



NIGERIAN JOURNAL OF EDUCATIONAL PHILOSOPHY

**EDUCATION, SECURITY, ECONOMY AND
VIABILITY OF DIGITAL RESPONSE**

VOLUME 33 NO. 2, OCTOBER, 2022

ISSN: 0794-0114

e-ISSN: 2971-5652

Published by:

PHILOSOPHERS OF EDUCATION ASSOCIATION OF NIGERIA (PEAN)

www.peanpapers.com

TIMSMEK GLOBAL PUBLISHERS®, PORT HARCOURT



An imprint of Timsmek Global Ltd

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Vocational and Technical Education: A Viable Tool for Transformation of the Nigerian Economy

Bitrus Audu Sule

Department of Educational Foundations,
Philosophy of Education Unit,
Nasarawa State University Keffi, Nigeria
08139078840, 08126921230

Mohammed Ahmed Jibrin

Department of Educational Foundations,
Psychology of Education Unit,
Nasarawa State University Keffi, Nigeria

&

Monica Emmanuel Alaku

Department of Arts and Social Science Education,
English Education Unit,
Nasarawa State University Keffi, Nigeria
Monicaalaku200@Gmail.Com
08069222282

Abstract

Vocational and Technical Education has been an integral part of national development strategies in many societies because of its impact on human resource development, productivity and economic development. It holds the key to national development of most nations. However, despite its contribution to societal and economic development, Nigerian leaders have not given this aspect of education the attention it desires. This could be one of the reason for the nation's underdevelopment. This paper attempts to examine the concept of vocational and technical education, objectives of vocational and technical education, image of vocational and technical education in Nigeria, the importance and role of vocational and technical education in economic development and challenges of vocational and technical education in Nigeria. The paper concludes that through vocational and technical education youths as well as adult will be trained to acquire skills, attitude and knowledge which are needed for the economic growth of our nation. The paper therefore recommends that the nation must invest copiously in education with particular attention given to vocational and technical education.

Keywords: Economic development, Nigeria, skills acquire, vocational and technical education.

Introduction

It is generally believed that one of the major parameters for measuring a country's economic growth, development and self-reliance is the extent of the country's development in vocational and technical education. Thus, neglecting vocational and technical education is socially injurious as robbing the nation of the contribution the graduates would make on national development. More importantly, the society needs competent auto mechanics, carpenters, plumbers, electrician, secretaries, fashion designers, storekeepers, and accountants to mention but a few. The current preoccupation with university education in Nigeria reduces economic opportunities of those who are more oriented toward work than academic. Not everyone needs a university education. Who would employ them if everyone became a university graduate? Graduates of vocational and technical institutions are highly skilled entrepreneurs. Many of the so-called expatriate engineers who are being paid huge sum of money in foreign currencies to build the road and bridges in Nigeria are graduates of vocational and technical colleges, yet, Nigeria is not taking the sector seriously.

Vocational and technical education (VTE) is fundamental to the development and industrialization of nations. Thus, the skills, abilities and competencies that are needed by the nation are embedded in vocational and technical education, which are central to a nation's social and economic emancipation. Consequently, any nation that believes in education as an instrument per excellence for national development has to recognize the significance of vocational and technical education and accord it the desired attention and support that it deserves. It is in this wise notion that the National Policy on Education (2004) places serious emphasis on the development of vocational and technical education for overall development of the nation. However, the much talked about vocational and technical development may not materialize unless the youth develop knowledge, interest, aptitude and manipulative skills required for the construction and production of basic necessities of life.

Okoro observes that one of the aims of vocational and technical education is to increase the employability of school leavers¹. Regrettably however, due to public prejudices against vocational and technical education (VTE), the aim/goal seems not to have been realized, which explains the prevalence of poverty, unemployment, prostitution, drug abuse, hunger, violence, insurgency, armed robbery and other forms of social vices in Nigeria today.

