# Vocational Technical Manpower Development in Nigeria: Issues and Strategies

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## Abstract

*The development of any nation depends largely on her technical prowess and capabilities. This study utilizes a pragmatist philosophical investigative approach to capture the opinions of stakeholders in vocational technical manpower development in the geo-political zones of Nigeria. In all, 188 survey questionnaires were administered to the randomly selected samples of stakeholders. Of these, 132 completed questionnaires (representing 70 percent response) were retrieved. Descriptive statistical (Relative Importance Index) tool was used along with the SPSS version 25 for the analysis of primary data. Results of the study revealed over-reliance on imported technology, inadequate funding and poor learning resources as the challenges of vocational technical manpower development. The study strongly recommends appropriate training in local and adaptable technology, and public-private collaboration in the development of vocational technical manpower in Nigeria.*

*Keywords: Issues, Manpower, Strategies, Technology, Training, TVET, VTMD.*

## 1. Introduction

In the process of development, the policies and systems of a nation dynamically change as dictated by the socio-economic, political and technological circumstances. Old systems become inappropriate, new technologies emerge, old skills become redundant while the human element requires new skills, new attitudes and a new orientation.

Perhaps never before in history has the need for manpower development been as important as now when the contest between man and machines is increasing in complexity. The needs of industry include land (for buildings, installation of equipment and future expansion), capital (for purchasing land, plants, equipment or machinery as well as reward for labour) and human labour force [1]. The human labour force is referred to in literature as manpower. It is worrisome that in a country (Nigeria) where resources abound, many young graduate adults are found on the streets riding commercial motorcycles (Okada) and tricycles (Marwa). This suggests that their training is inadequate, irrelevant or is at variance with the needs of the society.

Manpower has been defined as the portion of a nation's population that is capable of engaging in productive employment [2]. In other words, it is the total supply of persons available and fitted for service. Development is a planned programme to achieve targeted sustained economic growth of a nation or part thereof with desirable milestone over definable periods [3]. Development may also be perceived as expanding, enlarging upon or bringing out the potentialities, capabilities etc. of a person [4]. This research paper traces the evolution of vocational technical manpower development, and gives a vivid account of its historical development in Nigeria. The paper also presents and discusses empirical survey results.

## 2. Evolution of Vocational Technical Manpower Development

The history of Vocational Technical Manpower Development (VTMD) is the account of human effort to learn to work. Work has enabled humankind to satisfy the ever-increasing needs and wants. VTMD made very early beginnings among the races of humankind [5]. In all human effort to conquer the physical environment, manual skills and knowledge pertinent to specific tasks have in one way or the other been transmitted from humankind and from generation to generation [6]. This was accomplished by mastering, shaping and directing the environment towards economic ends through technology. In the olden days, fathers taught their sons the rudiments of their jobs in an informal technique. A son was expected to be like his father in all ways and more importantly to continue the father's vocation after his death. It has been asserted that training in the African traditional society was largely run on the apprenticeship system which existed in all the crafts and trades [7]. Apprenticeship is a system by which young adults acquire the skills necessary to be proficient in a trade, craft, art or occupation under the tutelage of a master craftsman. The apprenticeship period varied from district to district and from craft to craft. The goal of African traditional education was character training and acquisition of basic skills for survival [7]. This informal occupational specialisation contributed to an understanding and application of technology of the early humankind, and may be regarded as the beginning of VTMD.

The Industrial Revolution (1750-1850) and the continuing advances in the application of mechanical

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power to the production of goods and services resulted in several occupations that call for special knowledge, skills and attitudes at the sub-professional level [8]. Given that the formal education did not provide for training in these occupations as they emerged, apprenticeship and on-the-job training were used in providing needed skills to the industrial worker. However, the need to prepare prospective and employed workers for specific occupations through formal education was seriously felt in the early 20th century [9]. VTMD programmes were then developed to meet the needs of individuals and industries. The USA played a leading role in this development [5]. Through the activities of some national agencies and organisations, VTMD received a place in the formal education system. Thus, the forces that influenced VTMD were wars, National Study Panels, Employer Associations and Labour Organisation, Technology and the Smith-Hughes Act [10].

