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IMPACT OF QUALITY ASSURANCE ON TECHNICAL VOCATIONAL EDUCATION AND TRAINING (TVET) IN NIGERIA

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Abstract

Quality Assurance (QA) and Technical Vocational Education and Training (TVET) are two widely discussed concepts in specialised skill-focused education. Ineffective or absence of QA has been identified by policymakers as an inhibition to the realisation of goals of TVET. The purpose of this paper therefore is to examine the impact of QA on TVET in Nigeria. This study becomes imperative to provide a reliable assessment and research-based evidence on TVET in Nigeria. The research method is quantitative, while relying on the survey strategy for data collection. The key sample locations were Yaba College of Technology, Federal College of Education (Technical), Lagos State Polytechnic and Federal Science & Technical College, from which a sample size of 150 staff and student respondents was selected using purposive sampling technique. The returned questionnaires were analysed electronically, and the findings systematically presented using descriptive and inferential statistics. The major finding from the survey is that the impact of TVET has not been impressive because of ineffective QA at all levels. The practical implication of the paper is that for TVET to be impactful on technical progress, employability and national development there is need for the policymakers to focus on critical areas such as finance, access/participation, quality assurance and relevance of the programme to the needs of the country.

Keywords: Nigeria, Technical Vocational Education and Training, Quality Assurance, Educational Objectives

Classification: Empirical Paper.

1.0. Introduction

Formal education from developmental perspective is an instrument for attaining economic growth and technological progress judging by the experience of developed industrialised nations (Onyesom and Ashibogwu, 2013). When viewed from the functionalist perspective, education is a medium for transmitting social norms and values to learners through the formal school system (Filloux, 1993). From policy perspective, investment in education is a potent means that the third world nations could explore to fast-track economic growth, technological progress and boosting of citizens' capacities (World Bank; 2008). The various perspectives of education as articulated above can better be improved with a sound quality assurance mechanism. The term quality assurance (QA) is a critical examination of the objectives, attitudes, procedures and institutional control systems with a view to ensuring that set standards and quality are maintained (Fadokun, 2005). The essence of QA is to enhance the effectiveness of education system towards achieving set standards (Onyesom and Ashibogwu, 2013). With specific application to TVET, a quality assurance is imperative in the learning environment (school setting) to provide policy-makers with deeper understanding of vocational education, its functions, set goals and key characteristics (ETF, 2012).

Drawing from the experience of the industrialised nations, the Nigerian government established a number of TVET-oriented institutions to launch the country steadily on the path of

technological progress and national development in furtherance of its commitment to TVET (Besmart-Digbori, 2011). The main objective of TVET in the National Policy on Education (2004) is the inculcation of practical and applied skills as well as basic scientific knowledge in students for useful living in the society. The expected outcomes of TVET are:

- a) To provide trained manpower in the applied science and business particularly at craft, advanced craft and technical levels;
- b) To provide the technical and vocational skills necessary for agricultural, commercial and economic development; and
- c) To give training and impart necessary skills to individual who shall be self-reliant economically (NPE, 2004).

^ In the recent times, the Ministry of Education through the National Board for Technical Education (NBTE) enhanced the scope of TVET by granting approval for the establishment of 99 Vocational Enterprise Institutes (VEIs) and Innovation Enterprise Institutions (IEIs) to complement ongoing efforts of the conventional TVET institutions in Nigeria (NBTE, 2011; Oweh, 2013; Ladipo et al., 2013). The VEIs and IEIs are special vocational centres empowered to train and award National Innovative Diploma (NID) and National Vocational Certificate (NVC) in contemporary courses/vocations such as Multimedia Technology, Software Engineering, Networking & Systems Security, Film and TV Production, Performing and Media Arts, Computer Hardware Engineering Technology, Automotive Mechatronics, Refrigeration and Air-conditioning, Electrical Installation, Early Child Care Management, Block Laying and Concreting, Building Construction Technology, Hospitality and Tourism Studies, Paralegal Studies, Music Technology, Telecoms Technology, Petroleum Geo-Sciences, Cosmetology and Beauty Therapy, Office Secretarial Assistant et cetera (NBTE, 2011).

Despite the continued efforts of government on TVET, the pace of technological progress, employment and industrialisation is still slow and unimpressive as evidenced by rising unemployment rate and level of poverty in the country (Ladipo et al., 2013). The poverty level in Nigeria despite TVET is 72%, while the hydra-monster unemployment is 23.9% (National Bureau of Statistics, 2011, Central Bank of Nigeria, 2011). Similarly, the quest to attain technological progress and industrialisation through TVET is far from being actualised because Nigeria has no place among technologically-advanced nations. The nation still spends huge proportion of its budget on importation of tractors, lathe machines, drilling machines, cars, trains, industrial equipments and ICT accessories (Uwaifo and Uddi, 2009). Besides, Nigerians at different levels had expended the sum of \$7.592 billion or ₦1.2 trillion in 2013 on the importation of ICT equipment from America,

India and Europe, which is equivalent to 50 per cent of her budgeted expenditure for that fiscal year (Amuta, 2013).

Worse still, the UNESCO rated Nigeria low in the 2012 education assessment report, stating that the country's TVET performance manifested some disturbing indicators relative to other countries across the globe. The report further indicated that, Nigeria has the largest population of out-of-school children, prohibitive cost of education and high gender inequality which is concentrated in certain parts of the country (Oweh, 2013). Whereas, wherever TVET is vigorously pursued and encouraged, it should improve skills of learners and enhance employability (Maclean, 2011). The inability of Nigeria to develop technologically despite its adoption of TVET calls for objective policy retrospection and investigation.

