



**THE NATIONAL BOARD FOR
TECHNICAL EDUCATION**

OF THE

FEDERAL REPUBLIC OF NIGERIA

**National TVET Policy
and Strategy on**

**Open, Distance,
Flexible and
e-Learning (ODFEL)**

July 2018

Task Force Members

Name	Role	Institution/Organisation
Dr. M. A. Kazaure	Coordinator	ES, NBTE
Dr. (Mrs.) Amina Idris	Facilitator	NBTE/COE

Commonwealth of Learning (CoL)

Alison Mead Richardson	CoL Team Leader	CoL
Philips Uyis	Cobsultant	CoL

M8 Global Network

Dr. Loverdays Egbedion	Partner	M8 Global
Dr. Abiodun Atanda	Partner	M8 Global

Staff of NBTE Centre of Excellence

Dr. (Mrs.) Amina Idris	D/COE	NBTE/COE
Mr. Aroge Ayodele	Member	NBTE/COE
Mrs. Maryam U. Daura	Member	NBTE/COE
Mal. Tajuddeen Abbas	Member	NBTE/COE
Mal. Rabiun Yunusa	Member	NBTE/COE
Mal. Hamisu Yahuza	Member	NBTE/COE
Mr. Napoleon Akor	Member	NBTE/COE

Phases of Development of the National ODFEL Policy and Strategy for TVET Institutions

Phase 1: Preparatory meetings:

- i. Meeting with institutions on the adoption of Distance/e-learning mode of delivery and ICT resource assessment in TVET institutions in FSD/TIER project
- ii. Conduct of ICT baseline/audit visit to partner institutions
- iii. Analysis and presentation of findings to NBTE Management and the Commonwealth of Learning (COL)
- iv. Design and development of the National ODFEL implementation/action plan
- v. Mandate by NBTE Management to Centre of Excellence for policy and strategy ODFEL draft
- vi. Presentation of initial draft of the Strategy for e-Learning, as well as the ODFEL Policy and Procedures Manual to NBTE by M8 Global
- vii. Review of initial drafts by NBTE
- viii. Joint review by NBTE and M8 Global
- ix. Input by NBTE, partner institutions and M8 Global
- x. Presentation of revised document by NBTE to COL for review and input

Phase 2: Meeting with stakeholders on ODFEL Policy and Strategy

Phase 3: Meeting of the adhoc committee to harmonise COL's input to the ODFEL policy and strategy

Phase 4: A Three-day workshop facilitated by COL from 16-18 July 2018 to review the integrated ODFEL Policy and Strategy with stakeholders

Phase 5: A revision of the instrument by COL based on the Meeting (phase 4)

Phase 6: Presentation of the progress of policy and strategy development to NBTE Management

Phase 7: Meeting to approve the National ODFEL Policy and Strategy by NBTE Governing Board

Phase 8: Forward the approved National ODFEL Policy to NCE for noting and approval

Table of Contents

TASK FORCE MEMBERS.....	I
PHASES OF DEVELOPMENT OF THE NATIONAL ODFEL POLICY AND STRATEGY FOR TVET INSTITUTIONS.....	II
TABLE OF CONTENTS	III
DEFINITION OF TERMS.....	V
ABBREVIATIONS & ACRONYMS.....	VI
FOREWORD	VII
ACKNOWLEDGEMENT.....	VIII
1. BACKGROUND	9
2. SITUATION ANALYSIS	12
2.1 SOCIO-ECONOMIC CONTEXT	13
2.2 LEGAL AND POLICY FRAMEWORK	14
3. PHILOSOPHY	15
3.1 KEY VALUES AND GUIDING PRINCIPLES	15
3.2 ETHICAL CONSIDERATIONS	16
4. SCOPE, PURPOSE, VISION, GOAL AND STRATEGIC OBJECTIVES	16
4.1 SCOPE OF THIS POLICY AND STRATEGY	16
4.2 PURPOSE.....	17
4.3 VISION	17
4.4 GOAL	17
4.5 STRATEGIC OBJECTIVES	17
5. POLICY DIRECTIONS.....	18
5.1 LEARNING RESOURCE DEVELOPMENT, DISTRIBUTION AND DELIVERY	18
5.2 LEARNERS' SUPPORT	19
5.3 INTEGRATION OF ICT IN TVET	20
5.4 ASSESSMENT & CERTIFICATION.....	21
5.5 QUALITY ASSURANCE.....	22
5.6 BUILDING HUMAN RESOURCE CAPACITY.....	24
5.7 SOCIAL EQUITY.....	25
5.8 CHANGING PERCEPTIONS OF ODFEL.....	26
5.9 PROMOTION OF ODFEL	27
5.10 SYSTEM AND INSTITUTIONAL MANAGEMENT.....	28
5.11 FINANCING ODFEL INITIATIVES	29
6. IMPLEMENTATION FRAMEWORK	30
6.1 COMMUNICATING THE POLICY AND STRATEGY	30
6.2 COORDINATING AND OVERSEEING POLICY AND STRATEGY IMPLEMENTATION	30
7. MONITORING AND EVALUATION	31
8. REFERENCES.....	31

Definition of Terms

Blended learning	Teaching and learning which combines face-to-face learning with other approaches – such as online learning.
Flexible Learning	An approach which focuses on learner-centred education and reducing barriers to participation, through the use of appropriate technology.
ICT	Computers and other information and communication technologies that can be used to generate and disseminate information, as well as facilitating interactions between users
ODFEL	Open, Distance, Flexible and e-Learning (ODFEL) is defined as any way of providing learning opportunities that is characterized by the separation of teacher and learner in time or place, or both time and place, often using digital means. ODFEL approaches also aim to reduce, as far as possible, unnecessary restrictions on access to education and training opportunities and on the teaching and learning process itself. ODFEL includes the notion of “blended learning” where some of the learning and teaching occurs online through digital means and the rest through face-to-face interactions
OER	The 2012 Paris Declaration (UNESCO, 2012, p.1) defines OER as teaching, learning and research materials in any medium, digital or otherwise, that reside in the public domain or have been released under an open license that permits no-cost access, use, adaptation and redistribution by others with no or limited restrictions. Open licensing is built within the existing framework of intellectual property rights as defined by relevant international conventions and respects the authorship of the work
Open learning	An educational approach which combines the principles of learner-centeredness and flexibility of learning provision that gives learners flexibility and choice over what, when, where, at what pace and how they learn; and removing barriers to access learning
VLE	A Virtual Learning Environment normally has a central Learning Management System with a range of further appropriate educational technologies