VTMD is a programme designed to develop people (human resources) to use natural and capital resources wisely and participate fully and effectively as productive members of the society [5]. Essentially in USA, VTMD has come to mean education for any occupation which normally requires less than a Bachelor's degree for the beginning worker [10]. The International Labour Organisation (n.d) cited in [11] defined VTMD as activities which essentially aim at providing the skills, knowledge and attitude required for employment in a particular occupation, group or related occupations or a function in any field of economic activity including agriculture, industry, commerce, the hotel, catering and tourist industries, public and private services. From the fore-going, VTMD may be described as an education designed to develop abilities, understanding, attitudes, work-habit and appreciation encompassing knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis. The ultimate objective of VTMD is to produce semi-skilled and skilled individuals below the professional level for entry or advancement in given occupation.

## 3. Vocational Technical Manpower Development in Nigeria

Nigeria is a federal constitutional republic comprising 36 States, a Federal Capital Territory Abuja, and 774 Local Government Authorities. The name Nigeria was taken from the Niger River running through the country and was coined by the British journalist 'Flora Shaw' in the 1890s. The country is located in West Africa and shares land borders with the Republic of Benin in the west, Chad and Cameroon in the east, and Niger in the north. Its coast in the south lies on the gulf of Guinea on the Atlantic Ocean. Nigeria has well over 300 ethnic groups, each of which has its own language or dialect. Because of its language-diverse nature, English is the only common and unifying language to most people. Though the dominant indigenous languages of Yoruba, Hausa and Igbo are widely used, they are not universally understood. Therefore, English language is the official language of Nigeria. The country is roughly split half between Muslims and Christians with a very small minority who practice traditional religion. Nigeria is the most populous country in which the majority of the population is black. She is a member of the Commonwealth of Nations, listed among the 'Next Eleven' economies and projected to be the 'Third Most Populous' country by 2050 with over 400 million people [12].

In 1887, the Education Ordinance provided for increased government grants-in-aid for Agriculture and Industrial Technical activities which included gardening, sewing, handicrafts, arts and domestic science [13]. This development ushered in the inclusion of some vocational technical subjects like carpentry, woodwork, tailoring and painting in such schools as Bonny Boy's High School in 1900 and Hope-Waddel Institute in Calabar, as well as Nassarawa School in 1909, offering such courses as leatherworks, black-smithing, weaving, book-keeping and other crafts.

At the end of the second World-war, some meaningful efforts were made for VTMD especially at the primary school level [11]. The subjects included Agricultural Science, Crafts, and Domestic Science. The study of Agriculture included gardening, identification of plants, labour or out-door experiences built into the daily or weekly programmes of instruction. Arts and crafts education was generally known as Handwork in the primary schools. The pupils were made to weave ropes, make baskets, fans, brooms, a variety of raffia and cane objects, do some knitting, carve on wood and create objects out of paper in addition to the general art drawing programmes. Art materials were usually of local products such as palm-fronts, local clay, raffia, cane and different types of dies.

At that time, a trained Handwork master was usually attached to each school or to several schools to teach craft-oriented programmes [7]. Domestic Science, Agriculture and Crafts were taught with a view to developing insights, appreciation, attitude, skills and understandings important in home making. It was taught to young girls as part of the handwork activities and included needle-work, knitting, and cooking. While these efforts were going on in the primary schools, some secondary schools introduced programmes similar to those of the primary schools but emphasis was in the liberal arts than sciences [14].

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As time progressed, other institutions emerged that started aspects of VTMD programmes [6]. In this regard, efforts were made for the introduction of vocational programmes in different work situations as a consequence of the technical skills required notably the Railway, Ports Authority, Post and Telegraph, Electrical Corporation of Nigeria, Mining companies and Agriculture were in need of skilled persons to handle their various operations [9]. In 1931, the colonial government introduced a junior technical staff training course and a technical training course in the then Post and Telegraph (later NITEL and NIPOST). In 1938, the department of Agriculture opened a forestry school. In 1932, engineering courses were introduced at Yaba Higher College and in 1954, the government received a Higher Education (Elliot) Commission proposal to convert the college to Yaba Technical Institute (now Yaba College of Technology) [9]. The Commission proposed that handcraft centres should be established for training of skilled craftsmen, and technical institute for the technicians. This policy statement on education led to the establishment of Trade Centres and Technical Institutions in the three regions between 1948 and 1952 [9]. Thus, in 1952, the Nigerian College of Arts, Science and Technology with branches at Ibadan, Enugu and Zaria was established offering courses such as Surveying, Mining, Science and Arts, Forestry, Engineering and Secretarial Studies. The branches were later incorporated into the University of Ibadan, University of Nigeria and Ahmadu Bello University respectively [6].