Based on the foregoing, this empirical paper is premised on two objectives. The first is to examine the impact of quality assurance on TVET in Nigeria with specific emphasis on technological progress, employability and national development. The second intent of the paper is to carry-out a quality assurance survey on selected TVET institutions in Lagos (Nigeria) using four quality assurance indicators (QAIs). The entire paper has a total of five (5) parts. Part I represents the introductory segment of the paper, which provides a background to the study. Part II explores previous scholarly works on TVET and QA with a view to gaining deeper insights into the issues being investigated. Part III develops a theoretical framework for the paper relying on human capital theory (HCT) and critical conflict theory (CCT). Part IV focuses on the research materials/methods, data analysis and discussion of findings. Part V concludes with a summary of findings and recommendations.

2.0. Conceptual Issues: TVET and Quality Assurance

Technical Vocational Education and Training (TVET) and Quality Assurance (QA) are two widely discussed concepts in specialised education. This section of the paper provides concise explanations on both concepts.

TVET is a specialised education designed to empower learners through the development of their technical skills, human abilities, cognitive understanding, attitudes and work habits in order to prepare learners adequately for the world of work or positioned them practically for self-employment after graduation (Winer, 2000, Oni, 2007). However, Badawi (2013) noted that UNESCO and International Labour Organization unanimously defined TVET as: "*A comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life*" (p. 284).

Considering the importance of TVET to national development, it has attracted different names such as Technical Education (TE), Vocational Training (VT), Vocational Education and Training (VTE), Technical and Vocational Education and Training, Occupational Education (OE), Apprenticeship Training (AT), and Career and Technical Education (CTE) in education research literature (Wahba, 2010, Ladipo et al., 2013). The Ministry of Education has consistently articulated its commitment to TVET in the national policy on education (NPE) because of the prospects of poverty eradication, job creation, sustainable development and actualisation of the Transformation Agenda (Oweh, 2013; Ladipo et al, 2013).

Apart from poverty reduction potential of TVET, its effective implementation could also serve as instrument for curbing social exclusion, where cost of higher education is out of the reach of the majority and as antidote for youth unemployment, where the labour market is saturated (ETF, 2005). Furthermore, Maclean (2011) asserts that TVET if well positioned could play multidimensional roles of stimulating economic growth, social development, improving conventional education, empowerment, wealth creation, poverty reduction and skills enhancement. In a nation with recurring incidences of youth restiveness, TVET is well suited to help youths and adults become self-dependent and self-reliant, while for those working in the industry, TVET is helpful in the areas of skills enhancement, mitigation of high job turnover and risks of obsolescence (Okolocha, 2012).

As laudable as the philosophy of TVET is, it is misconstrued by different people in the society. The parents and wards view vocational education as a form of education designed for drop-outs and those found to be less intelligent (ETF, 2005; Ladipo et al, 2013). TVET to some Nigerians is a low quality education suitable for the less privileged students or second class citizens (Okolocha, 2012). According to Amodu (2011), the issue of negative perception of TVET is not limited to parents and ordinary Nigerians, the policy makers are equally not immune from negative impression about vocational education. The implication of negative perception of TVET is threefold: (a) low societal estimation of TVET in the society (b) gross gender imbalance in TVET implementation, and (c) inadequate human, material and financial resources for TVET institutions. Having explained the meaning of TVET and its socio-economic impacts on the society, the next sub-section operationalises the term quality assurance.

Conceptually, quality assurance (QA) refers to performance measures designed by the authorities for assessing the performance of educational institutions with a view to ensuring that the learning outcomes meet the needs of each society (Igborgbor, 2012; Onyesom and Ashibogwu, 2013). From another viewpoint, QA refers to established procedures, processes and standard systems that support and ensure effective delivery of educational services (Kontio, 2012). Besides,

within the policy circles, QA represents a potent “tool which enables policy makers to determine national educational needs, to assess new approaches to resolving issues, and to evaluate the effectiveness of policies and strategies” (Asian Development Bank, 1996:1.) From the foregoing, an effective QA should focus on critical elements such as access/participation, funding, relevance and quality of TVET (King, 2011; RECOUP, 2011). The relationship between the four elements above and TVET can better be measured through effective monitoring and evaluation of its supply, demand and financing elements (King and Palmer, 2008; King, 2011).

To ensure that quality and standards are maintained different nations and TVET institutions (formal or informal) do have in place QA mechanisms that suite their socio-economic and educational aspirations. For instance, the United States of America employed the accreditation systems as QA mechanism at regional, national and specialised levels for effective monitoring and coordination of educational services. Whereas, Australia created a full-fledged QA unit called Australian Universities Quality Agency (AUQA) to ensure effective quality control of educational services in tertiary institutions (Mohsin and Kamal, 2012). Similarly, the government of Nigeria established supervisory agencies to enforce quality assurance in tertiary institutions. The National Universities Commission (NUC) maintains oversight functions over the universities; the National Board for Technical Education (NBTE) oversees the polytechnics; and the National Commission for Colleges of Education (NCCE) takes charge of the Colleges of Education. These agencies have over the years developed the Minimum Academic Standards (MAS) as benchmark for QA and institutional self-assessment (Onyesom and Ashibogwu, 2013). The MAS is used by supervisory agencies for institutional accreditation; it covers among others: teaching quality/effectiveness, floor space for lectures, minimum laboratory facilities per students, minimum library space, minimum staff/student ratio, minimum teaching facilities/equipment and office accommodation (Uvah, 2005). From the foregoing discourse, the purpose of Accreditation Exercise in USA, Australia and Nigeria is to ensure that standard and quality of higher education are strictly regulated, maintained and enhanced by educational institutions in line with changing needs of the society and the industry (Mohsin and Kamal, 2012; Onyesom and Ashibogwu, 2013).