Abbreviations & Acronyms

ACE	Access to Computing Education
CoE	Centre of Excellence
D/COE	Director, Centre of Excellence
COL	Commonwealth of Learning
FSD	Flexible Skills Development
FOSS	Free and Open Source Software
ICT	Information & Communication Technology
IEI	Innovation Enterprise Institutions
ILO	International Labour Organisation
FEC	Federal Executive Council
FME	Federal Ministry of Education
MOU/MOA	Memorandum of Understanding/Agreement
M8	M8 Global Network
NBTE	National Board for Technical Education
NOS	National Occupational Standards
NPE	National Policy on Education
NSQF	National Skills Qualification Framework
ODFEL	Open, Distance, Flexible and e-Learning
OER	Open Education Resources
RPL	Recognition of Prior Learning
TIER	Tertiary Institutions E-learning Resources Project
TVEB	Technical & Vocational Broadband
TVET	Technical, Vocational Education and Training
VEI	Vocational Enterprise Institutions
VLE	Virtual Learning Environment
WITED	Women in Technical Education

Foreword

Open, Distance, Flexible and e-Learning (ODFEL) is fast becoming an accepted part of the mainstream of educational systems in both developed and developing countries. This growth has been stimulated in part by the interest among educators and trainers in the use of new, Internet based and multimedia technologies, and also by the recognition that traditional ways of organizing education need to be reinforced by innovative methods, to achieve education for all.

The Federal Ministry of Education has long realized that one of the ways to increase access to education, is through the system of Open, Distance, Flexible and e-Learning (ODFEL). It is in view of this that Nigeria at different times attempted to operate the open and distance learning in her educational system with the eventual establishment of the National Open University which was re-launched in October 2002.

Open learning is a philosophy founded on the principle of flexibility concerning when, where and how the learner studies. This system of learning can be applied to all types of learning in the tertiary education sector. Perhaps that may inform the reason why the Technical, Vocational Education and Training (TVET) sub-sector is presenting this guideline policy for Open, Distance, Flexible and e-Learning (ODFEL). This guideline will no doubt help the sub-sector in achieving the goals and objectives of ODFEL.

It is therefore with great pleasure that I present the ***Open, Distance, Flexible and e-Learning Policy and Strategy 2018*** to you. I congratulate the Management National Board for Technical Education in its persistent efforts by bringing innovations that are aimed at improving the TVET sub-sector.

Prof. Modupe Adeola Adelabu

Chairman, NBTE Governing Board.

Acknowledgement

The Open, Distance, Flexible and e-Learning Policy 2018 was developed in realization of the fact that Technical, Vocational Education and Training (TVET) holds the key to Nigeria becoming technological relevant and internationally competitive in the world market. TVET inculcates knowledge, attitudes and skills for making, doing and using tools in specific and reproductive ways. Technology is the most effective means of empowering the citizenry to overcome poverty, limit the incidence of social vices due to joblessness and promote a culture of peace, freedom and democracy. ODFEL is indeed an integral part of the education system in Nigeria, because it is one of the ways used by the Federal Ministry of Education to widen access to tertiary education learning. I would therefore like to express the appreciation of the National Board for Technical Education to the Honourable Minister of Education for the support and encouragement. The Open, Distance, Flexible and e-Learning Policy 2018 was prepared by the NBTE Centre of Excellence for TVE with the involvement of the Office of the Executive Secretary, the Polytechnics/Monotechnics and other important stakeholders in the TVET sub-sector. The contributions of all those involved in producing the publication is acknowledged.

Finally, I will like to inform the users of this instrument to know that such publications are dynamic and therefore subject to regular review and update. You are welcome to alert the Board should you feel that change to this instrument is necessary.

Thank you.

Dr. M. A. Kazaure, mni

Executive Secretary

National Board for Technical Education (NBTE)

1. BACKGROUND

Open, Distance, Flexible and e-Learning (ODFEL) refers to a mode of teaching and learning that combines open learning principles, distance education, traditional face-to-face teaching and most often e-learning. It aims at eliminating barriers to the provision and acquisition of education and training. It provides the learner with a choice of learning strategies, as well as greater flexibility in terms of the place, pace and time at which such learning takes place.

Technical and Vocational Education and Training (TVET) is facing a critical challenge to meet new demands for the 21st century. In Nigeria, the number of those seeking access to training is growing, an increasing number of these potential learners are unable to access training due to various barriers that include distance from a TVET centre, time constraints and entry requirements. All learners, regardless of their educational levels, deserve nothing less than quality education and training that will provide them with opportunities for lifelong learning and meaningful participation as productive citizens in the world of work, as well as other social and cultural activities.

Alternative ways of providing access to training via ODFEL need to be fully explored. ODFEL provides study opportunities for those who cannot or do not want to take part in classroom teaching at a particular institution on a full-time basis. It makes it possible for eligible persons throughout the country to enrol in TVET courses. Paper-based study materials have also been used effectively for many years to provide theoretical instruction for learners studying at a distance, including apprentices on work attachments and employees in the workplace. In these ways, ODFEL can make it possible for secondary school graduates to enrol in TVET, and pursue much of the course without leaving their home area.

The adoption of Information and Communications Technologies (ICTs) in the field of education and training, often referred to as e-learning, offers several advantages over traditional, campus- and workshop-based approaches. The use of modern educational technologies to deliver and support learning, teaching and assessment is now widely regarded as a central mission of tertiary institutions worldwide. The National Policy on Education (NPE) clearly indicates that "*there is urgent need to integrate Information and Communication Technology into education in Nigeria*" and that the "*government shall provide facilities and necessary infrastructure for the promotion of Information and Communication Technology (ICT) at all levels of education*" (NPE 2004). This form of education and training can offer virtual access to teaching staff around the world, as well as the option of virtual institutions and other linkages, where resources can be shared by people and organizations in places that are not physically connected. The potential strengths of ODFEL delivered through ICTs include: the ability to expand content, extend the reach and increase the effectiveness of existing academic, technical and vocational programmes. These strengths can be realised by implementing a flexible and workable TVET using modern techniques facilities¹

While ICT-mediated ODFEL holds promise, a number of obstacles would have to be addressed before it can be fully utilized in Nigeria. There are a number of resource and technological constraints that hinder the wider use of ODFEL approaches, not least of which is a stable power supply. Internet connectivity and the cost of its use remain major challenges in Nigeria. Not all potential learners have access to computers or other devices that they need to make use of e-learning resources, communicate with trainers and other learners, or to complete assignments. Affordable ways of enabling learners to access a high-speed and reliable Internet service need to be found.

