Ensuring Quality in Technical Vocational Education and Training in Nigeria Higher Education

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Abstract

The importance of Technical Vocational Education and Training (TVET) in the advancement of technology of any nation cannot be over emphasized. This is because TVET is widely recognized as a vital driving force for socio-economic growth and technical development of nations. The most important feature of TVET is the emphasis of its curriculum on the acquisition of employable skills with an orientation towards the world of work. Therefore, in order to achieve the goals and objectives of TVET in the Nigerian higher education system, the quality of the programme needs to be improved upon or enhanced. This paper reviewed the concepts of TVET, higher education, quality and quality assurance in TVET. It also looked at quality assurance agencies indicators and TVET; challenges of quality assurance in TVET and strategies for ensuring quality TVET in the Nigerian higher education system. This paper concluded that government policy makers, stakeholders and TVET providers in Nigeria higher education should focus on best practices in TVET that have worked in other countries around the world in ensuring quality TVET in the Nigerian higher education system. Furthermore, government should provide adequate funds, plan, implement and manage TVET programmes well in our institutions of higher education.

Keywords: TVET, Higher Education, Quality Assurance

Introduction

Technical vocational education and training (TVET) is one of the key agents of technological development, either as a way of developing human capacity thereby increasing the needed work force for modernization, industrialization and environmental development or (as a matter of personnel freedom) developing capability and empowerment. Skills and knowledge are the engines of economic growth and social development of any nation (Goel, 2010). TVET holds the key to attaining the skilled and entrepreneurial workforce needed for the changing technological workforce (Afeti, 2010). According to UNESCO (2002), TVET is used 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, the acquisition of practical skills attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.

Quality assurance in TVET is a concept that is concerned with high performance in activities involved in technical vocational education such as teaching, learning, infrastructures, students’ behaviour and the entire academic process. Quality in TVET refers to input and output of the programme, the expressions of standard by which certain goals can be achieved. Idialu (2007) in Idialu (2013) stressed that in order to ensure high quality in teaching, examination and improved learning in TVET, it is essential that students have opportunities to learn from...
teachers who they meet, and then continue to demonstrate throughout their career, rigorous professional standards.

The achievement of quality standard in TVET is an on-going process that is concerned with pre and post service education, monitoring, professional development and certification. (The main goal of TVET is to create and improve opportunities for high quality learning which is measured through output/performance (Idiala 2013). The concept of quality assurance and its implication on higher education cannot be overemphasized as performance indicators of TVET still require serious attention. Good quality TVET is very critical in the total development of the student, which ensures proper acquisition of employable skills with an orientation channelled towards the world of work.

For quality TVET to be achieved in a nation, the principal actors in the learning process – teachers, learners and the environment – must be cooperatively organized. In other words, the teacher must be adequate in quality and quantity, the students must be well trained and facilities must be provided as well.

In Nigeria, the goals of technical and vocational education according to the National Policy on Education (2004) are to:-

a) Provide trained manpower in the applied sciences, technology and business particularly at craft, advanced craft and technical levels;

b) Provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development;

c) Give training and impart the necessary skills to individuals who shall be self reliant economically.

In order to achieve these goals, the enhancement of quality should be one of the objectives of TVET system. This is because qualitative TVET is the bedrock of manpower development and skill acquisition in our societies. Therefore, quality assurance is an essential process for achieving the goals of TVET which will lead to the production of qualitative human capital development and fulfillment of key stakeholders’ expectations.

**Technical Vocational Education and Training (TVET)**

It has been maintained at national and international platforms that TVET provides the needed employable skills and attitude necessary for effective performance in the workplace. Winer (2000), and Oni (2007) described TVET as a specialized education designed to empower learners through the development of their skills, human abilities, cognitive understanding, attitudes and work habits in order to prepare them adequately for the world of work or position them practically for self-employment after graduation. Uwaifo (2012) referred to TVET as the training of technically oriented personnel who are to be the initiators, facilitators and implementers of technological development of a nation by adequately training its citizenry on the need to be technologically literate, leading to self reliance and sustainability. Badawi (2013) noted that UNESCO and International Labour Organization (ILO) 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. Thus TVET equips individuals with skills; attitude and knowledge that will make them participate meaningfully in the world of work.