2.1. Measuring functionality of TVET: Quality Assurance Indicators

To avoid measuring TVET performance haphazardly by the rule of thumb, educationists have developed quality assurance indicators (QAIs) as measures which give information and statistics about educational effectiveness, efficiency and performance in different contexts (Chalmers, 2008). There are several quality assurance indicators, but the common point of convergence among all the quality metrics is the need for objective evaluation and quality improvement. According to UNESCO (2002), the five key components of quality assurance indicators are: (a) What learners

gain; (b) Quality Learning Environments; (c) Quality Content; (d) Processes that support Quality; and (e) Outcomes from the learning environment. Additional quality assurance indicators include: (i) the learners' behavioural characteristics, attributes and demographic factors, (ii) the teacher's professional competencies/pedagogic skills, (iii) the teaching processes, curriculum and learning environment, (iv) the outcomes of education (Ehinderer, 2004).

Besides, quality assurance indicators could be classified as simple quality indicator, performance quality indicator and general quality indicator (Cave et al., 1997; Chalmers, 2008). In practice, simple and performance quality indicators are quantitative in nature. The simple indicators are employed by quality assurance evaluators for providing a relatively unbiased description of a situation or process in the school system. The result of such QA is often expressed as absolute figures devoid of valued judgement. Performance indicators on the other hand are QA that is tied to a particular standard of learning/teaching, educational objectives, goal of examination, evaluation of management/teacher/amenities et cetera. The outcome is relative rather than absolute and it is heavily depended on valued judgment. The general indicators however are used for QA that is essentially externally driven to elicit opinions, survey findings or general statistics (Cave et al., 1997; Chalmers (2008).

Moreover, quality assurance indicators could also be classified as Input, Output, Process and Outcome indicators (Borden, and Bottrill, 1994; Burke et al., 2002; Warglien and Savoia, 2006). Input and output indicators are quantitative in nature. The input indicators are employed in QA for measuring the quality of human, financial and physical resources available within the formal school systems. The result of input indicators because of its quantitative nature is constrained by its inability to determine clearly quality without extensive interpretation. Output indicators are used in QA for measuring concrete results produced in the learning environment, including infrastructural/instructional resources utilised to produce the reported results. The limitation of output indicators is that it reflects numerical value only, but the quality of the reported numbers is entirely disregarded. For the process indicators, they are employed for measuring qualitatively the means used to deliver educational programmes, activities and services within the school environment. The process indicators look at how the education system operates within a particular context; it is a good measure of inter- and intra-school quality comparison. However, outcome indicators are employed in QA by institutions and policy-makers to measure the quality of educational objective, academic activities and impact of service delivery. Outcome indicators do not generate results in numerical data like output indicators, but measure complex processes qualitatively (Borden, and Bottrill, 1994; Burke et al., 2002; Warglien and Savoia, 2006).

Furthermore, QA could be carried out using four quality indicators, namely: finance, access/participation, quality adequacy and relevance of TVET programme (ETF, 2012). Whereas, Ayeni (2012) proposed six quality indicators, viz: learning resource inputs, instructional process, teachers' capacities development, effective management, monitoring and evaluation, and quality learning outcome. However, Cheung (2001) submitted that there are seven areas of improvement that is often directed. These include: Teaching Improvement, Learning Improvement, Curriculum Improvement, Evaluation Improvement, Classroom Environment Improvement, School Management Improvement and Teacher Education Improvement. From the discourse above, the purpose of QA could be summarised into two, viz: (a) to evaluate brilliant academic performance of students in standard examinations; and (b) to determine the relevance of the learning experience to the needs of the students, the community, and the society at large. The next section discussed the theoretical framework of the paper.

3.0. Theoretical Framework

This paper derives its theoretical basis from Human Capital Theory and Critical Conflict Theory (CCT). A concise explanation on HCT and CCT is provided below.

3.1. Human Capital Theory

Most research works in the field of education adopt the human capital theory of Schultz (1975) as their theoretical foundation. In clear terms, the human capita theory (HCT) presumes that education or training has the potential for stimulating economic growth, technological progress and productivity because it transfers useful knowledge, dexterities and skills for better life time earnings (Becker, 1964; Schultz, 1975; Robert, 1991; Ladipo et al., 2013). From another viewpoint, Klein and Cook (2006: 347) state that investment in people is 'a form of human capital which propels changes in the society. Like other forms of human capital, human hands-on ability can be increased through education, training, experience, health care, and so on.'" The economic growth attainment of a number of East Asian nations like Hong Kong, Korea, Singapore, Shanghai and Taiwan is associated with the quality of their workforce (Xiao, 2001; Ladipo et al., 2013). As laudable as HCT is in the field of education, the woeful performance of Nigeria in both conventional and TVET education cast doubt on the relevance of HCT. Therefore, there is an urgent need for a separate theory for TVET. Broudy (1981) cautioned several years back that although there is no specific theory of TVET, but a sound theory of vocational education should reflect a set of reasoned beliefs, goals, policies, organization, curriculum, and methods of teaching and learning TVET as well as providing a consistent set of guiding principles and policy framework for effective implementation. In line with the presumptions on HCT, three (3) hypotheses are hereby formulated for empirical testing.