Another challenge is the lack of a trained cadre of professionals to support the implementation of ODFEL. The effective use of distance learning technologies demands that teaching staff be properly trained to take full advantage of the potential of various delivery modes. The number of trainers in Nigeria's TVET institutions who are familiar with teaching learners at a distance or in an online environment needs to be expanded.

ODFEL learning resource development is faced with a variety of challenges in Nigeria institutions. One of these challenges is inability of teachers to assist the learners in developing the ability and knowledge necessary to use ODFEL effectively. In many ODFEL projects, learners face challenges of a negative perception of the quality of ODFEL during their studies; lack of well-thought through pedagogy in their curriculum; and lack of interaction between learners and teachers.

Five obstacles affecting the ubiquitous implementation of ODFEL in developing countries, also true in Nigeria, are:

- (i) Framework: There is no national or institutional framework focusing on the adoption of ODFEL and the required technologies, and exploring the benefits that learners may derive in their learning and staff in their teaching;
- (ii) Training: No combination of connectivity, equipment and software will achieve anything if people are not well trained to use them. Due to inadequate experts or human capacity to train both the staff and the learners, some of the ODFEL equipment are under-utilised;
- (iii) Connectivity: Limited or lack of connectivity to the Internet (also via mobile smart phones) in many developing countries including Nigeria institutions impedes access to ODFEL;
- (iv) Equipment: ODFEL requires particular equipment that can facilitate learning, but in some of Nigeria's institutions, such equipment including computers, digital technology, and internet are not available for proper utilization.
- (v) Software: Software enables educators to design, develop and provide learning activities and content. Such software is often costly and not available for use in some of our institutions, to facilitate an ODFEL programme.

The absence of a clearly defined ODFEL policy and strategy in Nigeria thus poses a key challenge. In the absence of a clear vision for the future, there is a danger that TVET institutions will begin offering ODFEL programmes in a piecemeal fashion, with poor-quality resources and inadequate

support services for learners. National and institutional policies and strategies are needed to provide a framework for, and guide the development of ODFEL. In addition, minimum standards need to be established and enforced in order to protect the nation's residents from unscrupulous ODFEL providers. Regulation of cross-border providers who offer education and training through ODFEL methods also needs to be instituted.

Another challenge to overcome is cultural bias. ODFEL, by its very nature, involves more than just the transmission of information, but also the transmission of cultural/social paradigms between and among the participants. TVET, and also distance education are furthermore often perceived as a second-best form of education with lecturing being seen as the gold-standard in teaching.

An ODFEL policy and strategy is needed for TVET in Nigeria to help focus resources including ICT infrastructure, human capacity development and administrative service support on quality education.

The key objectives of change in Nigeria include to:

- enhance the quality of the learning experience through active learning that engaged the learner through ODFEL approaches;
- develop new, and review existing TVET curricula for national and international relevance using collaborative tools;
- increase support and scaffolding of learner learning allowing choice of approach, help with revision and retention;
- facilitate communication among learners, learners and teachers, and learners and content, and encourage creativity;
- provide a rich Virtual Learning Environment with a range and quality learning experiences based on pedagogically sound learning and teaching resources;
- develop more flexible, and therefore accessible ways of learning and teaching;
- increase capacity to maximise the benefits of current and emerging educational technologies;
- allow different modes of delivery and extending access in line with open learning principles especially to female children through scholarships and other mechanisms;
- provide high quality education for learners with disabilities;
- access the resources of an increasingly connected world – especially OER;
- increase learner comfort and familiarity with ICT (computer literacy) and in particular educational technology;
- engage with the wider world through online learning, use and contribution of OERs, Transnational Education, and programme exchange.

1. SITUATION ANALYSIS

The National Board for Technical Education (NBTE) (established in 1977) has been focussed on TVET within the limits of government funding for its operation. As of January 2019, 577 approved institutions are responsible for TVET across the nation, including: 123 polytechnics with 300,871 students; 34 colleges of agriculture; 38 colleges of health sciences; 27 other specialised institutions with 5,214 students; 153 Innovation Enterprise Institutions (IEI) with 4,243 students; 82 Vocational Enterprise Institutions (VEI) with 3,454 students; and 118 technical colleges with 78,725 students.

The goals of TVET as described in various versions of the national policy on education (NPE) are to:

- provide trained human resources in the applied sciences, technology and business, particularly in craft, and advanced craft at technical levels; (NPE 1998)
- provide the technical knowledge and vocational skills necessary for agricultural, commercial and economic development; (NPE 2004) and
- give training and impart the necessary skills to individuals who shall be economically self-reliant. (NPE 2013).

The ability of Nigeria to realise the vision of becoming one of the 20 largest economies in the world by the year 2020 is largely dependent on the capacity to transform its youth into highly skilled and competent citizens through TVET. TVET can largely address unemployment, underdevelopment and it can boost the economy of any nation if properly implemented and monitored (NPE 2013).

With the array of courses officially approved in the various TVET institutions in Nigeria, one would have thought that there would be a large percentage of youths with technical know-how, but this is not the case because actual implementation is at variance with policy. In spite of these goals for education Nigeria still depends in a major way on the importation of goods. According to Ojerinde “institutions called Technical and Vocational Schools are a shadow of themselves where the science equipment and laboratory apparatus are heard of, rather than seen. Where the equipment is available, it has become obsolete.”

Nigerian TVET is faced with a number of further challenges. The image of TVET as education of the last resort despite the efforts of the government to change it still prevails. Another issue is the lack of efficient educational monitoring and evaluation procedures. Poor funding is also a great challenge preventing TVET system from coherent development. Teachers in Nigerian TVET are underestimated and there is a lack of incentives provided for them. Another challenge is rapid technological growth that is hard to keep up with, which results in irrelevance of the

curricula taught in TVET programmes. A strongly established examination-oriented approach to curricula implementation is one more obstacle preventing Nigerian TVET from due development.

Other challenges cited in the literature regarding TVET education are:

- low enrolment;
- infrastructural decay;
- inadequate equipment and training resources;
- low remuneration for skilled vocational workers;
- low societal estimation of TVET ;
- poor private sector participation in the implementation of TVET programmes;
- low level of entrepreneurship and ICT literacy and utilization;
- poor learning outcomes due to poor learning environment;
use of outdated curriculum which result in a mismatch between what is taught and the
- needs of the labour market; and
- poor management of funds.