The Concept of Vocational and Technical Education

Vocational and technical education can easily be traceable to the different interpretation attached to them. It is common to find the terms used compositely when they should be used in a restricted sense and vice versa. Sometimes, where the terms are used separately, conjointly or interchangeably, some individuals (including intellectuals) interpret 'vocational' to mean business subjects or studies, and 'technical' to mean technical subjects or studies, or that which has to do with engine or metals. When used in relation to school, 'vocational school' is taken to mean where only business subjects are taught, while 'technical school' is taken to mean where only technical subjects are taught. This goes to support the general notion that 'vocation' means that which has to do with business studies, while 'technical' stand for that which has to do with technical studies.

Vocational and Technical Education used as a twin term are geared toward occupations requiring manipulative and technical skill application. But Aghenta notes a definite distinction between vocational and technical education². Vocational education, he argues, focuses on manipulative skills in non-technical occupations as reflected in field such as agriculture, business, home economics, painting and decoration. Technical education, on the other hand, is more science-oriented with emphasis on the application of scientific and mathematics principle as applied in such fields as engineering, electronics, electrical, mechanical and automobile trades. Technical education involves the use of knowledge of science, materials and energy to solve problems and improve daily lives and our environment while vocational education may be referred to as that aspect of education which leads to acquisition of practical and applied skills. Both vocational and technical education aimed at production.

Vocational education is defined as the activities which aim at acquiring the skills, knowledge and attitudes that are required for employment in particular occupation, cluster of related occupations or a function in a field of economic activity including business, agriculture, hotel, catering, fine and applied art, tourist industries, private and public services, etc. In a nutshell, vocational education is concerned with the skills, understandings, attitudes, knowledge, abilities and competences which a person needs to acquire in order to do or carry out a particular job. It is also a form of education that emphasizes the development of occupational and procedural skills needed as preparation for work. Maduka defined vocational education as “a type of education deliberately designed for the development of skills and knowledge which can be useful to both the individual concerned and the society³.”

Akaninwor defines vocational education as a type of education or training designed for preparing the individual learner to earn a living (to be self-reliant⁴. Osuala opines that any education which is necessary for effective employment in an occupation is vocational⁵. He further explained that vocational education assumes that a choice of occupation has been made and that appropriate training is needed to enable an individual enter or advance in his chosen occupation. Vocational education, as part of a general education programme, essentially constitutes any form of education with the primary purpose of preparing people for useful employment in recognized occupation (Okoro, , Oranu, and Olaitan describes vocational education as that type of education which is concerned with the development of skills, knowledge, and attitudes necessary for success in any occupation⁶.

UNESCO defines vocational education as” education designed to prepare skilled personnel at lower level of qualification for one or a group of occupations, trades or job⁷. Vocational education is usually provided at the upper (senior) secondary, technical school for technical college) includes general education, practical skills, and related theories required by the chosen occupation. The proportion may vary considerably but their emphasis is usually on practical skills training. UNESCO further defines technical education “ as education designed at upper secondary and lower tertiary levels to prepare middle level personnel (technicians, middle management etc.); and at university level to prepare engineers and technologists for higher management positions. Technical education includes general education, scientific and technical studies and related skill training. The components of technical education may vary

considerably depending on the type of personnel to be prepared and the education level. Egwuelu explained that “technical education is the kind of training that concerns a particular aspect of science, occupation or profession which have both theoretical and practical institutions that are given to those who are going to be employed in commerce and industry using tools and machinery for the operation, production, preservation and distribution of goods and services.”⁸

UNESCO defines vocational and technical education together as a comprehensive term referring to the educational process when it involves, in addition to general education, the study of technologies and related science and acquisition of practical skill and knowledge relating to occupation in various sectors of economic and social life⁹. Egwuelu added that technical education differently as a part of vocational education designed to prepare the learner to enter an occupation requiring technical information and an understanding of the laws of science and technology as applied to modern design production. Technical education stresses the engineering aspect of vocational education such as electronic, electrical, mechanical and automobile works⁹. Indeed, it involve the understanding and practical application of the basic principle of mathematics and science.

Vocational and technical education is defined by the international Labour Organization (ILO) and United Nations Educational, Scientific and Cultural Organization (UNESCO 2005) jointly as that which “is used as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related science, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life”.