- a) *H₀: There is no significant relationship between Technical Vocational Education and Training (TVET) and technological progress for national development.*
- b) *H₀: There is no significant relationship between Technical Vocational Education and Training (TVET) and skills acquisition for self-employment.*
- c) *H₀: There is no significant relationship between Technical Vocational Education and Training (TVET) and preparation of students for the world of work.*

3.2. Critical Conflict Theory

Critical Conflict Theory (CCT) provides explanation for poor quality of TVET and its inability to stimulate economic growth, employment and national development. It strengthens the functionalist's perspective and identifies the sources of conflict in education. The need for using two contrasting theories is premised on the statement of Ball (1994) that:

“...no one interpretational mode or set of theoretical tools or interpretational stance is adequate or exhaustive of the analytical possibilities of policy analysis. The same data can be subjected to very different types and levels of interpretation”(p.109).

According to the functionalist viewpoints, education emerged in human society as a socialisation mechanism which facilitates learning of skills, norms and positive attitudes for the good of the society thereby reducing social inequalities (Kendall, 2010). The critical conflict theory arose to underscore the fact rather than education reflecting the noble functions enunciated by the functionalists and several other theorists, it has been used by privileged segment of the society to engender social inequalities ranging from class, race, and gender (Liasidou, 2009; Kendall, 2010). The conflict of social inequalities that education engendered is historical and persists in every society (Durant and Durant, 1968). In the contemporary times, every society is still stratified between “a small group of rich men and a great mass of poor engaged in a constant class struggle” (Walsh, 2012:94).

Secondly, the CCT argues that educational institutions have failed to actualise the set goals and objectives because political elites starved education of funds. The disbursement of funds is a critical component to the perpetuation of social inequalities. Despite increasing awareness on the importance of TVET, funding has been a big issue (King, 2011). To resolve this state of affairs, the education sector must undergo a fundamental restructuring in order to redress the issue of funding with a view to creating equal opportunities for all students irrespective of social status (Kendall, 2010).

Besides, the critical conflict perspective identified hidden curriculum phenomenon as another source of conflict in education. Skelton (1997:188) defined hidden curriculum as “that set of implicit messages relating to knowledge, values, norms of behaviour and attitudes that learners

experience in and through educational processes. These messages may be contradictory, non-linear and punctuational and each learner mediates the message in her/his own way.” However, Kendall (2010) views hidden curriculum as the process of transmitting certain cultural values, norms and attitudes to learners through the mechanism of education. The rationale of hidden curriculum is to ensure that learners conform and obey schools’ rules and regulations. The hidden curriculum is tactically transmitted and nurtured in students as social norms and moral beliefs through the medium of the classroom (Giroux, 1983).

The implications of embedment of hidden curriculum on educational objectives are far-reaching. Bowles and Gintin (1976) remarked that the hidden curriculum leads to nurturing of passive and obedient learners often preferred by employers of labour because of their conformist attitude and readiness to accept the bidding of constituted authorities (subservient workforce). Consequently, the education sector turns out stereotyped professionals in excess of the demand of the industry, a situation that keeps wages abysmally low. In the same line of thought, Hargreaves (1978) argued that hidden curriculum stifles creativity and innovation because it rewards the conformists (students who cannot think beyond what they are taught in class) and reprimands creative students (students who think outside the box) because they prefer to act independently different. Therefore, the phenomenon of hidden curriculum produce unimaginative and unquestioning work force that would be exploited and manipulated by the employers of labour in the industry. It is instructive to conclude that a routine, periodic, internal and external QA would serve a potent mechanism for curtailing all the social conflicts (inequality, funding, hidden curriculum) raised within the CCT. Based on the following the fourth research hypothesis could be stated as follows:

- a) *H₀: There is no significant relationship between Technical Vocational Education and Training (TVET) and Quality Assurance in institutions.*

In summary, this section adopted the human capital and critical conflict theories from which four research hypotheses were formulated for empirical verification. The next sub-section explores the literature for environmental factors affecting the quality of TVET; this exploit becomes imperative for inter-country comparison.

3.3. Environmental Factors Affecting the Quality of TVET

Nigeria’s low quality TVET is linked to a number of environmental factors. The foremost of the environmental factor is ineffective implementation of TVET curriculum. According to Onyesom and Ashibogwu (2013), the outcome of Monitoring of Learning Achievement (MLA) in Nigeria revealed that “there is a wide gap between the intended curriculum (theory) and the achieved curriculum (practice).” The constraint of translating educational curriculum into reality in the

domains of colleges, polytechnics and universities had been a recurring implementation issue in Nigeria for a very long time; this ugly development is linked to cluster of constraints like inadequacy of experts, irrelevant text-books, ineffective teaching method, paucity of learning tools for practical-oriented exercises and poor funding of institutions (Garba, 2004; Gabadeen and Raimi, 2012). It is therefore right to conclude that several laudable educational programmes in Nigeria were compromised mid-way during implementation because of institution's inability to effectively translate the objectives of curriculum into practical realities (Okebukola, 2004).

The second factor that inhibits the quality of TVET in Nigeria is negative perception by the end-users especially parents, wards, students and policymakers; a phenomenon linked to poor understanding and low awareness (Eze and Okorafor, 2012). Similarly, Amodu (2011) remarked that negative perception of TVET is not an attitude confined to the general public, but the policy makers in the Education sector are also not insulated from the negative mind-set about TVET. The problem of negative attitude towards TVET featured in a survey carried out in Pakistan, where respondents rated Science Education as more desirable than TVET. From a total of 683 respondents surveyed, 57% preferred Science Education, 35% favoured Technical Education, while 8% voted in favour of Humanities/Arts. TVET was rated low by respondents because of negative impression that this form of education attracts lower financial benefits in the society (Reliance Services, 2012).