ODFEL can make a significant contribution to alleviation of many of the challenges above, so that this Policy and Strategy is crucial and will be the first to specifically address open, distance, flexible and e-learning in TVET.

In many other countries, technology-enhanced learning has become the key mode for delivering TVET, particularly in situations where alternative ways of providing actual hands-on practice are either too dangerous or too costly. In Nigeria, by contrast, ODFEL programmes still represent a very small part of the nation's TVET system and government involvement is quite minimal. The TVET programmes currently being delivered through ODFEL methods are mainly the result of initiatives by individual institutions. Some intergovernmental organizations like COL have also been instrumental in promoting ODFEL practices, for example through the INVEST Africa programme.

2.1 SOCIO-ECONOMIC CONTEXT

TVET in Nigeria is seen as a tool for combating poverty and unemployment. Given the shortage of qualified human resources especially in technical disciplines, TVET is believed to be one of the main priorities that will greatly contribute to the socio-economic development of the country¹. Youth unemployment though is still on the rise in Nigeria.

In Nigeria the majority of employed people are unable to take part in conventional TVET programmes because their working hours make it impossible to attend formal classes. Traditional customs and nomadic lifestyles are also an obstacle to learning delivered through the face-to-face mode. The concentration of training institutions in major cities has led to a situation where people living in rural and marginalised areas have to travel long distances to access learning institutions. People working in the informal sector constitute the largest labour in the country, these people also need upskilling a task that is challenging for a fulltime face to face mode of training. There is a need to also continually provide skills and support to entrepreneurs. These challenges, coupled with the need to continuously upskill the national labour force, especially in the rapidly changing world of technology, make ODFEL a viable alternative to traditional approaches for skills development.

2.2 LEGAL AND POLICY FRAMEWORK

The World TVET Database Nigeria¹ describes a number of relevant policy developments. The National Policy on Education implemented in 1977 and most recently revised in 2004 describes main priorities and ways to achieve them for all aspects of Nigerian education system. Decree 9 of 1977 established the National Board for Technical Education (NBTE), still the main coordinating body for TVET in Nigeria. The National Board for Technical Education (NBTE) exists under the authority of the Federal Ministry of Education and was established in 1977 with the purpose of handling all aspects of technical and vocational education falling outside of university education. In addition to providing standardised minimum guide curricula for technical and vocational education and training (TVET), the Board supervises and regulates, through an accreditation process, the programmes offered by technical institutions at secondary and post-secondary levels.

NBTE and other key stakeholders of NVQF have partnered with International Labour Organisation (ILO) for the development of National Occupational Standards (NOS) in Nigeria. Accreditation visits to a specific field of study are usually undertaken by a panel of experts in the professional area drawn from the academia, industry, and relevant professional bodies, under NBTE's coordination. The team normally uses the NBTE minimum guide curriculum and programme specifications, as the minimum reference, and the NBTE's programmes evaluation form, as a guide.

A number of decrees and acts regulate various aspects of education including TVET in Nigeria such as decree¹ 17 formally inaugurated in 1991 establishes the National Commission for Mass aLiteracy, Adult and Non-formal Education. The Education National Minimum Standards and Establishment of Institutions Decree¹ 16 of 1985 together with the Constitution of 1999, empowers the Ministry of Education to ensure that minimum standards are established, maintained and constantly improved in all schools of the federation. The Federal Inspectorate Service (FIS) Department and other bodies of the Ministry bear the responsibility of ensuring uniformity of standards in schools and colleges. The same Decree¹ 16 vested the NBTE with the powers of maintenance of standards in Nigerian Technical Institutions. This power is exercised through a variety of quality assessment processes including visitations for resource inspection and accreditation. The TRCN Decree¹ 31 establishes the Teachers Registration Council of Nigeria

One of the strategies for implementing the above decrees and legal framework is the development of an overall, national ODFEL policy and strategy for TVET.

1. PHILOSOPHY

3.1 KEY VALUES AND GUIDING PRINCIPLES

The philosophy underpinning Nigeria's TVET system is based on the National Policy on Education. It is focused on providing skills that meet the needs of the workplace and self-employment. This policy endeavours to promote the following principles:

- **Access:** Creating an enabling environment, opportunities and mechanisms to provide high-quality programmes to those seeking vocational and technical training at all levels;
- **Openness and Flexibility:** Removing all unnecessary barriers, restrictions and constraints to access skills training including geographical, temporal, academic, socio-economic and cultural barriers, as well as providing learners with increased control over when, where, what and how they develop knowledge and skills;
- **Inclusiveness:** promoting equity, equality and protection for marginalized, hard-to-reach and vulnerable groups, such as girls and women, people living with disabilities, cultural barriers, rural and urban diversity;
- **Learner-Centeredness:** putting learners at the center of the teaching and learning process and focusing on meeting their needs.
- **Quality assurance and relevance:** Ensuring the quality and relevance of ODFEL programmes and learner support services;
- **Responsiveness:** Emphasis shall be placed on training that focuses on the demands of the industry, labour market and self-reliance.
- **Sustainability:** sustainability of the ODFEL programmes, protection of the environment, social equity and the common heritage of the country;
- **Collaboration and partnership:** Promoting partnership in the development of learning resources, learner support systems and credit transfers;
- **Efficiency:** Ensuring optimum use of resources to increase access and improve the quality of education through ODFEL.

3.2 ETHICAL CONSIDERATIONS

Provision of ODFEL will be guided by the following ethical considerations:

- Affirmation and enhancement of the moral foundation of our society;
- A high degree of integrity and transparency in the provision of skills;
- The highest level of professionalism.

1. SCOPE, PURPOSE, VISION, GOAL AND STRATEGIC OBJECTIVES

4.1 SCOPE OF THIS POLICY AND STRATEGY

The policy and strategy cover the Technical and Vocational Education and Training Sector in Nigeria with regards to ODFEL, and are applicable to:

- All academic support departments, and learners at TVET institutions;
- All content developers within the institution and those engaged by the institution on temporary/contract basis;
- All types of learning resources developed and used in physical or digital format;
- In cases where the material is developed in collaboration/partnership with other institutions, the guidelines governing the collaboration/partnership as indicated in the MOU/MOA will prevail. However, any such agreement should duly consider this Policy and Strategy before any deviation is agreed upon and approved by the collaborative partners.

4.2 PURPOSE

The purpose of the NBTE Open, Distance, Flexible and e-Learning Policy and Strategy is to assure a quality ODFEL programme through flexible educational technologies as an effective mode for expanding educational opportunities in tandem with NBTE's mandate and its regulated institutions. ODFEL approaches would be widely adopted in Nigeria's TVET sector in a manner that is harmonised, well-coordinated and capable of producing quality, skilled human resources with the right attitudes and values required for growth and prosperity of the various sectors of the economy, and with a love for learning.

