit that can be derived from the WBL in TVET.

Lastly, in view of the severe economic situation and hostile environment [49], poor governance, the low system of education, high rate of inflation and poverty, there is no doubt that the current TVET's curriculum is not working. It should, therefore, be redesigned to address solutions to the challenges of graduate related unemployment [53, 54]. However, enforcing the graduates to become self-employed may be a waste of human capital since the curriculum and the poor education system does not give room for graduates to become one [35]. In this circumstance, a better option will be adopting the WBL in TVET to ensure that the graduates have required skills the industries demand; if by any reason they are unable to join the industries (paid employment), the graduates can be self-employed having acquired the specific skills professionally.

## REFERENCES

1. Amadi, U.P., Appraising Work-Based Learning Experiences of Technical and Vocational (Teacher) Education and Training (TVTET) Programmes In Nigeria. *Mediterranean Journal of Social Sciences*, 2013. **4**(5): p. 137.
2. Biesta, G., Encountering Foucault in lifelong learning. Foucault and lifelong learning: Governing the subject, 2008: p. 193-205.
3. Billett, S., Critiquing workplace learning discourses: Participation and continuity at work. *Studies in the Education of Adults*, 2002. **34**(1): p. 56-67.
4. Helyer, R., Learning through reflection: the critical role of reflection in work-based learning (WBL). *Journal of Work-Applied Management*, 2015. **7**(1): p. 15-27.
5. Stainsby, K. and K. Bannigan, Reviewing work-based learning opportunities in the community for physiotherapy students: an action

- research study. *Journal of Further and Higher Education*, 2012. **36**(4): p. 459-476.
6. Okon, U. Work-Based Learning initiatives. in Step-B/World Bank-assisted TVET Teachers Upskilling workshop held at the University of Nigeria, Nsukka from 23rd October–4th November. 2011.
7. Brodie, P. and K. Irving, Assessment in work-based learning: investigating a pedagogical approach to enhance student learning. *Assessment & Evaluation in Higher Education*, 2007. **32**(1): p. 11-19.
8. Stewart-Lord, A., S.M. McLaren, and C. Ballinger, Assistant practitioners (APs) perceptions of their developing role and practice in radiography: results from a national survey. *Radiography*, 2011. **17**(3): p. 193-200.
9. Johnson, D.R., C. Sword, and B. Habegger, Handbook for Implementing a Comprehensive Work-Based Learning Program According to the Fair Labor Standards Act. *Essential Tools: Improving Secondary Education with Transition for Youth with Disabilities*. National Center on Secondary Education and Transition (NCSET), University of Minnesota, 2005.
10. Lester, S. and C. Costley, Work-based learning at higher education level: Value, practice and critique. *Studies in Higher Education*, 2010. **35**(5): p. 561-575.
11. Schrenko, L.C., Standards and Guidelines for Work-Based Learning Programmes in Georgia. State of Georgia Department of Education, 2010.
12. Macfarlane, B. and L. Gourlay, The reflection game: Enacting the penitent self. *Teaching in Higher Education*, 2009. **14**(4): p. 455-459.
13. Mulder, M., T. Weigel, and K. Collins, The concept of competence in the development of vocational education and training in selected EU member states: a critical analysis. *Journal of Vocational Education & Training*, 2007. **59**(1): p. 67-88.
14. Nicoll, K., Discipline and e-learning. Foucault and lifelong learning: Governing the subject, 2008: p. 164-77.
15. Nwanegbo, C.J. and J. Odigbo, Security and national development in Nigeria: The threat of Boko Haram. *International Journal of Humanities and Social Science*, 2013. **3**(4): p. 285-291.
16. Okolie, U.C. and A.M. Yasin, Technical Education and Vocational Training in Developing Nations. 2017: IGI Global.
17. Okolie, U.C., P.A. Igwe, and E.N. Elom, Improving graduate outcomes for technical colleges in Nigeria. *Australian Journal of Career Development*, 2019. **28**(1): p. 21-30.
18. Otto, G. and W.I. Ukpere, National security and development in Nigeria. *African Journal of Business Management*, 2012. **6**(23): p. 6765-6770.
19. Ayonmike, C.S.O., P. Chijioke, and B.C. Okeke, Competency based education and training in technical vocational education: Implication for sustainable national security and development. *Journal of Educational Policy and Entrepreneurial Research*, 2014. **1**(2): p. 290-300.
20. National Bureau of Statistics, Unemployment rate in Nigeria (2016 3rd Quarter report). 2017.
21. Deba, A.A., M.K. Jabor, and M.M. Inti, The role of technical and vocational education in meeting the challenges of youth unemployment in Nigeria. *International Journal of Research in Social Sciences*, 2013. **3**(1): p. 671-680.
22. Deba, A.A., Conceptual Framework of Service Learning in Technical and Vocational Education at the Nigerian Tertiary Education. 2015, Universiti Teknologi Malaysia.
23. Umar, I., R. Audu, and A. Idris, Public private sector participation in education: A Panacea for Provision of facilities in Technical Colleges in Nigeria. *Journal of League of Researchers in Nigeria (JOLORN)*, 2009. **10**(1): p. 27-32.
24. Adamu, M.K., Capacity Building Needs of Automobile Technology Lecturers in Federal Colleges of Education (Technical) in North-East, Nigeria. 2017.
25. Umar, I.Y. and A.S. Ma'aji, Repositioning the facilities in technical college workshops for efficiency: a case study of North Central Nigeria. *Journal of stem teacher education*, 2010. **47**(3): p. 6.
26. Chinsonso, O.U., Management of woodwork workshops in Nigerian tertiary institutions: An analytical study. *MOJEM: Malaysian Online Journal of Educational Management*, 2017. **2**(1): p. 20-36.
27. Okwori, R.O., Mechanisms for improving the provision of facilities for wood workshops in colleges of education in the north central zone of Nigeria. *Journal of Emerging Trends in Engineering and Applied Sciences*, 2012. **3**(3): p. 455-460.