The third inhibiting factor against quality TVET is the inability of the programme to meet the need of the industry. The Nigerian educational system at present cannot meet the needs of the industry and the society (Omede, 2012). Empirical studies in Pakistan on the relevance of TVET to the needs of the industry indicated that 43% of the respondents felt that TVET aligned with the job demand in the industry; 53% remarked that TVET did not meet industry expectations and 4% of the respondents were indifferent (Reliance Services, 2012).

Furthermore, TVET experienced fall in quality on account of poor funding from government and other stakeholders in Nigeria. King (2011) reported that in several countries of the world, funding/financing of TVET has been very low; the case is worse in developing nations despite increasing awareness about the importance of TVET. Empirical finding on funding for TVET from Pakistan indicated that 75% of the respondents were of the opinion that TVET is grossly underfunded, 20% replied that TVET is well funded and 5% of the respondents maintained a neutral viewpoint. The result above is a common feature in developing nations. In Nigeria, TVET is challenged by paucity of funding from government and donor agencies (Ladipo e al., 2013). Whereas, huge budgetary allocation is appropriated to security, defence and administration by the government to the detriment of education sector (Adebakin and Raimi, 2012). Consequently, quality and standards in the educational institutions have been compromised because of lack of

adequate funding; a development which stifles the capacity of institutional authorities to meet their teaching, research and infrastructural needs (Oladipupo et al., 2007; Onyesom and Ashibogwu, 2013). It was this realisation that informed the deliberate inclusion of funding as a key quality assurance indicator in several working papers (UNESCO, 2002; ETF, 2012; Reliance Services, 2012).

The fifth factor affecting quality of TVET is its inability to stimulate employability contrary to the widely held notion that specialised education empowers the citizens to be creative, innovative and productive thereby improving their employability (Sofoluwe et al., 2013). The rising unemployment rate in Nigeria negates the presumption that TVET stimulates employability (Ladipo et al., 2013). TVET Survey findings lent credence to the employability potential of TVET in Pakistan, where 80% of the respondents favoured TVET as a potent tool for employment, 14% felt it does not and 6% of the respondents expressed neutrality (Reliance Services, 2012).

The last environmental factor affecting TVET is absence of enabling environment and infrastructural facilities to strengthen skills acquisition programmes (Lockheed et al., 1980; King, 2011). Absence of an enabling environment is worsened by condition of the economy, weak internal capacity of institutions, poor organisational governance, poor institutional research engagements, the phenomenon of brain drain leading to paucity of experts, unhealthy industrial actions, political tampering with policies, unsuitable policy environment, inadequate funding, shortage of instructional resources, and inconsistent educational policy (Oladipupo et al., 2007). From the foregoing, the factors affecting the quality TVET could be summarised as poor conceptualisation of vision and goals, competencies/expertise of instructors, teaching and learning environment admission and assessment standards, learning environment, and employability prospects (World Bank, 2007).

4.0 Materials and Methods

This research adopts the quantitative research methods. The required quantitative data were sourced from Yaba College of Technology, Federal College of Education Technical, Lagos State Polytechnic, Federal Science & Technical College and few others using a structured questionnaire instrument with 54 items. The homogeneous nature of TVET institutions in Lagos (Nigeria) made purposive sampling technique more appropriate. From a proxy population of 65,000 in the sample locations, a sample of 150 respondents was selected electronically using an internet-assisted sampling calculator available on the domain <http://www.surveysystem.com/sscalc.htm>. The returned questionnaires were collated, coded, entered as data entries and analysed electronically using SPSS, and the findings were presented using descriptive and inferential statistics (Saunders et al., 2012).

4.1. Data Analysis/Discussion

From a total of 150 questionnaires administered to cross-section of lecturers, students, parents and other stakeholders in selected TVE institutions, a total of 143 questionnaires were returned after a period of two weeks with consistent follow-ups on email, personal contact and phone calls. The response rate represents 95.3% of the entire questionnaires. The reliability test was conducted to test if the 54 items in the questionnaire instrument actually measured what it was intended to measure. The Cronbach Alpha based on standardised items indicated a magnitude of 0.892; an indication that the reliability condition is satisfactory. The findings arising from the survey as well as the outcomes of four tested hypotheses are hereby presented and discussed in Tables (1-9) below.

Table 1: Personal Data of respondents

Variable	Frequency	Percentage (%)
Sex		
Male	83	58%
Female	60	42%
Total	143	100%
Age of respondent		
15-24 years	43	30.1%
25-34 years	40	28.0%
35-44 years	37	25.9%
45-54 years	19	13.3%
55 years and above	4	2.8%
Total	143	100%
Marital status of respondent		
Single	68	47.6%
Married	74	51.7%
Widow	1	.7%
Total	143	100%
Educational qualification of respondent		
GCE O/Level	12	8.4%
ND/NCE	15	10.5%
HND	17	11.9%
Bachelor	36	25.2%
Masters and Doctoral	26	18.2%
Others	37	25.9%
Total	143	100%
Which of the TVET institutions are you affiliated?		
Yaba College of Technology	37	25.9%
Federal Science & Technical College	30	21.0%
Federal College of Technology (Technical)	39	27.3%
Lagos State Polytechnic	16	11.2%
Others	21	14.7%
Total	143	100%
Status of respondent in TVET Institution		
Staff	53	37.1%
Student	69	48.3%
Parent	15	10.5%
Contractor/Vendor/Friend of the institution	6	4.2%
Total	143	100.0%

Table 1 clearly reflects balanced representation of genders, age groups, TVET stakeholders, TVET institutions as well as different education statuses of respondents.