**Higher Education**

Education is actually the basic instrument of economic growth and technological advancement of any society. However today, the workplace is becoming increasingly geographically fluid across national, regional and international borders due to economic globalization and development of advanced communications.
and information technologies (Oyebade, Oladipo and Adetoro, 2012). It is pertinent to note that qualitative higher education is especially acknowledged as a vital driving force for the socio-economic growth and technological development of nations.

Higher education according to the National Policy on Education (2004) is the education given after secondary education in Colleges of Education, Polytechnics, Monotechnics, and Universities including those institutions offering correspondence courses. The national goals for this level of education according to (NPE, 2004), shall be to:

- Contribute to national development through high level relevant manpower training;
- Develop and inculcate proper values for the survival of the individuals and society;
- Develop the intellectual capability of individuals to understand and appreciate their local and external environments;
- Acquire both physical and intellectual skills which will enable individuals to be self-reliant and useful members of the society;
- Promote and encourage scholarship and community service;
- Forge and cement national unity; and
- Promote an international understanding and interaction.

Therefore, it is expected that these goals shall be pursued through: teaching, research and development, staff development, generation and dissemination of knowledge through a variety of modes (full-time, part-time, sandwich, distant learning etc); access to training fund; maintenance of minimum educational standard, inter-institutional co-operation and dedicated service to community.

**Quality and Quality Assurance in TVET**

The concern for quality has been at the core of the motivating forces for reforms in education. International Organization of Standardization (IOS) (1994) defined quality as the totality of features and characteristics of a product or service that bears on its ability to satisfy stated needs. African Union (2007) stated that quality is a multidimensional concept, embracing all functions and activities of education system, including teaching and academic programmes, research and scholarship, staffing, students, buildings, facilities, equipment, services to the community, academic environment; taking into account national cultural values and circumstances and international dimensions such as exchange of knowledge, interactive networking, mobility of teachers and students, and international research projects. Idialu (2007) also described quality as standards of something as compared to other things – that is the degree of goodness or excellence. Adegbesan (2011) opined that quality is not just a feature of a finished product or services but involves a focus on internal processes and outputs which include the reduction of waste and the improvement of productivity. In the same vein, Adegbesan (2011) in Fadokun (2015) characterized quality by three interrelated and interdependent strands:

i) Efficiency in the meeting of its goals,
ii) Relevance to human and environmental conditions and needs
iii) Exploration of new ideas, the pursuit of excellence and encouragement of creativity.

With regard to education, assuring quality is a fundamental aspect of gaining and maintaining credibility of programmes in institutions and national systems of higher education worldwide. Quality assurance is designed to prove and improve the quality of an institution’s methods, and educational products and outcomes. Arikewuyo (2004) viewed quality in education to be judged by both its ability to enable the students perform well in standard examinations and relevance to the needs of the students’ community and the society as a whole. According to, Oyebade Oladipo
and Adetoro (2012) quality in education may be considered on the basis of how good and efficient the teachers are; how adequate and accessible the facilities and materials needed for effective teaching and learning are; and how prepared the graduates are for meeting the challenges of life and solving the social problems. Oderinide (2004) enumerated two aspects of quality in education, which are internal and external. The internal aspect is the implementations of school objectives while the external aspect deals with the implementation of national objectives which are prerequisites to the achievement of quality in any educational institution.

The quality of TVET in the education system is defined as the totality of characteristics of a learning programme and of its provider, through which the expectations of beneficiaries and quality standards are met. (Directorate of Industrial and Vocational Training, 1991, and Quality in Education Law 2006). Ayonmike, Okwelle and Okeke (2013) stated that in TVET, quality is directly related to the achievement of the learning outcomes (knowledge, skills and competence achieved at the end of the learning process) that fulfill the key stakeholders’ expectations: students, parents, employers and community in general. They further maintained that continuous enhancement of quality TVET system is key priority to any nation that desires to reap the benefits of this all important aspect of education system.

