

# Refocusing Technical Vocational Teacher Education Towards Green Skill Acquisition for Sustainable Development in Nigeria

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**ABSTRACT**--*Technical vocational teacher education is a program for training individuals who shall be productive citizens that will contribute to the sustainable development of a nation. This could best be achieved where technical vocational teacher education program focuses much attention on skill acquisition that aligns with changes in occupational trends in today's world of work. It is on this bases that this paper focused on refocusing technical vocational teacher education towards green skill acquisition for sustainable development in Nigeria. The paper highlighted the concept of technical vocational teacher education as well as green skills. The paper also viewed the relevance of green skill in Technical vocational teacher education. Challenges facing technical vocational teacher education in achieving sustainable development through green skill acquisition were also discussed. Finally restructuring of technical vocational teacher education to emphasize much on practical skill acquisition, recruiting quality and qualified teaching personnel, constant sponsorship of teaching personnel to attend seminars and workshops to be kept abreast with new technologies and 21st century learning skills and adequate funding of technical vocational teacher education program were among the suggestions made as a way forward in refocusing technical vocational teacher education towards green skill acquisition for the sustainable development of Nigeria.*

**Index Terms:** *Refocusing, Technical Vocational Teacher Education, Green Skills Acquisition, Sustainable Development.*

## I. INTRODUCTION

Technical vocational teacher education (TVTE) refers to those planned programs of activities geared towards the preparation of individuals towards coping with life challenges. TVTE is a study of program that skillfully prepare people for effective performance on practical tasks (Umar, 2014). It involves the acquisition of skills and competencies that will make an individual function effectively in industrial and commercial occupations (Wapmuk, 2011). Muhammad (2012) sees TVTE as a professional education of teachers implemented according to the policies and procedures designed to equip prospective teachers with knowledge, attitude, skills, and behaviour they require to perform their tasks in the class room, school and the wider community. TVTE not only equip prospective teachers with knowledge and skills for effective teaching and learning, it also prepares them to acquire the necessary skills

to fit into the labour market. The Federal Republic of Nigeria FRN(2004) further described TVTE to mean:

- 1) An integral part of general education
- 2) A means for preparing for occupational field and effective participation in the world of work
- 3) An aspect of life long learning and preparation for responsible citizenship
- 4) A method of alleviating poverty, and
- 5) An instrument for promoting environmentally sound sustainable development

From the above description it could be deduced that TVTE is geared towards preparation of individuals through the acquisition of skills and knowledge to be productive and contribute to the sustainable development of a society. It is very evident that teachers are the key towards achieving sustainability in every nation's development and that the sustainable development of every nation is dependent on the quality of its teachers (Unameye and Oviawe, 2006). In this regard having an effective TVTE program that focus towards green skill acquisition is indispensable in Nigeria.

Green skills have emerged as added value elements in the production of competent individuals who will contribute to the sustainable development of a nation in meeting the demands of green economy. Green skills are needed in TVTE program for competent teachers who will be independent, creative and initiative (Arasinal, Ramlee, Nowaliza, Bushra, 2016). The significant role of green skills cannot be over emphasized because of its uniqueness in meeting the skills demand of green economy. It therefore, becomes imperative that TVTE refocuses its direction towards green skill acquisition so as to achieve sustainable development in Nigeria.

However, achieving sustainable development in Nigeria through refocusing TVTE towards green skill acquisition remains a doubtful issue in the presence of defective curriculum that pays less emphasis on practical skill acquisition, as well as the presence of inadequacies in terms of funding, facilities and qualified teaching personnel.

## II. TECHNICAL VOCATIONAL TEACHER EDUCATION IN NIGERIA

Technical vocational teacher education in Nigeria is a program for training prospective teachers as well as teachers in service in the acquisition of theoretical and practical

**Revised Manuscript Received on May 15, 2019.**

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knowledge and skills in technical and vocational education. Umar and Maaji (2010) explained that technical and vocational teacher education train people to acquire particular skills in order to earn a living and contribute to the development of a nation. In explaining the importance of TVTE Agbo (2000) emphasized that technical vocational teacher education prepares the students to earn a living in an occupation in which success is dependent largely on the understanding of technology as applied to modern technology and design. The main priority of TVTE in Nigeria is skill acquisition (University of Nigeria Nsukka, 2015). TVET program in Nigeria also aimed towards producing qualified TVET teachers who can effectively impact technical knowledge and vocational skills to their students. The FRN (2013) amply stated that Technical vocational teacher education concerns with the professional education of teachers implemented across the policies and procedures designed to equip prospective teachers with the knowledge, attitude, behaviour and skills they require to effectively perform their tasks in the classrooms, schools and the wider community. TVTE encompasses training would be teachers as well as teachers in service. It aims towards the production of competent teachers who will be skilful and function effectively by contributing to the sustainable development of a nation (Wapmuk, 2011).