Table 2: Perception of TVET by the Nigerian Public						
SN	Strongly Agree (SA), Agree (A), Neither Agree nor Disagree (N) Disagree (D) and Strongly Disagree (SD)	SA	A	N	D	SD
1.	TVET is believed was designed for students who cannot effectively cope with the rigour of conventional education system.	16.8%	36.4%	11.2%	14.7%	21.0%
2.	Prevalent belief is that brilliant students should not take-up TVET programmes.	14.7%	28.7%	16.1%	21.7%	18.9%
3.	TVET is perceived as an inferior education designed for students from poor families.	12.6%	28.0%	11.9%	23.1%	24.5%
4.	The essence of TVET as contained in the national policy on education is to enhance skills acquisition and promote self-employment.	50.3%	38.5%	7.7%	3.5%	-
5.	TVET unlike the conventional education has the prospect of stimulating technological progress for national development.	46.9%	34.2%	13.3%	3.5%	2.1%
6.	TVET if well-positioned could become a mechanism for curbing unemployment of graduates in the Nigerian competitive industry.	58.7%	28%	7.0%	4.9%	1.4%
7.	Formal or informal TVET is helpful in preparing students adequately for the world of work and better performance in the industry.	41.3%	44.8%	12.6%	1.4%	-

Table 2 indicate a varied perception of TVET among the stakeholders in Nigeria. Majority of Nigerians are of the opinion that TVET was designed for students who are weak in conventional education; some were of the view that TVET is an inferior education which is not suitable for brilliant students. The survey established that TVET has the potential of enhancing skills acquisition; promote self-employment, technological progress as well as preparing students for the industry.

Table 3: Quality Assurance Exercise in TVET Institutions						
SN	Strongly Agree (SA), Agree (A), Neither Agree nor Disagree (N) Disagree (D) and Strongly Disagree (SD)	SA	A	N	D	SD
1.	Your affiliated TVET institution undergoes routine and periodic quality assurance exercise.	16.8%	50.3%	20.3%	10.5%	2.1%
2.	Importance of Quality assurance in your affiliated institution necessitated the establishment of Quality Assurance Committee or Unit	21.7%	47.6%	17.5%	10.5%	2.8%
3.	The essence of TVET Quality Assurance in most institution is to strengthen the training outcomes and deliverables.	40.6%	45.5%	10.5%	1.4%	2.1%
4.	Quality assurance in your affiliated institution covers competencies of instructor and instructional resources.	18.9%	49.7%	20.3%	7.0%	4.2%
5.	Quality assurance in your affiliated institution explores funding of TVET by government.	16.8%	37.8%	32.2%	9.8%	3.5%
6.	Quality Assurance exercises are disliked by authorities and instructors in your affiliated institution because of socio-economic challenges.	7.7%	32.9%	32.9%	16.1%	10.5%
7.	Philosophies of Quality Assurance are sacrificed by personal interests and institutional corruption.	10.5%	39.2%	32.9%	11.9%	5.6%

8.	Outcomes of Quality Assurance are at times positive despite infrastructural deficiencies.	23.1%	46.2%	17.5%	9.8%	3.5%
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Table 3 indicated that majority of the respondents agreed that quality assurance is observed in their respective TVET institutions despite a number of socio-economic challenges. The core finding is that the role of QA is appreciated, but there are some areas that require improvement to make QA more impactful.

Table 4: Quality of TVET Facilities in Your Institution				
	TVET Items	Adequate	Fairly Adequate	Inadequate
1.	Workshop Rooms built for TVET	25.2%	60.1%	14.7%
2	Books and reference materials on TVET available in the Library	20.3%	62.9%	16.8%
3.	Learning Environment for TVET	30.8%	57.3%	11.9%
4.	Machines, Equipment and Tools provided for TVET	27.3%	54.5%	18.2%
5.	Computer rooms set up for TVET	27.3%	44.8%	28.0%
6.	TV & Audiovisual used for TVET	16.1%	49.0%	35.0%
7.	TVET Instructors/Trainers	28.7%	50.3%	21.0%
8.	Contents of TVET curriculum to needs of the society	28.7%	54.5%	16.8%

Table 4 indicated that majority of the respondents rated the quality of TVET facilities like workshop rooms, books, learning environment, machines, computer rooms, TV/Audio visual, instructors and contents of curriculum as fairly adequate. The core finding therefore is that TVET facilities in Nigeria need to be upgraded and overhauled for trainees/students to meet the needs of the industry.

Table 5: Relevance of TVET Facilities in Your Institution				
	TVET Items	Adequate	Fairly Adequate	Inadequate
1.	Workshop Rooms built for TVET	49.7%	43.3%	7.0%
2	Books and reference materials on TVET available in the Library	41.3%	53.1%	5.6%
3.	Learning Environment for TVET	50.3%	40.6%	9.1%
4.	Machines, Equipment and Tools provided for TVET	44.1%	47.6%	8.4%
5.	Computer rooms set up for TVET	42%	43.4%	14.7%
6.	TV & Audiovisual used for TVET	30.1%	44.8%	25.2%
7.	TVET Instructors/Trainers	39.9%	40.6%	19.6%
8.	Contents of TVET curriculum to needs of the society	42.0%	41.3%	16.8%

Table 5 indicated that the rating of relevance of the TVET facilities like workshop rooms, books, learning environment, machines, computer rooms, TV/Audio visual, instructors and contents of curriculum was mixed. Overall, a little above 40% of the respondents felt the TVET facilities are relevant, the same number of respondents noted that TVET facilities in place are fairly relevant and the remaining 10% noted that TVET facilities are irrelevant. Like the core finding in Table 4 earlier, there is an urgent need for the relevance of TVET facilities in Nigeria to be enhanced and upgraded to meet the needs of the industry and stakeholders.