In all these efforts, people were not clear in their minds as to what they were doing. The colonial masters at that time failed to come out quite clearly as to the type of education they envisaged for the country. What was uppermost in their minds was to educate a few citizens who could operate some essential functions for their own welfare and not necessarily for the welfare of Nigeria [15].

Furthermore, at the end of the second World-war, two trade schools for ex-service men were set up at Ikeja-Lagos and Enugu where veterans were given a six-month training before returning to civilian life [16]. The centre at Ikeja has been converted to Armed Forces Resettlement Centre while that of Enugu is now known as Government Technical College, Enugu. It can be rightly said that the importance of VTMD in rehabilitating civilians was realised during this period, the first evidence of which is the awareness for training the World-war 11 ex-service personnel in the basic skills and crafts.

The British system, after which pre-independence Nigerian education was modelled, considered VTMD as training in manual and technical skills [17]. The stigma attached to VTMD in Britain was also carried into and in fact extended to the Nigerian system [16]. Thus, VTMD has been underdeveloped relative to other types of education at all levels. Neither the British colonial government nor the Missionaries, who pioneered formal western education in Nigeria, encouraged scientific and technical/vocational education [6]. At independence, Nigeria inherited and continued with an elitist and esoteric type of education, which produced manpower interested only in white-collar jobs but not in manual work [7]. VTMD was viewed with disdain by the society, it was reserved mainly for school drop-outs and generally was underfunded by the government [16].

Prior to the formation of the first National Policy on Education (1977, revised 1981), VTMD received little attention in Nigerian educational system [15]. Greater emphasis was placed on general education and the preparation of youths for the socially valued professions such as law, education, theology and medicine at the University level [6]. The only meaningful attention given to VTMD was the establishment of Technical colleges. The first Technical College in Nigeria, Federal Technical College, Yaba (Lagos State) was established in 1948 [15]. Additional nine Federal Technical Colleges were established between 1988 and 1992 in Orozo (FCT), Uyo (Akwam Ibom State), Zuru (Kebbi State), Jalingo (Taraba State), Ilesa (Osun State), Shiroro (Niger State), Okposi (Abia State), Kafanchan (Kaduna State), and Otukpo (Benue State) [15]. All these colleges have been converted to Federal Science and Technical Colleges, hence the establishment and management of Technical Colleges is now left to the State Governments and private sector.

Lagos was the capital city of Nigeria immediately after the country gained her independence from the British in 1960, and maintained this role until 12$^{th}$ December, 1991 when the seat of government moved to Abuja. The city however remains the corporate, commercial and industrial nerve centre of Nigeria. Early in the 1980's, the Lagos State Government decided to set up a multi-dimensional technical college with the co-operation of the organised private sector [18]. A frontline industrialist, Chief Amusa Beyioku Adebowale was in the forefront of that worthy course which gave birth to the Lagos State Industrial and Manpower Development Centre at Odomola in Epe Division of Lagos State. In order to provide high calibre of teaching staff for the college, the State Government took advantage of the national foreign exchange and local programmes for the training of technical teachers [18]. More Technical Colleges were later established at Ado-Soba, Ikotun, Ikorodu and Ikeja to popularise technical education throughout Lagos State. Other State Governments in Nigeria have also kept faith with VTMD.

The 6-3-3-4 system of education (6years primary, 3years junior secondary, 3years senior secondary and 4years in either the polytechnic or university)

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introduced pre-vocational and vocational subjects into the secondary school curriculum in Nigeria [19]. The subjects include technical drawing, basic technology, metalwork, woodwork, plumbing and pipe fitting, electrical installation, block-laying, building construction, painting and decorating, garment making, fashion design, carpentry and joinery, furniture making, printing, sign writing, auto-mechanics, mechanical craft, radio and television, GSM repair, welding, catering and hotel management, clothing textiles, food nutrition, agricultural science, fine arts, etc.