4.3 VISION

To enable everyone learn anywhere, anytime and anyhow, using educational technologies in widening access to the TVET sector to ensure that Nigeria has a skilled and globally competitive human resource base.

4.4 GOAL

To provide guidance on the effective adoption of ODFEL approaches in order to achieve the goal of creating a learning environment where acquisition of skills and right attitudes is not hampered by unnecessary obstacles or restrictions and where all learners have an equal opportunity to succeed in their studies.

4.5 STRATEGIC OBJECTIVES

In order to achieve the vision, goal, purpose, the following strategic objectives have been identified:

- Supporting institutional strategies in learning and teaching, and inform e-learning developments in the TVET sector
- Developing human capacity and ICT infrastructure services for the provision of e-learning and related support
- Providing an administrative framework for the formulation and adoption of e-learning policy
- Promoting technological creativity and innovation in teaching, learning and assessment
- Supporting flexible delivery of TVET programmes irrespective of barriers imposed by geography, time, culture, language, disability or gender
- Providing learner support, faculty support, authoring tools, venture incubator and e-learning centres
- Supporting monitoring, evaluation and quality assurance
- Engaging in research in educational technologies and their applications in teaching and learning
- Supporting economic development through collaboration with businesses, government, higher educational institutions, professional bodies and international organisations
- **Promoting female participation in TVET towards achieving the Sustainable Development Goals of Agenda 2030**
- **Promoting greening and other eco-friendly initiatives.**

1. POLICY DIRECTIONS

5.1 LEARNING RESOURCE DEVELOPMENT, DISTRIBUTION AND DELIVERY

Policy Issues

The need to make available appropriate teaching and learning resources for ODFEL and improve attitude towards ODFEL necessitates development and use of quality teaching and learning resources in TVET.

There is equally a need for creativity and innovation in ODFEL material development coupled with specialized teaching and learning resources for trainers and learners. Adequate infrastructure for development of resources, specialists in resource development are vital to the development and distribution of learning and teaching resources.

Policy Objective

To ensure that appropriate teaching and learning resources are acquired, adapted or developed and appropriately made available to all stakeholders.

Strategies:

To achieve the policy objective, the following strategies are to be implemented:

- Enable the NBTE to facilitate and enable development and dissemination of learning resources;
- Support professional development activities for staff of TVET institutions to acquire the skills needed to develop high-quality ODFEL resources;
- Ensure that ODFEL resources are readily available for use to both learners and teachers;
- Carry out intensive publicity to promote use of ODFEL resources to counter the over-reliance on textbooks;
- Proactively adopt the use of OER in TVET and adhere to Intellectual Property Rights - in the light of Nigeria's national OER policy for Higher Education (<http://oasis.col.org/handle/11599/2798>);
- Encourage TVET institutions to integrate Eco-greening in their programmes;
- Establish the NBTE Campus Startup Studios in all selected institutions with dedicated resources for business knowledge, networking, marketing and research, accounting and financial management, business presentation skills and etiquette;
- Ensure that ODFEL policies are clear concerning ownership of resources, facilitator compensation, copyright issues and the use of revenue derived from the creation and production of software, tele-courses or other media products;

- Ensure academic support services are appropriate and specifically related to ODFEL;
- Ensure Programme duration is appropriate for each of the institution's educational programmes, including those offered through ODFEL;
- Ensure that for all programmes offered through ODFEL, the programmes embody a coherent course of study that is compatible with the institution's mission and is based upon fields of study appropriate to TVET institutions;
- Ensure that for all courses offered through ODFEL, the institution employs sound and acceptable practices for determining the amount and level of credit awarded and justifies the use of a unit other than semester credit hours by explaining its equivalency;
- Ensure that no institution is allowed to enter into consortia arrangements or contractual agreements for the delivery of courses/programmes or services offered by ODFEL without the approval of the NBTE. NBTE and institutions must ensure the effectiveness and quality of the courses/programmes offered by all;
- Ensure that learners have access to and can effectively use appropriate library resources;
- Ensure that access is provided to laboratories, facilities, and equipment appropriate to the courses or programmes.

5.2 LEARNERS' SUPPORT

Policy Issues/Challenges

ODFEL programmes require blended forms of learners' support that institutions are not familiar with.

Policy Objective

To ensure adequate and appropriate support for learners in ODFEL programmes.

Strategies:

To achieve the policy objective, the following strategies are to be implemented:

- All learners receiving teaching through ODFEL are provided with equivalent access to learners' support services offered to traditional learners;
- Learners have adequate access to the range of specialised services appropriate to support the programmes offered through ODFEL;

- Learners in ODFEL programmes have an adequate procedure for resolving their complaints and the institution follows its policies and procedures;
- Advertising, recruiting and admissions information must accurately represent the programmes, requirements and services available to learners;
- Learners enrolled in ODFEL courses are able to use the technology employed, have the equipment necessary to succeed and are provided assistance in using the technology employed.

5.3 INTEGRATION OF ICT IN TVET

Policy Issues/Challenges

Although the opportunities of using technology in TVET are recognized, technology has not been effectively integrated into teaching activities in TVET in Nigeria. At present, the integration of ICT in TVET is minimal and limited to some institutions, and further tends to be used primarily for administration. This has been due to:

- Inadequate ICT infrastructure appropriate for ODFEL;
- Lack of policies at the institutional level for integrating the use of ICT in the teaching and learning process;
- Internet connectivity and access is relatively costly; hidden costs to end-user often make it prohibitively expensive;
- The quality of internet connectivity still remains a challenge;
- Outdated and insufficient computer equipment to support ODFEL;
- Electricity connectivity and reliability in some training centres is still a challenge;
- ICT security and technical support continues to pose a challenge in the implementation of ODFEL;
- Lack of requisite application and systems software.

Policy Objective

Promote integration of ICT in teaching and learning in order to facilitate provision of TVET programmes through ODFEL.