In order to ensure quality in TVET in Nigerian higher education, it is important to establish a quality assurance (QA) framework in all aspects of TVET. A systematic and consistent QA system helps to establish an institution’s good credibility and image. It includes defined standards of achievement, documented procedures for all identified processes, established way of responding to issues and clear accountability of outcomes. The result is greater public confidence, more satisfied students, efficient processes and staff who are confident in their jobs. Onocha (2002) saw quality assurance as the management of goods, services and activities from input stage, through processes to the output stage of production. Maajumdar, Khambayat, Tsesore-Gayondato and Solla (2010) in the same vein described QA as the process of verification that determines whether products or services meet or exceed customers’ expectations. Therefore in general concept, QA is seen as any process of checking to ensure that products or services meet specific requirements.

Furthermore, Fasasi (2006) defined QA in education as the consistent and adequate provision and utilization of good and high standard resources to foster effective teaching and learning in every stage and aspect of the educational system. Quality assurance in TVET is the systematic management and assessment procedure adopted by an educational institution or system to monitor performance and to ensure achievement of quality outputs or improved quality (Maajumdar et al 2010). Ayonmike, Okwelle and Okeke (2013) stated that the main actors in QA in TVET are; the teachers, the commission for quality assurance and evaluation, schools management, school inspectorate and community. Thus, QA in higher education is the guarantee of confidence and certainty by a programme of study given by an institution that standards and quality are being maintained and enhanced (ESIB, 2005). Therefore, any activity that is concerned with the training of personnel to ensure quality skills acquisition and enhancement of performance in workplaces in compliance with given standard in the field of TVET constitutes quality assurance.

### Quality Assurance Agencies, Indicators and TVET

In order to ensure that quality and standards are attained and maintained, TVET institutions (formal or informal) and different nations do have in place, quality assurance mechanisms that suit their socio-economic and educational goals and objectives. Akhuemonkhan, Raimi and
Dada (2014) stated that the United States of America employed the accreditation system as a QA mechanism at regional, national and specialized levels for effective monitoring and coordination of educational services. Whereas, Australia created a full-fledged QA unit called Australian University Quality Agency (AUQA) to ensure effective quality control of educational services in tertiary institutions.

Also in Nigeria, in order to ensure quality in higher education, the federal government established supervisory agencies to enforce quality assurance. This is because educational standard/quality falls under the exclusive power of the federal government. These agencies carry out accreditation based on individual programmes in the various higher educational institutions. The National Universities Commission (NUC) oversees the universities in the areas of accreditation, monitoring, evaluation of programmes, infrastructural facilities, teaching and non-teaching staff, and instructional materials. National Board for Technical Education (NBTE) oversees polytechnics, and technical colleges performing similar task as NUC in these institutions. National Business and Technical Examination Board NABTEB is the external examination body for technical and business education trades in technical colleges. The National Commission for Colleges of Education (NCCE) takes charge of Colleges of Education. These agencies have over the years developed Minimum Academic Standards (MAS) as benchmark for QA and institutional self assessment (Onyesom and Ashibogwu 2013). Accreditation exercises in Nigerian higher education is to ensure that standards and quality are strictly regulated, maintained and enhanced by educational institutions in line with changing needs of the society and the industry (Moshin and Kamal, 2012).

Quality assurance indicators are things that can be used to decide the way in which teaching and learning activities can be done, they can also be used to judge the extent to which set objectives have been achieved. Ogbodo and Nwaoku (2009) in Ayonmike, Okwelle and Okeke (2013) opined that there are indicators and indices that are associated with quality assurance in education, TVET inclusive. They further stated that some of these indicators and indices are students, teachers, supervision of instruction and teaching effectiveness, teaching and learning environment, student admission policy, recruitment and selection of staff, measurement and evaluation as well as the flow of operational funds. 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 (e) Outcomes from the learning environment. Ehinderedo (2004) also stated that there are additional quality assurance indicators which include (i) The learners’ behavioural characteristics, attributes and demographic factors (ii) The teachers’ professional competencies/pedagogic skills (iii) The teaching processes, curriculum and learning environment (iv) The outcomes of education. In Nigerian higher institutions, quality assurance units have been set up with the sole aim of monitoring teaching and learning process.