Vocational and Technical Education is said to train or develop individuals in the fields of vocation and technology so that the country can through the activities of such experts enjoy the good fruit of technology and at the same time contribute her own quota to the overall technological development of the world. Vocational and Technical Education is aimed at making individuals that will be well armed with skills and knowledge to enable them secure employment either by establishing a small-scale outfit, or by being gainfully employed thereby utilizing their skills, abilities and competencies that are cultivated and inculcated by this type of education are of immeasurable importance in the socio-economic life of today’s society..

The Objectives of Vocational and Technical Education

The National Policy on Education (2004) reversed edition defines vocational education as “that form of education which is obtainable at the technical college¹⁰. This is equivalent to senior secondary education but designed to prepare individual to acquire practical skills, basic scientific knowledge and attitude required as craftsmen and technicians at sub-professional level.” The Policy also enumerated the objectives of vocational and technical education in Nigeria as follows:-

- a. To provide trained manpower in applied science, technology and commerce particularly at sub-professional grades;

- b. To provide the technical knowledge and vocational skills necessary for agriculture, industrial, commerce and economic development;
- c. To provide people who can apply specific knowledge to the improvement and solution of environmental problems for the use and convenience of man;
- d. To give an introduction of professional studies in engineering and other technologies;
- e. To give training and impart the skill leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant and
- f. To enable our young men and women to have an intelligent understanding of the increasing complexity of technology.

The above goals are intended to make vocational and technical education more practical, functional and job oriented. If all these goals were to be properly implemented, they could bring about the desired technological development.

Scope of Vocational and Technical Education

The National Policy on Education vividly spelt out the scope or the range of subjects which make up vocational and technical education from the primary school level to that of the tertiary institution. It follows the approved 6-3-3-4 system of education. This means: six years of primary education, three years of junior secondary school education, three years of senior secondary school and four years at the university level. This is why vocational and technical education courses are embedded in every level of education in Nigeria in order to “develop the creative ability of individuals” as well as “promoting the culture of productivity by enabling every individual to discover the creative genius in him and apply it to the performance of specific tasks, thereby increasing the efficiency of his personal and societal efforts”

Structure of Pre-Vocational and Vocational Courses at the JSS and SSS Levels

The following are the structure of pre-vocational and vocational course in Nigerian secondary institutions as contained in the 2004 edition of the National Policy on Education.

JSS Prevocational Electives:

Agriculture
Business studies
Home Economics
Local Crafts
Fine Arts
Music
Introductory Technology
Computer Studies
Food and Nutrition

SSS Vocational Education Electives

Agriculture
Applied Electricity
Bookkeeping and Accounting
Building Construction
Auto Mechanics
Commerce
Electronics
Clothing and Textiles

However, the Curriculum Structure for Senior Secondary School Education in Nigeria has been reviewed. The new structure, which came into effect in September 2011, has been diversified and consists of Core Subjects, Electives and 34 Trades/Entrepreneurship Studies. The electives are categorized into four (4) distinct fields of study namely:

Senior Secondary Education (Science)
Senior Secondary Education (Humanities)
Senior Secondary Education (Technology)
Senior Secondary Education (Business)

Senior Secondary Education (Technology)

Technical Drawing
General Metal Work
Basic Electricity
Electronics
Auto-Mechanics
Building Construction
Wood-Work
Home Management
Food & Nutrition
Clothing and Textiles
Computer Studies

Trade Subjects

Machine Woodworking
Auto Body Repair and Spray-Painting
Auto Mechanical Work
Air Conditioning/Refrigeration
Welding & Fabrication Eng. Craft Practice
Block Laying Bricklaying and Concrete Work
Plumbing and Pipe Fitting
Carpentry and Joinery
Furniture Making
Upholstery
Printing Craft Practice
Auto Electrical Work
Radio, TV and Electrical Work
Date Processing
Mining
Painting and Decorating
Leather Goods Manufacturing and Repair
Dyeing and Bleaching
Photography
Tourism
Electrical Installation and Maintenance Works
Cosmetology