### 3.1. Government Policy

Technical and Vocational Education and Training (TVET) is that aspect 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 [19]. The document further explained TVET as:

1. An integral part of general education
2. A means of preparing for occupational fields and for effective participation in the world of work.
3. An aspect of lifelong learning and a preparation for responsible citizenship.
4. An instrument for promoting environmentally sound sustainable development
5. A method of alleviating poverty.

The goals of TVET 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 individual who shall be self-reliant economically.

The institutions responsible for technical and vocational manpower training in Nigeria are the:

- Pre-vocational Schools
- Vocational Enterprise Institutions
- Technical Colleges
- Mono-technics
- Polytechnics/Colleges of Technology
- Colleges of Education (Technical)
- Universities

## 4. Research Methodology

The aim of this paper is to identify the challenges of VTMD in Nigeria and proffer solutions. The study utilizes a pragmatist philosophical investigative approach to capture the opinions of stakeholders in VTMD in the geo-political zones of Nigeria. In all, 188 survey questionnaires were administered to the randomly-selected samples of stakeholders i.e. employers of graduates of vocational technical institutions, policy makers (Federal Ministry of Education and its agencies), and vocational technical teachers and students. Of these, 132 completed and usable questionnaires (representing 70 percent response) were retrieved. Secondary data were collected through a systematic review of relevant literature such as scholarly publications, refereed conference papers, government policies and guidelines, and expert panel reports. Descriptive statistical (Relative Importance Index) tool was used along with SPSS version 25 for primary data analysis.

## 5. Results of the Study

According to Table 1, 36% of the respondents are professional vocational technical teachers, 30% are vocational technical students, 18% are policy makers (Federal Ministry of Education and its agencies), while the rest are employers of graduates of vocational technical institutions.

Table 1: Respondents' characteristics

| Characteristics | Frequency | Percentage |
|---|---|---|
| Employers of graduates of vocational technical institutions | 20 | 15.1 |
| Policy Makers (Federal Ministry of Education and its agencies) | 24 | 18.2 |
| Students of vocational technical institutions | 40 | 30.3 |
| Vocational technical Teachers | 48 | 36.4 |
| **Total** | **132** | **100** |

These people have direct involvement and insight into VTMD. The respondents to the study are subsets randomly selected and representatives of the stakeholders in VTMD in Nigeria, with sufficient size to warrant statistical analysis [20]. Therefore, the conclusions which would be derived from the results of this study will apply to the entire stakeholders in VTMD in Nigeria.

Results in Table 2 show that majority (65%) of the research subjects have over 10years cognate

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working experience in their various fields (policy formulation, training, administration, operations, etc.), while 33% of the respondents have about 5years experience in VTMD.

Table 2: Respondents' working experience

| Years of Experience | Frequency | Percentage |
|---|---|---|
| 1-5 years | 44 | 33.3 |
| 6-10 years | 02 | 01.5 |
| 11-15 years | 40 | 30.3 |
| 16-20 years | 46 | 34.9 |
| **Total** | **132** | **100** |

The underlying assumption that these respondents are competent, experienced and capable of exercising sound judgement is met.

## 6. Discussion

Empirical results from this study (see Table 3) reveal that over reliance on imported technology (with a RII of 0.91) accounts for low productivity and underdevelopment in Nigeria. Technology could be defined as the way of doing things through the application of knowledge derived from systematic investigations of natural forces and materials [16]. It is the means of changing and controlling the environment, based on the knowledge of its characteristics and understanding of its functions. Technology leads to the development of processes and devices indispensable to the stable enhancement of the quality of life and to human progress [21]. Specifically, low productivity of manpower in Nigeria is rooted in continued over reliance on imported technology [22]. For example, during the march towards industrialization, Nigeria opted for the alternatives of importing technology packages of such forms that require mere robot-like and routine operations. Hence, while a lot of light industries which require mere machine operators abound (e.g. Breweries, Bottling companies, Oil and Feed Mills, Textiles, Cement factories, Paint firms, and Motor Assembly Plants), engineering industries are almost non-existent. The technology available determines the boundaries of what is possible for a country to achieve. In other words, if a nation's imported technology requires only robot-like operators, the training systems cannot but provide such calibre of manpower. This implies that the poverty in the third World Countries today is traceable to the underdeveloped state of abundant manpower.