**Challenges of Quality Assurance in TVET in Nigerian Higher Education**

TVET is concerned with the preparation of skilled manpower through training and retraining which is directed towards developing the learner to become productive in a paid employment or in self-employment. In order to accomplish these outcomes successfully, quality must be the key component. However in Nigeria today, TVET programmes are bedeviled with various challenges which have affected the achievement of the goals and objectives of quality outcomes. According to Anachuna and Nwachukwu (2012) in Ayonmike, Okwelle, and Okeke (2013) some of the factors militating against quality assurance in TVET in Nigerian higher education
system include: low level of funding, inadequate infrastructural facilities, inadequate retraining of trainers, poor societal perception, poor administration and supervision, poor remuneration of instructors, mirage office accommodation, unstable academic calendar due to incessant strikes by staff, students unrest, examination malpractice, dearth of research grants, cultism, ill equipped libraries and too much emphasis on paper qualification.

**Low Level of Funding**

Low level of funding is a very serious issue affecting the quality of TVET programmes in Nigerian higher education. Amadi (2007) in Idialu (2013) remarked that despite the efforts of governments at different levels to provide funds for higher education and the huge amounts of money expended, higher education still lacks funds to implement various programmes. Strict implementation of TVET in Nigerian higher education will remain elusive without competent teachers, adequate equipments, accommodation (workshops), training materials and money for the maintenance of equipment. Ebenebe (1991) in Idialu (2013) called on the government to increase funding of technical education stating that for institutions to perform their educational and training assignments properly and thus produce the right caliber of people that can win the respect of industry and the public, they need to be adequately equipped. TVET is practical oriented and the absence of infrastructures; equipment and materials due to low level of funding is bound to affect the quality of the programme.

**Poor Administration and Supervision of TVET Programmes**

Poor administration and supervision of TVET programmes in Nigerian higher education can greatly affect its quality. Lack of co-ordination between the various tiers of government agencies responsible for the administration of TVET programmes has resulted in costly duplication of efforts. Government, administrators and proprietors do not take internal and external supervision seriously in the institutions.

**Retraining the Trainer**

The world is making steady and daily progress in the area of technology and the societal needs today are enormous and varied. New tools and machineries are required daily to meet the complex industrial need of modern times in the area of TVET. This, in turn creates current skills and bodies of knowledge that necessitate vigorous training and retraining of teachers/lecturers in order to bring them up to date. Therefore, on the job training is very essential for the success of TVET programmes and a tool for ensuring quality.

**Poor Remuneration of TVET Teachers**

This is a serious problem affecting the quality of TVET in Nigerian higher education. More often than not, salaries, allowances and entitlements are paid in arrears. This has led to incessant strike actions and brain drain of the teacher/lecturers in search of better conditions of service. Amadike (2007) in Idialu (2013) stressed that poor remuneration is responsible for the poor attitude to work of staff; they go about doing their own businesses instead of concentrating on how to improve on the quality of teaching and learning in TVET in higher education. This makes TVET programmes ineffective thus affecting quality adversely.

**Poor Societal Perception**

This is concerned with the poor image given to TVET programmes by the general public as an education for drop-outs, handicapped and low academic achievers. This attitude has greatly hindered the general public from embracing this type of education. Gambo (1980) in Idialu (2007) stated that there is still a strong tendency towards white collar jobs as a result of low status associated with most kinds of vocational and technical education. Most parents want their wards to become medical
doctors, lawyers, engineers, accountants, good politicians and administrators. This poor societal attitude towards TVET hinders the teaching of TVET as most people doing it are not interested.

**Strategies for Ensuring Quality in TVET in Nigerian Higher Education**

In order to ensure quality in TVET in Nigerian higher education, the following strategies should be adopted:

**Monitoring and Supervision**

One of the instruments for monitoring quality in higher education in Nigeria is accreditation exercise. Accreditation is aimed at evaluating programmes/departmental curriculum offerings, and it focuses on general and specific objectives, its staff strength, quality of students, equipment and facilities including general administration and execution of the programmes. Therefore, accreditation exercise for academic programmes/departments in higher education should be given greater attention. Also, regulatory bodies for the various arms of higher education in Nigeria should carry out their supervisory role meticulously to ensure quality for the benchmark minimum academic standard. Onocha (2002) stated that supervision is a way of advising, refreshing, encouraging and stimulating staff.