(Source: WAEC 2013)

Senior Secondary Education (Business)

Accounting
Store Management
Office Practice
Insurance
Commerce

Animal Husbandry
Fisheries
Catering Craft Practice
Garment Making
Salesmanship
Auto Parts Merchandising
Textile Trade
Stenography
Storekeeping
Bookkeeping
Marketing
GSM Phone Maintenance & Repair

The Image of Vocational and Technical Education in Nigeria

Vocational and technical education has been accorded very low image in the country. It has been regarded as education specifically meant for those who could not meet the rigours of academics in the classroom, that is, the dropouts. Every Nigerian wants to live a life that is adorned by individuals in the society. According to Olaitan vocational education in Nigeria has been taken to mean education for the mentally retarded, physical handicapped and socially maladjusted students¹¹. In some instances, vocational and technical education has been referred to as education which can easily be acquired by under achievers, those with low intelligence and drop outs from the formal school system.

Another misconception has been that vocational and technical education does not require much academic work which gives the impression that its programmes are exclusively meant for the handicapped and those who are unable to continue with normal academic programme of the school system. Olaitan further observed that vocational education has the potential role of transforming the nation economically and technology¹². However, vocational education's ability to meet this challenging potential is frustrated by the public lack of awareness of the true value of vocational and technical education to the nation.

Importance of Vocational and Technical Education to Nigerian Economy

In Nigeria people go to school with the belief that education will enable them participate in the society. But from the look of things, full participation in Nigerian society requires vocational and technical education at all levels of our educational system, which will recognise the different skills and abilities and give an equal opportunity to all children to prepare for work. The importance of vocational and technical education in transforming Nigerian economy cannot be over-emphasized. Some of it's importance are enumerated as follows:

- a. Vocational and technical education help to solve the problem of unemployment and reduces the number of people who depend on government for job. When the youths and adults are trained vocationally or technically, it would enable them to be self-reliant in different areas such as electrical, plumbing, automobile, vulcanizing, computer engineering, GSM repairs, cloth weaving and so on.
- b. Vocational and technical education is always serving as a motivating force in individuals to work for the nation because it stimulates technological and industrial development through the production of competent and honest workers who are capable of utilizing the abundant natural and human resources available in a country for economy and industrial growth and development.
- c. It helps to bring about rapid economic development. The survival of individuals will ensure the survival of a country as a nation. To continually meet the needs of the present generation means there must be continued economic growth. The commitment of the Federal Government to place Nigeria amongst the top 2020 economics in the world by the year 2020 can only be realised when the vocational and technical education among others is harnessed to empower Nigerians.
- d. Through vocational and technical education, local technology can be developed by indigenous technicians and technologies. It should be emphasized here that every society

has its peculiar problems. Therefore, it will take the ingenuity of local artisans, craftsmen, technicians and technologies to design and fabricate tools, equipment and simple or complex machines to solve local problems. This eventually will save the nation billions of Naira or Dollars in foreign currency that would have been used in importing machines, most of which break down shortly on arrival in the country because they were not designed for our peculiar environment.

- e. Vocational and technical education is not left out in agriculture. It is needed to direct those in the sector towards making the farmer an intelligent user of our natural resources.
- f. Vocational and technical education is needed in every aspect of our national life. The problem of juvenile delinquency and crime can be reduced if the youths are given the necessary vocational training that will keep them busy.
- g. Vocational and technical education is also needed to prevent waste of human resources. So far Nigeria has given very little attention to conservation of human resources. It is obvious that waste of labour by improper employment can be largely avoided through vocational and technical training. Such training is the most potent remedy for unemployment.