Table 6: Level of Funding for TVET in Your Institution						
SN	Strongly Agree (SA), Agree (A), Neither Agree nor Disagree (N) Disagree (D) and Strongly Disagree (SD)	SA	A	N	D	SD
1.	TVET receives adequate funding from the governments and supervisory authorities.	13.3%	28.0%	23.1%	29.4%	6.3%
2.	TVET is treated as a special education hence there is massive funding for its programmes in most institutions.	9.1%	32.9%	20.3%	27.3%	10.5%
3.	TVET receives intervention funding from private sector organisations and external donor agencies.	10.5%	34.3%	30.8%	16.1%	8.4%
4.	Spending on capacity-building for TVET instructors is a priority of government and the supervisory authorities.	20.3%	36.3%	21.0%	17.5%	4.9%
5.	Funds are set aside for conducting Internal Quality Assurance in your affiliated TVET institution.	6.2%	41.3%	27.3%	19.6%	5.6%
6.	Research & Development on TVET has attracted funding in recent times.	10.4%	34.3%	26.6%	23.1%	5.6%

Table 6 shows that the level of funding for TVET in the areas of research, capacity-building, internal quality assurance, general administration and external intervention support is very low. An indication that TVET is not accorded a special status by the policymakers in Nigeria at least in practical terms.

Table 7: TVET and the Level of Access/Participation						
SN	Strongly Agree (SA), Agree (A), Neither Agree nor Disagree (N) Disagree (D) and Strongly Disagree (SD)	SA	A	N	D	SD
1.	Access/enrolment on TVET programmes by students is almost the same with enrolment in the conventional education.	11.2%	43.4%	11.2%	28.7%	5.6%
2.	Nigerian students across social classes (rich and poor) have fair access to TVET in your institution.	18.2%	46.9%	16.8%	14.0%	4.2%
3.	Nigerian students across ethnic nationalities have fair access to TVET in your institution.	20.3%	35.7%	21.7%	14.7%	7.7%
4.	Nigerian students across geographical zones have fair access to TVET in your institution.	21.0%	35.0%	19.6%	18.2%	6.3%
5.	TVET is made accessible to Nigerian students across religious affiliations in your institution.	15.4%	35.7%	23.8%	14.7%	10.5%

Table 7 indicates that a little above 50% of the respondents agreed that the level of access/participation by the people in TVET is representative of social classes, ethnic nationalities, geographical spread and religious affiliations. Also, the same percentage of respondents agreed that enrolment in TVET is comparable with enrolment in conventional education.

Table 8: Challenges facing TVET						
SN	Strongly Agree (SA), Agree (A), Neither Agree nor Disagree (N) Disagree (D) and Strongly Disagree	SA	A	N	D	SD

	(SD)					
1.	Inadequate instructional resources affect the effectiveness of TVET programmes in your affiliated institution.	35.0%	49.7%	9.1%	2.1%	4.2%
2.	Poor conditions of service and motivation for instructors hinder effectiveness TVET in your institutions.	31.5%	51.0%	10.5%	2.8%	4.2%
3.	Irregular capacity-building and training for those handling TVET programmes affect training outcomes.	32.2%	50.3%	11.9%	1.4%	4.2%
4.	Inadequacy of experts and well trained TVET instructors affect students' performances in vocational education.	37.1%	43.4%	11.2%	4.2%	4.2%
5.	Poor funding of TVET instructional resources hinder technological progress in Nigeria.	41.3%	42.7%	8.4%	3.5%	4.2%
	Endemic corruption in the management of TVET programmes perpetuates unemployment and underdevelopment.	36.4%	37.1%	18.9%	2.8%	4.9%

Table 8 shows that between 60%-80% of the respondent identified inadequate instructional resources, inadequacy of TVET experts/instructors, poor conditions of service for instructors, irregular capacity-building/training and endemic corruption as critical challenges affecting the quality of TVET in Nigeria.

Table 9: Results of the Hypotheses

SN	Hypothesis Statements	Df and Level of Sig.	Chi square and P-Values	Decision
1.	There is no significant relationship between Technical Vocational Education and Training (TVET) and technological progress for national development.	12(5%)	22.496 (0.032)	Reject
2.	There is no significant relationship between Technical Vocational Education and Training (TVET) and skills acquisition for self-employment.	9(5%)	10.782 (0.291)	Accept
3.	There is no significant relationship between Technical Vocational Education and Training (TVET) and preparation of students for the world of work.	9(5%)	9.189 (0.420)	Accept
4.	There is no significant relationship between Technical Vocational Education and Training (TVET) and Quality Assurance in institutions.	16(5%)	48.579 (0.000)	Reject

From table 9 above, two null hypotheses were rejected, while the other two were accepted all at 5% level of significance, but with different degree of freedoms.

For the first hypothesis, the p-value = (0.032). Since p-value = 0.032 < 0.05, we reject the null hypothesis and accept the alternative hypothesis that there is significant relationship between Technical Vocational Education and Training (TVET) and technological progress for national development. This finding aligns with the prevalent views in the literature that investment in

specialised education like TVET is a potent means for fast-tracking, technological progress, citizens' capacities and national development (World Bank; 2008; Besmart-Digbori, 2011).