**Adequate Funding**

This involves adequate provision of finance for TVET programmes in Nigerian institutions of higher education. To ensure quality and bring about the realization and achievement of the aims and objectives of TVET, adequate funds must be provided by government and TVET providers. Adequate funds are needed for the purchase of tools, equipment, training materials and maintenance of equipment. Quality can only be achieved in TVET in an atmosphere of financial sufficiency as it will help in the provision of infrastructure and facilities.

**Provision of Adequate Infrastructure and Facilities**

For TVET to be administered effectively, there must be adequate provision of infrastructure and facilities in terms of workshops, laboratories, tools, equipment, training materials and physical facilities. Lecture halls must have enough seats and instructional materials for conducive teaching and learning. The training environment should be like that obtained in the real world of work environment.

**Adequate Retraining of the Trainer**

This involves the provision of adequate staff development programmes where lecturers are retrained on the job to enable them acquaint themselves with new knowledge, skills and competencies. This will not only enhance teaching and learning but also ensure quality. According to University of Georgia Handbook for staffing Practices in student affairs (2008), staff development can be viewed as the activities and programmes (formal or informal and on or off campus) that help staff members learn about responsibilities, develop required skills and competencies necessary to accomplish institutional and divisional goals and professionally to prepare themselves for advancement in the institution or beyond the campus. Therefore, retraining the trainer in TVET is an important aspect of quality assurance strategy that monitoring bodies of higher education in Nigeria should be interested in.

**Change of Negative Societal Perception**

Government, TVET providers and all other stakeholders in technology education should create more public awareness and enlightenment on the importance of TVET to the socio-economic growth of, not only the citizens, but the nation at large. This approach would change or reduce the negative societal perception of TVET to the barest minimum thus minimizing the high rate of unemployment, armed robbery, violence, kidnapping and
other social vices as those involved in them would embrace TVET and keep themselves busy. TVET would, in turn, change them from job seekers to job creators thus removing them from idleness which is the cause of most social vices.

**Motivation/Remuneration of Lecturers**

Lecturers in TVET should be motivated to enjoy the profession rather than painfully enduring it. For instance, they should be encouraged by prompt payment of salaries, allowances and other entitlements like promotion, in-service training, workshops and conferences attendance and other conditions of service as and when due. This will totally eradicate the brain-drain syndrome that is seriously ravaging our higher institutions of learning and restore the pride of TVET teachers in their profession.

**Conclusion**

The need for quality in TVET cannot be overemphasized as it is the process of ensuring that products or outputs are reliable. The purpose of quality assurance is for capacity building within an institution for pursuing quality improvement leading to stakeholders’ satisfaction. The quality of TVET will have no meaning if these factors highlighted in this paper, such as funding, teacher motivation, infrastructure, supervision, retraining the trainer etc, are not given adequate attention by stakeholders in the education industry. Furthermore, stakeholders in TVET in Nigerian higher education should focus on international best practices that have worked in countries like China, Japan and other nations around the world in ensuring quality TVET.

**Recommendations**

Based on the discussion in this paper, the following recommendation were made:

1) Effective supervision should be injected to ensure quality TVET in our higher education system.

2) Government should endeavour to fund TVET in higher education in the country to meet the expectations of the society.

3) Lecturers should be motivated and well remunerated as and when due to avoid incessant strike actions and lackadaisical attitude to work.

4) Quality TVET can only be achieved through provision of adequate infrastructure, and facilities. Therefore government and stakeholders should make adequate provision as discussed on this paper.

5) TVET institutions should invest massively in routine and periodic capacity-building training programmes for lecturers/instructors. This effort would keep trainers abreast with current best practices and methodological changes in the field.

6) The federal government, TVET providers and all other stakeholders should embark on aggressive promotion of TVET as a springboard for the nation’s technological progress, industrialization and national development.

**References**