The respondents claim that lack of appropriate training has adversely affected the technological development of Nigeria. They reported that some of the trainings offered in our institutions are inadequate and not tailored to the specific needs of modern industry. Appropriate training builds a potential in an individual and acts as a driving force on his/her career path. A nation cannot be self-reliant and great as long as she relies on imported technology and foreign manpower to produce, construct, repair and maintain roads, railways, bridges, aeroplanes, airports, seaports, skyscrapers, power plants, printing machines, motor cars, pumps, household equipment, etc. for which her citizens have adulterously developed insatiable tastes. Results of this study (Table 3) show that there is inadequate production in number and quality of skilled vocational technical manpower in Nigeria. The research subjects of this study alerted that Nigeria presently depends on the neighbouring West African Countries for skilled artisans in building trades.

Modern construction requires more proficient plumbers, electricians, tilers, welders, block layers, furniture and cabinet makers, painters, plasterers, carpenters and other vital personnel in the building production industry. After all, a well-built house pre-supposes a well-trained labour force working in accordance with the requirements of modern engineering and architectural practice. Mechanics also are required to possess some technical knowledge in addition to manual skills. Their work demands and acquaintance with both the theory and construction of automobiles of various models. Similarly, it is in the nation's interest if commercial drivers are well educated to understand the rules and ethics of the profession. Thus, the ability of Nigeria to march towards a first-rate economy rests on the degree of development of her industries, and development can only be obtained if the required manpower is available. Over-reliance on imported technology, foreign manpower and goods is counter-productive to the development and growth of local/indigenous technology. It turns States into consumer, beggar nations and dumping ground for scraps.

The problem of inadequate training facilities requires some focus. Technological development advances daily in some developed countries such that a new piece of equipment becomes obsolete in a matter of months. The industrial sector, being profit-oriented is always on the look-out for technological advances that could increase their profit margin in less time with greater labour efficiency. Results of this study indicate that Nigerian training institutions, as is characteristic of depressed economies, are hardly able to renew their facilities to keep pace with global technological progress. The results show clearly that most vocational technical training institutions lack basic modern tools, equipment, machinery, learning and consumable materials for workshop/laboratory practice. The trainees from these institutions enter the world of work only to discover that the equipment in the industry have been

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Table 3: Challenges of Vocational Technical Manpower Development (VTMD)