28. Mohammed, D.S. and S. Ismail, A Framework for the Integration of Goal Setting Skills in Electrical Technology Education Programme Curriculum. *Advanced Science Letters*, 2018. **24**(5): p. 3697-3700.
29. Chukwu, B. and A. Igwe, Reducing graduate unemployment through entrepreneurship development: The Nigerian experience. *African Journal of Social Sciences*, 2012. **2**(4): p. 139-152.
30. Agboeze, M., F. Onu, and E. Ugwoke, Enhancement of Critical Thinking of Vocation and Adult Education Students of Entrepreneurship Development in Nigeria. *Journal for Education and Practice*, 2013: p. 116-123.
31. Udofia, A., A. Ekpo, and E. Nsa, Instructional Variables and Students' Acquisition of Employable Vocational Skills From Technical Colleges in Akwa Ibom State, Nigeria. *Annals of Modern Education*, 2013. **5**(1): p. 60-71.
32. Adetayo, O., A. Oke, and O. Aderonmu, Assessment of Entrepreneurship Education and Employment Generation among University Graduates in Nigeria. *Assessment*, 2015. **7**(23).
33. Bassey, G.E. and J.A. Atan, Labour market distortions and university graduate unemployment in Nigeria: Issues and remedies. *Current research journal of economic theory*, 2012. **4**(3): p. 67-76.
34. Ismail, S. and D.S. Mohammed, Employability Skills in TVET Curriculum in Nigeria Federal Universities of Technology. *Procedia-Social and Behavioral Sciences*, 2015. **204**: p. 73-80.
35. Olusegun Ajayi, J., Graduates Unemployment and Criminality in Ado-Ekiti. *International Journal of Management and Business Research*, 2015. **5**(1): p. 61-77.
36. Poletaev, M. and C. Robinson, Human capital specificity: evidence from the Dictionary of Occupational Titles and Displaced Worker Surveys, 1984–2000. *Journal of Labor Economics*, 2008. **26**(3): p. 387-420.
37. Eneji, M.A., D. Mai-Lafia, and S. Weiping, Socio-economic impact of graduate unemployment on Nigeria and the vision 20: 2020. 2013.
38. Audu, R., et al. Provision of workshop tools and equipment: necessity for technical vocational education graduates skills acquisition. in *2nd International Seminar on Quality and Affordable Education (ISQAE)*. 2013.
39. Deba, A.A., et al., Potential of service-learning on students' interpersonal skills development in technical and vocational education. *Asian Social Science*, 2014. **10**(21): p. 1.
40. Uwaifo, V., Technical Education and its Challenges in Nigeria in the 21st Century. *International NGO Journal*, 2010. **5**(2): p. 040-044.
41. Jonker, J. and B. Pennink, The essence of research methodology: A concise guide for master and PhD students in management science. 2010: Springer Science & Business Media.
42. Robson, C., Real world research: A resource for social scientists and practitioner-researchers. 2002: Wiley-Blackwell.
43. Creswell, J.W. and J.D. Creswell, Research design: Qualitative, quantitative, and mixed methods approaches. 2017: Sage publications.
44. Cooper, D.R., P.S. Schindler, and J. Sun, Business research methods. Vol. 9. 2006: McGraw-Hill Irwin New York.
45. Creswell, J.W., A concise introduction to mixed methods research. 2014: Sage Publications.
46. Shields, L. and A. Twycross, The difference between quantitative and qualitative research: this paper is one of a series of short papers on aspects of research by Linda Shields and Alison Twycross. *Paediatric nursing*, 2003. **15**(9): p. 24-25.
47. Palinkas, L.A., et al., Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, 2015. **42**(5): p. 533-544.
48. Dabalén, A., B. Oni, and O.A. Adekola, Labor market prospects for university graduates in Nigeria. *Higher Education Policy*, 2001. **14**(2): p. 141-159.
49. Afolabi, O., M.A. Yusuf, and F. Alao, Ameliorating The Problem Of Unemployment Among Graduates Through Relevant, Functional And Sustainable University Education In Nigeria. *Projournal Of Humanities And Social Science*, 2014. **2**.
50. Bereiter, C., Education and mind in the knowledge age. 2005: Routledge.
51. Stevenson, J. and J.C. Stevenson, Developing vocational expertise: Principles and issues in vocational education. 2003: Allen & Unwin Crows Nest, NSW.
52. Griffiths, T. and D. Guile, A connective model of learning: The implications for work process knowledge. *European educational research journal*, 2003. **2**(1): p. 56-73.
53. Longe, O., Graduate Unemployment in Nigeria: Causes, Consequences and Remediable Approaches. *American International Journal of Contemporary Research*, 2017. **7**(4): p. 63-73.
54. Akor, R., et al., Technical And Vocational Education: A Solution To
55. Precarious Youth Unemployment In Nigeria. *European Journal of Education Studies*, 2016.
56. Education Studies, 2016.