It is a well known fact that skills are very essential in every nation's human and economic development. TVTE holds the key towards achieving sustainable development through equipping individuals with the necessary skills, abilities and competencies to succeed in employment and to contribute to the sustainable development of a nation (George, Udemé, and Stella, 2017). TVTE is saddled with the responsibility of producing competent teachers who will be skilful and knowledgeable in facing the challenges of sustainability in every nation's development.

Teachers are the most valuable resources for the realization of sustainable development of every nation. The teacher is saddled with the responsibility of producing the needed workforce for the nation's development. This implies that TVTE as an educational program must aim to prepare and produce teachers with the required skills that can fit into the workforce of a nation and impart the knowledge and skills acquired to learners as well (Ajibola, 2008). Technical vocational teacher education program in Nigeria is categorised into two :

1. TVTE program acquired through Colleges of education and polytechnics
2. TVTE program acquired through the universities (Uwaifor, 2009).

#### *TVTE Programs Acquired Through Colleges of Education and polytechnics:*

The Colleges of education and polytechnics in Nigeria train prospective and in service teachers in various TVET courses. Courses taught include woodwork, metal work, electronics, building technology, auto mechanic, home economics, accounting, office technology and management, agriculture (FRN 2012). The period of training is usually not less than three years with an award of Nigerian certificate in education (NCE) to teach technical and vocational basic

subjects in primary and junior secondary schools (Uwaifor, 2009).

#### *TVTE Program Acquired through Universities :*

The universities in Nigeria train technical and vocational teachers for the award of bachelor degree and further higher degrees in the areas of construction trades, electronic, auto mechanic, computer, agriculture, business and entrepreneurship, education, agriculture and home economics. The training period for bachelor degree is usually a minimum of four years, and a minimum of 18 months for the award of a masters degree, while the PhD last for a minimum of three academic sessions. Teachers who pass through this level are suitable to teach at all levels (Uwaifor, 2009).

### III. GREEN SKILLS

Green skills are skills needed to live with, develop and support a society which aims to reduce the negative activities in the environment and cope with the challenges of the greening economy. Green skills also referred to as skills for sustainability are the technical skills, knowledge, attitude, ability and value that are needed for the live in growth and to support the formation of community that is sustainable and efficient in management of resources (Phong and Martin, 2016). Arasinahetal (2016) defined green skills as skills needed in the workforce to support the social economic and environmental outcome that is established in business, industry and community. Two forms of green skills exist:

- 1) Skills for working in green economy
- 2) Skills for helping to bring a green economy out and about
- 3) In other words vocational and productivity skills and social and citizenship skills (John, 2011). John further list the following as the types of green skills
- 4) Thinking skills
- 5) Skills for environmental sustainability example energy efficient, water conservation
- 6) Skills for social responsibility
- 7) Skills for economic responsibility example financial accountability, innovation and entrepreneurship.

### IV. RELEVANCE OF GREEN SKILLS IN TECHNICAL VOCATIONAL TEACHER EDUCATION

Technical vocational teacher education is regarded as a major producer of the workforce that are absorbed into the schools and industries. TVTE has the responsibility of creating a significant number of workforce for creating, re-creating and transforming resources often with environmental implications. TVTE not only afford scientific and technical skills but also facilitate understanding, motivation and support to apply them to create sustainable future. Owing to the changing nature of the world of work characterised by the shifts to green economies extends the scope of responsibility of TVTE in meeting the skills



demand of green economies. (Shyamal,2004). The current priority of TVTE should be based on imparting green skill that are align towards achieving sustainable development in a green economy. Acquiring green skills in TVTE institutions will provide the means for producing competent individuals who will be able to cope with the challenges of the green economy.

## V. CHALLENGES FACING TECHNICAL TEACHER EDUCATION IN ACHIEVING GREEN SKILL ACQUISITION FOR SUSTAINABLE DEVELOPMENT IN NIGERIA

Acquiring green skills is essential in TVTE in Nigeria, it provides the needed skills to cope with the changes in today's world of work. Unfortunately achieving these skills becomes difficult in Nigeria due to the following factors briefly discussed here.