| Challenges of VTMD | SA(4) | A (3) | D (2) | SD(1) | RII | Rank |
|---|---|---|---|---|---|---|
| **Societal Attitude** | | | | | | |
| VTMD alleviates poverty. | 40 | 24 | 36 | 32 | 0.63 | 30 |
| Manual work is despised and reserved for dropouts. | 68 | 42 | 12 | 10 | 0.81 | 8 |
| Our society places emphasis on university education than vocational technical training. | 62 | 44 | 20 | 6 | 0.80 | 9 |
| Manually-skilled people are looked down upon in our society. | 80 | 36 | 4 | 12 | 0.84 | 5 |
| VTMD has not enjoyed the same status as Science education. | 46 | 30 | 32 | 4 | 0.64 | 27 |
| VTMD has been treated as a second-rate discipline. | 40 | 40 | 32 | 20 | 0.68 | 22 |
| VTMD is a solution to unemployment. | 40 | 32 | 28 | 32 | 0.65 | 23 |
| Over reliance on imported technology accounts for low productivity and underdevelopment. | 104 | 16 | 8 | 4 | 0.91 | 1 |
| **Training Resources** | | | | | | |
| Vocational technical institutions lack essential training resources. | 48 | 28 | 8 | 48 | 0.64 | 27 |
| Electric power (energy) is pivotal in vocational technical training. | 76 | 28 | 8 | 20 | 0.80 | 9 |
| The labour market prefers finished (ready-made) products who do not need expensive retraining on the job. | 84 | 28 | 12 | 8 | 0.85 | 3 |
| Training facilities which are replica of what obtains in the labour market are not readily available in colleges. | 28 | 44 | 44 | 16 | 0.65 | 23 |
| There are few relevant local textbooks for VTMD. | 76 | 32 | 20 | 4 | 0.84 | 5 |
| Power outages disrupt effective functioning of training tools, audio-visual aids and equipment. | 50 | 44 | 20 | 18 | 0.73 | 20 |
| **Funding** | | | | | | |
| VTMD is capital intensive. | 96 | 24 | 4 | 8 | 0.89 | 2 |
| Vocational technical institutions are not adequately funded. | 60 | 28 | 32 | 12 | 0.75 | 17 |
| Government alone cannot fund VTMD. | 36 | 24 | 52 | 20 | 0.64 | 27 |
| VTMD requires a fruitful partnership between Government and the organised private sector. | 58 | 42 | 22 | 10 | 0.78 | 14 |
| **Manpower** | | | | | | |
| The apprenticeship training system is going into extinction. | 44 | 16 | 48 | 24 | 0.65 | 23 |
| Vocational technical training is pivotal in the scheme of manpower development. | 64 | 40 | 20 | 8 | 0.80 | 9 |
| There is no reliable statistics for vocational technical manpower needs. | 54 | 44 | 20 | 14 | 0.76 | 16 |
| Vocational technical training institutions have no functional follow-up evaluation programme for graduates. | 50 | 40 | 26 | 16 | 0.73 | 20 |
| Appropriate training in local technology enhances self-reliance. | 52 | 38 | 36 | 6 | 0.75 | 17 |
| Scarcity of skilled manpower is a problem to national development. | 36 | 28 | 48 | 20 | 0.65 | 23 |
| Appropriately educated, competent and experienced master vocational technical teachers are in short supply. | 60 | 40 | 18 | 14 | 0.77 | 15 |
| Vocational technical teachers are not motivated. | 72 | 28 | 24 | 8 | 0.81 | 8 |
| Retention of professional vocational technical teachers in colleges is difficult. | 56 | 52 | 16 | 8 | 0.79 | 13 |
| National development hinges on the technical prowess and capabilities of citizens. | 80 | 24 | 24 | 4 | 0.84 | 5 |
| Vocational technical institutions compete with other economic sectors for manpower. | 48 | 52 | 20 | 12 | 0.75 | 17 |
| There is inadequate production in number and quality of skilled manpower. | 84 | 24 | 20 | 4 | 0.85 | 3 |

**Key: RII = Relative Importance Index, SD= Strongly Disagree, D= Disagree, A= Agree, SA= Strongly Agree**

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modified or at times have drastically deviated from those on which training occurred.

Energy (electric power) is a very important infrastructure for running both the private and public sectors of any economy. However, the respondents lament about epileptic and incessant power supply. This implies that the amount of energy generated, distributed and transmitted in Nigeria today is grossly inadequate for meaningful technological development. Modern technology emerges from a systematic application of the laws of nature (Science) to the solution of man's daily problems.

The financial needs of VTMD are quite different from those of general education. Aside from the usual need for buildings, staff remuneration and stationeries, VTMD requires fund for procuring tools and equipment, regular supply of consumables, regular maintenance of tools and equipment, students' industrial work experience scheme, security needs, and stipends/ honorarium for trainees. The dependence of VTMD solely on government for all her needs has also contributed to the problem of under-funding. Worse still, the stunted growth of the programme could be further traced to its merger with the general education. This merger results into a situation where administrators who have little or no understanding of the peculiar funding requirements of VTMD underestimates its needs and divert funds into areas which appeal to them. A non-technically inclined school administrator may ascribe superior status to other areas of education such as Science, Commercial, Arts, etc.

At the very heart of Nigerian society and economic problems is a national attitude which implies that training in manual skills is designed primarily for the under-privileged masses and the children of the poor. This attitude is shared by parents, businessmen, labour leaders, administrators and students. The research subjects lament that vocational technical training has been despised and treated as a second-rate discipline reserved for drop-outs. Nigeria has promoted the idea that the only good education is an education capped by a university degree [23]. This explains why parents go extra mile to get their wards at all cost into universities, even though such children would have done better in vocational technical institutions. This attitude infects students who make inappropriate choices because they are victims of the national yearning for prestigious occupations. Nigeria's socio-economic dependence lies in the ability of her citizens to appreciate the dignity of labour.

Lack of statistics on manpower needs account for the increase in the incidence of unemployment among school leavers [24]. It also makes it difficult for trainers to tailor their training efforts towards manpower needs and effective demand by industries and other agencies. For improved performance, technical training institutions need reliable and up-to-date data on manpower demands (quantity and quality), to guide annual students' intake, curriculum review and avoidance of unplanned production of irrelevant skilled and unemployed graduates. In the same vein, training institutions should have a functional follow-up evaluation programme aimed at finding out where their graduates are and how they are progressing.