Strategies:

To achieve the policy objective, the following strategies are to be implemented:

- Facilitate the formulation of institutional policies for integration of ICT in TVET;
- Facilitate the acquisition of adequate ICT infrastructure in TVET institutions;

- Provide subsidized or free broadband Internet connectivity to the TVET institutions under the NBTE Technical & Vocational Education Broadband (TVEB);
- Put in place schemes to enable facilitators and learners to acquire their own ICT access devices;
- Provide in-service training to improve ICT skills of facilitators through the NBTE Access to Computer Education (ACE);
- Promote the use of Free and Open Source Software (FOSS) and genuine software for teaching and learning processes;
- Provide cost-effective, seamless, integrated learning technology solutions that facilitate open distance and flexible course content delivery;
- Enable appropriate partnerships to ensure that research, monitoring, evaluation and reporting on the utilization of ICT for TVET are carried out;
- Encourage the private sector to play an integral role in the development of ICT infrastructure in TVET institutions through the TIER project;
- Ensure that the technology used is appropriate to the nature and objectives of the programmes, courses and expectations concerning the use of such technology are clearly communicated to the learners;
- Provide technological aids to people with special needs to access ODFEL resources;
- Ensure adequate support services for integration of ICT in TVET.

5.4 ASSESSMENT & CERTIFICATION

Policy Issues/Challenges

Currently in TVET, greater emphasis is placed on summative assessment of learners' competencies – and often through examinations - as opposed to continuous, competency-based assessment. By contrast, well-designed ODFEL resources include opportunities for learners to assess their own progress as the course proceeds (i.e. formative assessment), and to revisit topics until competency is achieved.

There is an approved National Skills Qualification Framework (NSQF) by the Federal Executive Council (FEC) on 11th April, 2013. This recognises skills and competences acquired on the job, or from formal or informal training organisations, based on nationally validated assessment and certification system. Learners with NSQF certifications and other statutory professional examinations are provided seamless progression to formal ODFEL TVET programmes.

In addition, there are variable mechanisms/frameworks for assessing competencies and recognition of prior learning (RPL). Inadequate facilities also hamper appropriate assessment of TVET learners, and this problem is likely to get worse as ODFEL enrolments increase. In addition, failure by the regulatory bodies to recognize internally-assessed certificates issued by

institutions limits their flexibility to design and deliver TVET courses in response to locally-identified needs. Institutions should be given the flexibility to design and enrich training contents with technological advancement and local needs.

Policy Objective

To ensure that learners are appropriately assessed, with minimal delays, and that certification is based on achievement of competencies.

Strategies

To achieve the policy objective, the following strategies are to be implemented:

- Collaborate with industry in establishing competency-based assessment centres and procedures capable of accommodating ODFEL learners and awarding credit for their achievements;
- Promote the development of programmes by TVET institutions for delivery through ODFEL methods;
- Promote the development of NSQF awards (Levels 1-6) in line with international best practises in all institutions as an alternative to existing entry requirements in order to facilitate access to TVET courses by non-traditional learners;
- Emphasize the attainment of competencies through successive assessment as opposed to traditional summative examinations;
- Ensure that there are proper mechanisms and facilities to enhance credibility of assessment through ODFEL;
- Learners with NSQF certifications and other statutory professional examinations are provided seamless progression to formal ODFEL TVET programmes;
- Provide robust guidelines for using online formative and summative assessment;
- Certificates awarded by accredited ODFEL institutions should be recognised;
- Ensure all TVET institutions has NSQF approved centres and programmes;
- Ensure the internalization and benchmarking of all NBTE curricular with best globally recognised qualification framework for assured academic and career progression pathway both locally and internationally.

5.5 QUALITY ASSURANCE

Policy Issues/Challenges

To ensure that citizens derive the best training from ODFEL programmes, it is essential to put in place effective guidelines for the establishment and maintenance of TVET.

Quality Assurance involves adherence to minimum standards in relation to course content, support services, program administration and institutional governance.

Policy Objectives:

- a) To regularly monitor training institutions to ensure that they are in compliance with national laws, standards and guidelines with respect to ODFEL programmes;
- b) To ensure that training institutions put in place effective internal quality control and procedures to continuously monitor the ODFEL programmes;
- c) To put in place external quality control mechanism that regularly monitor and review ODFEL programmes to ensure that they meet prescribed requirements.

Strategies:

To achieve the policy objective, the following strategies are to be implemented:

- Rigorously apply the quality assurance framework adopted by NBTE (outlined in Quality Matters Higher Education Rubric, Fifth Edition, 2014).
- Monitor and evaluate the use and impact of ODFEL in all TVET institutions to form part of annual monitoring reports and institutional plans;
- Design a reward and recognition scheme to recognize and encourage ODFEL best practice;
- Benchmark the practice of globally accepted qualifications and grading qualifications framework;
- Responsive development of the full range of National Occupational Standards; Adopt training and teaching practices to improve relevance to teaching and learning needs in a digital and dynamic environment;
- Document procedures for the purpose of security and sanctity in the conduct of assessments and evaluations and in the dissemination of results;
- Improve and strengthen accreditation processes for training institutions that adopt or plan to adopt ODFEL methods;
- Align ODFEL programmes with national needs;
- Roll out minimum standards for ODFEL courseware for use by TVET institutions periodically;
- Create database of all ODFEL courseware to facilitate sharing, adaptation and re-use;
- Ensure that all stakeholders involved in quality assurance have adequate information and requisite knowledge on ODFEL in order to assist/advise TVET institutions;
- Ensure comparability of ODFEL programmes to campus-based programmes and courses by the evaluation of educational effectiveness, including assessments of learning outcomes, learner retention and satisfaction;

- Ensure that their ODFEL courses and programmes comply with the NBTE Resource and Content Review. This applies to all educational programmes and services, wherever located or however delivered;
- All ODFEL institutions should adhere strictly to the stipulated 70:30 enrolment ratio for science and technology non-science programmes.
- All ODFEL programmes should adhere strictly to the minimum benchmark 30:70 delivery ratio i.e. the class will meet 30% face to face and at least 70% online;
- All ODFEL approved institutions may admit more than once in a year provided they meet the Multi-year Budget criteria as defined by NBTE;
- The institution should regularly assess the effectiveness of its provision of library/learning resources and learner support services for ODFEL learners.

5.6 BUILDING HUMAN RESOURCE CAPACITY

Policy Issues/Challenges

- **Human Resource Capacity:** The TVET sector in Nigeria faces human resource capacity crisis especially in terms of quality and quantity. This impact negatively on the operations of ODFEL in particular and the TVET sector in general.
- **Training facilities:** These are either inadequate, obsolete or poor quality or all.
- **Curriculum:** Obsolete curriculum also impacting negatively on the effectiveness of ODFEL.
- **Public Perception:** Poor or low public perception is a serious challenge facing the TVET sector and this has negative implication for ODFEL.
- **Funding:** Inadequate funding is also a challenge facing the sector.
- **Management Support:** Management Support is minimal and this affects the rate and magnitude of capacity building in TVET institutions.