### *Defect in Curriculum*

The curriculum structure of Technical vocational teacher education is faced with the problems of attaching much emphases to theoretical knowledge than practical skill acquisition (Muhammad,2017). TVTE being a program that aims to prepare people for the world of work should have a curriculum that emphasizes practical skill acquisition. The curriculum of TVTE in Nigeria is predominantly theoretical rather than practical skill acquisition. By implication, this implies that acquiring green skills in TVTE in Nigeria will not be visible. The curriculum of TVTE in Nigeria is over loaded with irrelevant content and has no linkage at different levels of learning (Agbai and Enemuah,2011). In fact there is a total mismatch between the training given to TVTE and the industry requirements. The lack of a well organised curriculum in TVTE in Nigeria poses a great constraint to the acquisition of green skills needed for sustainable development in Nigeria.

### *Lack of Qualified Personnel*

One of the major problems facing TVTE in Nigeria is that of recruiting enough qualified skilled teachers. Most TVET teachers in TVTE institutions possess virtually no practical skill of their courses.. According to Ogundeji (2012), the problem faced by TVTE in Nigeria is that of producing unskilled personnel who cannot function effectively in the society. This ugly situation could be attributed to lack of skill by teachers in TVTE institutions who are weak in imparting practical skills to the learners (Umar,2014). Acquiring green skills in Nigeria becomes a difficult issue to be achieved with unskilled teachers in TVTE institutions, invariably this affects the sustainable development in Nigeria.

### *Poor Funding*

Poor funding has been a major hindrance for the successful implementation of TVTE program in Nigeria. TVTE program is capital intensive and requires much fund to operate. Unfortunately TVTE program is not adequately funded to meet the growing demands of the program (Ali,2012). The problem of poor funding in TVTE program resulted to lack of equipment and facilities for training in TVTE institutions. George et. al(2017) stated that there are so many modern facilities for teaching and learning that are

absent in TVTE institutions due to inadequate fund for their acquisition.

### *Absence of Twenty First Century Learning Skills*

Technical vocational teacher education deals with modern innovations in teaching and learning. It employs skills in effective instructional delivery as well as technical competence. Problem based learning, project based learning, inquiry based learning are some of the 21<sup>st</sup> century learning skills used in modern teaching and learning. In spite the new innovations in teaching and learning, the predominant method of teaching and learning in TVTE institutions in Nigeria remains similar to that practiced in the 1950's, that is "talk and chalk" with large classes and lecture based delivery (Ali,2012). The absence of twenty first century learning skills in instructional delivery in TVTE institution remains a problem that hinders green skill acquisition in TVTE in Nigeria.

## VI. CONCLUSIONS

Green skills are indispensable elements in today's world of work. Acquiring green skills enables individuals contribute effectively to the sustainable development of a nation. Technical vocational teacher education is one of the educational programs that can aid effective green skill acquisition for the sustainable development of Nigeria. It is however worrisome that the absence of a well structured curriculum coupled with deficiencies such as under funding, quality teaching personnel, and inappropriate instructional delivery in TVTE program in Nigeria hampers effective green skill acquisition in achieving sustainable development.

## VII. THE WAY FORWARD

- 1) The curriculum of TVTE in Nigeria should be restructured to pay much emphasis on practical skill acquisition. There should be a linkage between the curriculum content of TVTE at all levels. Only professionals in the field of TVTE should be allow in the curriculum planning. This will go a long way to address the problems of mismatch in the TVTE curriculum. It will also assist in developing a curriculum that will focus on the industrial requirements for gainful employment of TVTE graduates.
- 2) Teachers are the bedrock for the sustainable development of any nation. It therefore becomes necessary that only teachers who possess the necessary practical and theoretical knowledge and skills in TVTE should be recruited to teach in TVTE institutions.
- 3) - Updating teachers knowledge is a necessity in teaching profession in view of the advancement in the teaching and learning situation and the new technological innovations in equipment used in the teaching and learning process. Teachers involved in teaching TVTE courses should be regularly sponsored by government to attend seminars and workshops so as to be updated and acquainted with new teaching and learning techniques and the use of modern equipment for teaching and learning.