## 7. Conclusion

The world today is witnessing an accelerated growth in technology, allied and semi-professional occupations. A large number of other occupations also call for considerable technical know-how and training. The greatest asset of any nation is her human resources and when put into optimal use, the beauty is shown in her rapid social, economic, technological, structural and political development. This paper investigated vocational technical manpower development in Nigeria. The study identified over-reliance on imported technology, inadequate manpower, poor learning resources, poor funding, paucity of data, and general apathy as challenges to VTMD. Consequently, the following strategies are proffered for effective VTMD.

Given that VTMD is capital intensive, the need for the organised private sector to partner with Government(s)/ the citadels of learning for positive development cannot be over emphasized. Both the public and the private employers of labour should be given the opportunity to participate and recommend training for job-seekers, trainees and potential students. In Sweden and Canadan Manpower Service, this approach has been used successfully. When employers are involved, they become committed towards enhancing the quality of programmes. In some cases, they would even provide the tools, equipment and materials required for the success and effectiveness of programmes. This approach could also serve as a check on high unemployment rate as it encourages trainees to seek employment or maintain contact with employers before enrolment. In the face of the daunting developmental challenges confronting the third world/developing nations and common humanity today, public-private collaboration in VTMD will undoubtedly enable training institutions to live up to their mandate as agents of change and drivers of national regeneration efforts. In this regard, large business concerns could contribute a certain percentage say 5% of their annual profit towards funding effective functional education.

Additionally, the vocational technical manpower needs of Nigeria should be appraised periodically to meet changes in technological development. This assessment could be done every five years bearing in mind the logistics and costs involved in such

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exercise. Periodic review and accreditation of vocational technical programmes should also be conducted immediately after each manpower need assessment exercise. Similarly, adequate incentives, remuneration, fringe benefit and rewards for excellence should be initiated and sustained in order to encourage vocational technical teachers to remain in teaching and attract practically capable people from industry. Moreover, vocational technical teachers in Nigeria should be sponsored and encouraged to participate in relevant continued professional development programmes such as regular conferences, seminars, workshops, refresher courses, exchange programmes, symposia, etc. This would help to keep them abreast of technological development in their various fields. A teacher who has not left the studio, workshop/ laboratory for five years may already be on the way to becoming a walking anachronism.

Unemployment is a product of modern times. The primitive mankind never knew it, human life was a constant struggle for survival, and to live was to work. Today, however, youth unemployment is at its peak with its attendant problems. The violence and social vices (kidnapping, rape, robbery, militancy, banditry, insurgency, etc.) that is prevalent in Nigerian cities and towns have their roots in unemployment and unequal opportunities. Those who have no jobs in a seemingly affluent community lash out in anger and frustration. Young adults who do not possess any marketable skills distrust the society which reared them; dissidents speak with the voice of rebellion; campus and workers' strikes plague the society and disrupt effective functioning of the economy. It is necessary that these people should be equipped with relevant technical know-how and skills commensurate with their abilities in order to bring them back to the mainstream of the economy. The acquisition and utilization of practical and entrepreneurial skills, abilities and competences remains an enduring solution to unemployment, crime, youth restiveness and social vices in Nigeria. The importance of VTMD is highlighted in the Sustainable Development Goal (SDG 4, Education 2030 Agenda, Targets 4.3 and 4.4). Therefore, appropriate training in local, adaptable technology and in relevant methodologies for self-reliance and national development becomes imperative. The national development of any economy depends largely on her technical prowess and capabilities.

From the foregoing, the policy makers may need to set up an Advisory Unit for VTMD in order to accomplish the strategies above. The responsibilities of the Advisory unit may include the following:

a) To collect and disseminate manpower information for national planning.
b) To compile a periodic occupational directory resulting from manpower needs assessment.
c) To advise on manpower production programmes relevant to national needs, yearnings and aspirations.
d) To handle manpower placement, retraining, redeployment and follow-up.

Though empirical data is drawn from Nigeria, this study has significant implication for policy makers, planners, administrators, operators, entrepreneurs and transmitters of technical know-how and students especially in developing countries.

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