Policy Objective

- To put in place a framework that ensures continuous professional development of staff while harnessing their full potential and ensuring they are well equipped and motivated to take advantage of the latest and future technological developments available to ODFEL.

Strategies

To achieve the policy objective, the following strategies are to be implemented:

- Ensuring that ODFEL is integrated in the curricula for training TVET teachers;
- Establish mechanisms for developing programmes to build the capacity of pre-service and in-service trainers to implement ODFEL including appropriate training and certification by NBTE;
- Identify opportunities and mobilizing fund for continuous professional development of staff in TVET institutions adopting ODFEL methods;
- Reviewing the staff structure arrangements and devising flexible approaches to employment of experts required in ODFEL;
- Progressively making available fund to technical and support staff, including those who provide ICT support, library/resource centre services and academic advice/counselling;
- Establishing formal ODFEL management structures in TVET institutions;
- Ensuring that institutions offering ODFEL have sufficient number of facilitators qualified to develop, design and teach the courses/programmes;
- Ensuring that institution has clear criteria for the evaluation of facilitator teaching ODFEL courses and programmes;
- Ensuring that ODFEL staff are adequately and appropriately developed and giving the opportunity to run their promotions as provided in the institution policy;
- Ensuring that ODFEL learning resources are recognised as a publication for promotion purposes
- Developing appropriate and current curricula for training the trainers.

5.7 SOCIAL EQUITY

Policy Issues

To increase access to learning necessary actions are needed to remove all forms of social discriminations against females, males, people with disabilities (PWDs) and other vulnerable groups.

It is the government's commitment to increase the proportion of women and other vulnerable groups in teaching, administration and research at all levels of tertiary education institutions. The challenge can be addressed by developing mechanisms to cater for them to benefit more from flexible programme provision. It is in this view that the NBTE aims to promote ODFEL to

increase learning opportunities and review training delivery mechanisms to include on and off-the-job training to enhance quality ODFEL for life-long learning.

Policy objective

Institutionalize affirmative action for vulnerable groups, particularly females (where applicable) and people with disabilities.

Strategies:

To achieve the policy objective, the following strategies are to be implemented:

- Ensuring active existence of WITED in TVET Institutions by NBTE Management;
- Coordinate Women in Technical Education (WITED) chapters in all TVET institutions using a shared database;
- Providing ODFEL programmes and curriculum that guarantees social equity;
- Creating a safe, secure and protective learning and work environment that is friendly to all;
- Establishing modalities for dealing with sexual harassment, gender-based violence and all forms of discrimination in TVET institutions;
- Ensuring that TVET institutions and all stakeholders allocate necessary resources and implement Action Plans to ensure equitable opportunities, participation and achievement by all learners and trainers.

5.8 CHANGING PERCEPTIONS OF ODFEL

Policy Issue/Challenge

There exists a negative perception of distance and online programmes by the public, who do not view them as a viable alternative to traditional (mostly face-to-face) ways of teaching and learning. It is often seen as inferior to formal classes. Parents/guardians do not appreciate forms of learning other than traditional, face-to-face teaching, especially for practical courses. In summary the perceived challenges are:

- In many cases, the certificates awarded to those who studied through ODFEL methods are viewed as inferior to those obtained through conventional education and training;
- Difficulty of mobilizing conventional institutions to implement ODFEL program;
- Difficulty in matching ODFEL provisions to the needs of human resource development;
- Issues of Administrative conflicts within institutions and NBTE in the implementation of ODFEL programmes and activities.

Policy Objective

To promote positive perceptions of ODFEL among all role players/stakeholders in the TVET sector.

Strategies

To achieve the policy objective, the following strategies are to be implemented:

- Supporting activities of ODFEL through teaching and learning centres, educational technology units, appropriate technological infrastructure and virtual learning environments;
- Ensuring that all the institutions have champions to spearhead the process, and encourage the institutions to create a dedicated ODFEL Units (where possible) to act as a Centre of ODFEL;
- Organizing nationwide ODFEL sensitization for TVET stakeholders;
- Sharing exemplars of best practice through global community platforms;
- Involve the institutions and stakeholders in implementation of ODFEL;
- Sensitizing learners at an early stage of education (ideally from primary education) on ODFEL as an alternative, quality mode of study.

5.9 PPROMOTION OF ODFEL

Policy Challenges

There is resistance to change among managers/administrators teaching staff and learners, and the 'customers', namely; parents/guardians, employers, the industry etc as the value proposition of ODFEL is not always clear to these stakeholders. To address this challenge, NBTE recognizes that promotion of ODFEL is key in order to create awareness, impart knowledge for the basic understanding of ODFEL and changing perception. For the success of ODFEL in the institutions, there is need, for support and cooperation from all the stakeholders. There must be willingness to embrace change that goes with the introduction of ODFEL. Failure to embrace change means that the management will not fully support the introduction of the policy or allocate sufficient resources for this purpose; the staff's failure to embrace change means they will not embrace ODFEL approaches to teaching. Similarly, the learners must be ready to key into the change to fully adopt flexible teaching and learning approaches.

Policy objective

The objective is to promote and provide programmes that are geared towards change management and embracing of ODFEL programmes, based on a clear value proposition for each of the stakeholders.

Strategies:

To achieve the policy objective, the following strategies are to be implemented:

- Developing a clear value proposition of ODFEL for each of the stakeholders;
- Organising seminars/workshops to promote ODFEL in the MDAs, institutions, professional bodies and other relevant agencies;
- Improving the image of TVET and popularize the ODFEL programmes;
- Promoting recognition of ODFEL departments as equal to other academic departments;
- Sensitizing managers, staff and learners on ODFEL;
- Supporting the preparation and keeping ODFEL programmes in line with ensuring periodic update of ODFEL programme to guarantee their currency and social relevance;
- Encouraging stakeholders' participation in ODFEL programmes and activities;
- Appointing and develop Champions at all levels including MDAs, state government, institutions, management, teaching staff, administrators, learners and employers;
- Enacting an Act for the recognition of ODFEL system.

5.10 SYSTEM AND INSTITUTIONAL MANAGEMENT

Policy Issues/Challenges

Ensuring authenticity of learners in an online and/or distance education environment. Administration of e-learning and distance education to occur in an orderly and well-planned manner. ODFEL programmes to be clearly articulated in institutions' missions and not depicted as a second-best option.