- 4) Adequate funding is essential in TVTE program. Government should inject sufficient fund in TVTE program this will arrest the problems of inadequacies in training facilities required in TVTE and the professional development of teachers. In this regard non-governmental agencies should assist in the funding and training of TVTE program.

#### REFERENCES

1. Agbai, J. O., & Enemuah, U. J. (2013). Strategies for Repositioning Vocational Technical Education for the Attainment of Policy Thrust of the National Transformation Agenda. *Journal of Nigerian Association of Teachers of Technology*, 9(1), 159-164.
2. Agbo, B.C. (2000). Functional Vocational Education in Nigeria Public Schools. *Journal of Nigerian Vocational Association*, 11, 45-48.
3. Ajibola, M. A. (2008). Innovations and Curriculum Development for Basic Education in Nigeria: Policy Priority and Challenges in Practical implementation. *Research Journal of Education Studies*, 8(5), 53-66.
4. Ali, M. (2012). Retraining Needs of Technical Teachers in Technical Colleges. *Jigawa Journal of Education*, 4 (1), 138-144.
5. Arasinah, K., Ramlee, M., Nowaliza., A., & Busrah, L. (2016). Green Skill as an Added-Value Element in Producing Competent Students. *International Journal of Engineering Research and application*, 6 (1), 12-21.
6. Diop, P. C., & Hartman, M. (2016). Green Skills in Vocational Teacher Education. A Model of Pedagogical Competence for a World of Sustainable Development. *Journal of Technical and Vocational Education and Training in Asia*, 6, 1-19.
7. Federal Republic of Nigeria (2013). *National Policy on Education* (6th ed.). Lagos: NERDC Press.
8. Federal Republic of Nigeria (2012). *Nigeria Certificate in Education: Minimum Standard for Vocational and Technical Education* (2012 ed.). Abuja: TETF.
9. Federal Republic of Nigeria (2004). *National Policy on Education* (4th ed.). Lagos: NERDC Press.
10. Geoge, W. K., Udeme, S. U., & Stella, I.U. (2017). Challenges of Technical Vocational Teacher Education and Teaching : The Need for Intervention. *International Journal of Education and Evaluation*, 3(7), 71-82.
11. John, F. (2011) Green Skills in the Classroom: Innovative Approaches to Teaching and Learning. [Http://www.bibb.de/dokument/pdf/Fien.pdf](http://www.bibb.de/dokument/pdf/Fien.pdf). Retrieved 22/10/18.
12. Muhammad, I.U. (2017). Refocusing Vocational Technical Education for Employment Generation and sustainable Economic Development in Nigeria. *Journal of School of Secondary Education (Arts and Social Sciences) FCE Katsina*, 1(1) 37-42.
13. Muhammad, I. U, (2012). Repositioning Technical Teacher Education for Quality Education in Nigeria. *Jigawa Journal of Education*, 4 (1), 85-92.
14. Ogundeji, A. O. (2012). Issues and Challenges Facing Technical Education Graduates in Nigeria. *Bichi Journal of Technology Education*, 1, 99-104.
15. Shyamal, M. (2012). *Developing a greener TVET Frame Work*. UNESCO: UNIVOC International Centre.
16. Umar, I. Y., & Ma'aji, A. S. (2010). Repositioning the Facilities in Technical College Workshops for Efficiency: A Case Study of North Central Nigeria. *Journal of STEM Teacher Education*, 47 (3), 63-85.
17. Umar, L. (2014). Skills Required by Teachers to Carry out Their Activities in Wood workshops in Tertiary Institutions in North Wester Nigeria. *Journal of Education and Social Sciences Research*, 4 (7), 108-114.
18. Unameye, R., & Oviawe, I. (2006). Professional Competency Needs of Introductory Technology Teachers in Southern Nigeria. *India Journal of Vocational Education*, 8, 122- 127.
19. University of Nigeria (2015) *Philosophy and Objectives of Vocational Teacher Education*. Nsukka: University Press.
20. Uwaifor, V.O. (2009). Training Technology and Vocational Education Teachers for the New 9-3-4 System of Education in Nigeria: Its Problems and Prospects. *International NGO Journal*, 4 (4), 160-166.
21. Wapmuk, I. S. (2011). Technical Vocational Education and Training for Sustainable Development of Nigeria. *Key Note Address Presented at the 24<sup>th</sup> Annual National Conference of Nigeria Association of Teachers of Technology*, FCET, Umunze.