The second hypothesis has a p-value = 0.291. Since $p\text{-value} = 0.291 > 0.05$, we accept the null hypothesis that there is no significant relationship between Technical Vocational Education and Training (TVET) and skills acquisition for self-employment. This second finding goes contrary to the widely held view in the literature that TVET as a specialised education is well-positioned to empower and prepare learners practically for self-employment and self-reliance after graduation (Winer, 2000, Oni, 2007; Okolocha, 2012). The reason for the mismatch between theory and reality in Nigeria is not unconnected with inefficiency in management of TVET by formal and informal institutions as well as dysfunctional impact of the self-employment schemes and poverty reduction intervention programmes which by design were designed to assist graduates of TVET.

However, hypothesis 3 has a p-value = 0.420 and since the $p\text{-value} = 0.420 > 0.05$, we accept the null hypothesis that there is no significant relationship between Technical Vocational Education and Training (TVET) and preparation of students for the world of work. This third finding also did not align with the position of the literature that TVET is a form of learning experience that prepares students to meet the needs of the industry and the society for those that opt for the industry (Omede, 2012; Reliance Services, 2012; Okolocha, 2012).

The fourth hypothesis has p-value = 0.000. Like previous hypotheses, its $p\text{-value} = 0.000 < 0.05$, we reject the null hypothesis and accept the alternative hypothesis that there is significant relationship between Technical Vocational Education and Training (TVET) and Quality Assurance in institutions. This finding is in harmony with the philosophy of quality assurance which seeks to ensure effective quality control of educational services and maintenance of Minimum Academic Standards (MAS) as benchmark for institutional self-assessment (Mohsin and Kamal, 2012; Onyesom and Ashibogwu, 2013). The finding restates that despite all the odds in the administration of TVET in Nigeria, the issue of quality assurance is taken seriously by the policy-makers.

5.0. Conclusion/Recommendations

This paper sets out to investigate the impact of quality assurance on TVET in Nigeria. Based on this intent, the literature was explored for deeper insight on TVET and Quality Assurance. For data gathering however, a structured questionnaire with 54 items was administered to a sample of 150 respondents using purposive sampling technique. The findings from the inferential statistics carried out were instructive. The first hypothesis indicates that there is significant relationship between Technical Vocational Education and Training (TVET) and technological progress for national development. But the second hypothesis indicates that there is no significant relationship between

Technical Vocational Education and Training (TVET) and skills acquisition for self-employment. The third hypothesis indicates that there is no significant relationship between Technical Vocational Education and Training (TVET) and preparation of students for the world of work. Whereas, the fourth hypothesis indicates that there is significant relationship between Technical Vocational Education and Training (TVET) and Quality Assurance in institutions.

Flowing from the key findings above, the following recommendations are critical for developing an enduring quality assurance (QA) that would impact positively on TVET in Nigeria.

- a) For TVET to stimulate employability and national development there is need for proper sensitisation and education of the general public including the policymakers on the real essence of TVET. This measure when properly carried out would fast-track attitudinal change and elicit positive commitment from parents, student, wards and all other stakeholders in the country.
- b) Federal Government and stakeholders should provide adequate funding for TVET institutions in order to meeting national aspirations. Adequate funding would boost standards and quality of manpower, instructional resources and infrastructural resources in vocational institutions in Nigeria. At the governmental level, the Ministry should lobby the Tertiary Education Trust Fund (TETFUND) to earmark adequate funding for tertiary institutions running TVET programmes considering its importance for national development. In the same vein, the organised private sector organisations should be sensitised to support TVET with their corporate social responsibility (CSR) initiatives as done in developed nations by CISCO, NBC/Cappy Plc, Microsoft and other multinational companies.
- c) Exchange programme between Industry and TVET institutions is inevitable for effective TVET outcomes that meet industry's needs and needs of individuals for self-employment and improved productivity. Exchange arrangements often bridge the gaps between theory and practice as well as acquaint the trainers and trainees of TVET/VTE/IEI institutions with the present needs and expectation in the industry. This is otherwise called Town-Gown relationship.
- d) TVET institutions should invest massively in routine and periodic capacity-building training programmes for teachers/lecturers/instructors. This effort would keep trainers informed of best practices and methodological changes in the field.
- e) The Ministry of Education in collaboration with the supervisory agencies should embark on sensitisation campaign through the mass media to enrich public understanding and perception

on the socio-economic benefits of TVET. This is needed to correct the negative stereotyping of students on different TVET programmes.

- f) In order to ensure effective curriculum implementation, there is need for the supervisory agencies to ensure all TVET institutions implement uniform standards, training, evaluation and certification at federal, state and local government area. At present there is variance in the certification patterns of formal and informal TVET institutions especially now that approval had been granted to VTEs and IEIs.
- g) In the area of uniform quality assurance, the same Ministry and supervisory agencies are advised to put in place enduring mechanisms for QA. This is imperative to standardize, monitor and control quality of training, process, instructional resources, teachers and certification. An effective QA would ensure learners are adequately prepared for the needs of the industry. This would be possible if regulatory authorities mentioned above could develop a strong institutional supervision mechanism to regularly supervise the teaching and learning of vocational education in Nigeria.
- h) More importantly, the Federal Government of Nigeria should muster the political will to promote TVET as a springboard for the nation's technological progress, industrialisation and National Development beyond the present rhetoric.

The policy-makers in the Ministry of Education must go beyond rhetoric by genuinely according special attention to TVET.

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