Education and training are administered and controlled at all National, State and Institution levels. These create challenges in coordination, stakeholder participation in planning, implementation, management, governance and accountability. In addition, a variety of governance and management structures are evident, such as: Governing Councils, *Management Committees and Academic Board*.

For ODFEL programmes to be effectively implemented there is need for mentorship at all levels. Currently there are no clear policy guidelines on mentorship at aforementioned levels and

implementation is therefore hampered. Institutions can develop their own policies to address mentorship.

Policy Objective

To provide leadership in coordination, planning and accountability in ODFEL

Strategies:

To achieve the policy objective, the following strategies are to be implemented:

- NBTE to play a leading role in the promotion and establishment of ODFEL across the Nation, States and Institutions;
- Establish clear governance and management structures that accommodate ODFEL at all levels;
- Establish linkages and partnerships with industries;
- Establish effective monitoring and evaluation across the TVET sector;
- Provide administrative framework for the formulation and adoption of institutional ODFEL Policy and Strategy;
- NBTE to conduct audit visits to ascertain ODFEL readiness:
 - ODFEL programmes should be reflected in the institution's mission statement;
 - The institution should demonstrate that the learner who registers in an ODFEL course or programme is the same learner who participates in and completes the course or programme and receives the credit by verifying the identity of a learner who participates in class or coursework by using, at the option of the institution, methods such as (1) a secure login and pass code, (2) proctored examinations, and (3) new or other technologies and practices that are effective in verifying learner identification;
 - The institution should demonstrate that it has a written procedure for protecting the privacy of learners enrolled in ODFEL courses or programmes;
 - The institution should demonstrate that it has a written procedure distributed at the time of registration or enrolment that notifies learners of any projected additional charges associated with verification of learner identity;
 - The institution must ensure that it reports accurate learners' enrolment and completion of data on its Annual Institutional Profile submitted to the NBTE.

5.11 FINANCING ODFEL INITIATIVES

Policy Issue/Challenge

The need for sustainable financing policy that adequately addresses ODFEL programmes.

Policy Objectives

Provide adequate financing of ODFEL programmes in training institutions.

Strategies: To achieve the policy objective, the following strategies are to be implemented:

- All ODFEL institutions must set aside 30% accrued funds paid by students for infrastructure and other related facilities;
- Promote adoption of a financing mechanism that treats ODFEL programmes as equivalent to the traditional programmes;
- Giving incentives to institutions with ODFEL for Course Content formulation;
- Create tax rebates for private sector stakeholders involved in support of ODFEL;
- Adequately finance ODFEL designated infrastructure;
- Each institution must put in place a multi-year infrastructure plan for ODFEL to benefit from a consortia arrangement framework by consultants, donors and partners. A legal template as public-private partnership shall be made available to all participating institutions;
- Making available appropriate equipment and technical expertise required in ODFEL;
- Providing adequate funding for facilitators, staff, services and technological infrastructure to support ODFEL by the institutions;
- Developing a TVET expenditure tracking system to enhance monitoring and evaluation of ODFEL programmes;
- Develop remuneration guidelines for administrators, trainers and ODFEL resource persons.

1. IMPLEMENTATION FRAMEWORK

6.1 COMMUNICATING THE POLICY AND STRATEGY

The NBTE will be responsible for communicating the Policy and Strategy to the TVET sector.

6.2 COORDINATING AND OVERSEEING POLICY AND STRATEGY IMPLEMENTATION

The existence of a cohesive and well-functioning national and institutional framework is essential for effective and efficient policy implementation and the attainment of all the objectives of this Policy and Strategy. The NBTE will lead in the overall implementation of this Policy and Strategy under the guidance of the Federal Ministry of Education.

For the various institutions within the TVET sector to play their roles effectively, the NBTE must ensure that the different stakeholders buy-in in the provision of ODFEL. These stakeholders include TVET institutions, development partners, civil society organisation, private sector investors, communities and individuals.

As such the NBTE will:

- Provide leadership and direction in the TVET Sector, in the implementation of the policy objectives and coordinate the efforts of various agencies involved in the implementation. The NBTE will foster linkages with various development partners to provide financial, material, technical assistance as well as build capacity for sustainability;
- Ensure that the TVET sector, through its structures, implement the policy, and monitor the learner support system for quality delivery;
- Ensure that Institutions derive their own ODFEL Policies and implementation strategies based on this National Policy and Strategy document; and
- Ensure that all Stakeholders make relevant contribution to increase access to education and reduce poverty.

1. MONITORING AND EVALUATION

Monitoring and evaluation of ODFEL will be done at the national level under the guidance of the Federal Ministry of Education, other line ministries, the National Board for Technical Education (NBTE), TVET institutions and other agencies as the public providers of ODFEL. All agencies in the monitoring and evaluation (where not applicable) must ensure that Monitoring & Evaluations Units are established. This will occur annually or as required by changes in strategic intent or national/international best practice, and will include revision of this Policy and Strategy.

2. REFERENCES

Akanbi, G.O. (2017). *Prospects for Prospects for technical and vocational education and training (TVET) in Nigeria: Bridging the gap between policy document and implementation*. The International Education Journal: Comparative Perspectives Vol. 16, No. 2, 2017, pp. 1-15 Accessed at <https://openjournals.library.sydney.edu.au/index.php/IEJ>

Ngor, Z.B. & Tambari, D.M. (2017). *Enhancing Technical Vocational Education and Training (TVET) as a Tool for National Development in Nigeria: Issues, Challenges and Strategies*. Journal of Education, Society and Behavioural Science 21(4): 1-9, 2017; Article no.JESBS.35527

Obomanu, B. J. (2015). *Development of technical and vocational education and training (TVET) in Nigeria: The journey so far*. A Keynote Address delivered at the 12th Annual National Conference of Historians of Education Development Society of Nigeria (HOEDSON) held at the University of Port Harcourt, Port Harcourt.

Ojerinde, D. (2011). *Contemporary education issues in Nigeria*. India: Melrose Books and Publishing Ltd.

Oranu, R.N. (2001). *Vocational and Technical Education in Nigeria*. Geneva: UNESCO IBE. Accessed at <http://www.ibe.unesco.org/curriculum/AfricaPdf/lago2ora.pdf>

UNESCO-UNEVOC International Centre for Technical and Vocational Education and Training (2012, November). *World TVET Database - Nigeria*. Validated by: National Board for Technical Education, Centre of Excellence in TVET (NBTE).

World TVET Database Nigeria. UNESCO-UNEVOC.
https://unevoc.unesco.org/wtdb/worldtvetdatabase_nga_en.pdf