Challenges of Vocational and Technical Education in Nigeria

There are many challenges facing the effective programme of Vocational and Technical education in the country. They are as follows:

- a. **Poor Funding:** Vocational and technical education is very expensive as it is capital equipment based. Even though all the tiers of government in Nigeria are interested in funding the course, such government have approved lean resources to implement it. That is why there is inadequate flow of finance to purchase teaching and learning materials for training students right from the secondary level to that of tertiary institutions. Practical courses that are supposed to expose students to real practical training in order to match the theory learnt in the classrooms have become a mirage.
- b. **Lack of economic self-reliance awareness:** Many youths and adults do not know that vocational and technical education is the only branch of education that can provide gainful and immediate employments to graduates, and that liberal arts education can only make graduates to be job seekers. This is due to erroneous belief that the course is offered to the never-do-well members of the society and it has greatly affected the interest of students in both secondary and tertiary schools towards vocational and technical education.
- c. **Inadequate workshops/laboratories for training:** Laboratories/workshops, which house the tools, machines, and equipment for the training of students, are hardly available and the available ones are obsolete. This is why many vocational and technical education teachers resort to theoretical teaching. Where few functioning equipment or machines are available, students are divided into groups. This system is not effective, as many students do not have access to such equipment for practice as much as they want.

- d. **Parental Influence:** Some parents have cultivated an undue influence over their children or wards by counselling them on the type of course(s) to be taken due to their educational status.
- e. **Consumption of foreign products in preference to home made products:** Many Nigerians still prefer the consumption of foreign products to that of Nigeria made ones. This is invariably killing our infant industries by making such industries to close down while employees become jobless.
- f. **Power Supply:** There is problem of power supply in virtually all parts of the country which made it impossible for small and medium scale businesses to function effectively.
- g. **Policy and legislative inadequacies** contribute to poor performance of vocational and technical education in Nigeria. Some policy provisions like amorphous merger of science and technology education; where science over-shadow and stamped most considerations disregarding occupational orientations of vocational and technical education subject area.
- h. **Lack of appropriate trained personnel and rigid curriculum requirement** of vocational and technical education courses and programmes. If these problems would be addressed, our economy will surely be revamped and our vision 20-20-20 will be a reality.
- i. **Lack of Mobilization:** There is also inadequate mass mobilization by way of publicity campaigns to raise awareness in vocational skill acquisition. This lack of mobilization and advocacy campaigns has tended to stunt the growth of vocational training education.

Conclusion

The transformation agenda of Federal Government of Nigeria which includes National Economic Empowerment and Development Strategy (NEEDS), Millennium Development Goals(MDGs) vision 20-20-20 remains the ‘hottest’ government policies in the drive to revitalize the nation’s economy but any attempt to ignore the development of vocational and technical education (VTE) may be the country’s greatest disadvantages.

Vocational and technical education (VTE) is the most viable and reliable instrument for economy transformation. This is why vocational and technical education is placing emphasis on the development of occupational skills needed as preparation for work in order to earn a useful and lawful living through gainful employment. It also involves the application of the brain and manipulation with the hands in order to give an individual the “best assurance in a creative activity”.

Vocational and technical education is also a form of education that promotes and encourages the dignity of labour and related competences. This is why the clamour for the re-orientation of our educational system in Nigeria with skills, attitude and knowledge has been hinged upon vocational and technical education in order that the teaming youths and adults could achieve self-employment.

For any country to utilise her population effectively for gainful employment, vocational and technical education could reduce the drop-out rate by providing training avenues or opportunity to youths and adults who are not satisfied with the types of education that are not suitable to the modern period. Therefore, up-to-date vocational and technical programmes would take into consideration the manpower needs of local, state and federal governments in both goods-

producing and service-producing occupations. It will also take into account the increasing demand for women in the workforce. And as such, it would create a kind of mechanism for meeting the various types of manpower needs in agricultural, business, technical, home economics, fine and applied arts, and bunch or clusters of occupational interests and capabilities.

Recommendations

For the success and survival of vocational and technical education as a viable tool to economic development, the following recommendations are offered:

- a. Government should increase the budgetary allocation to vocational and technical education. As we know that government cannot do it alone, corporate organizations, parents and alumni associations should assist in providing some of the equipment needed in the training of vocational and technical students.
- b. Efforts should also be made by the government to see that there is full implementation of the policies concern vocational and technical education. They should make this possible by promulgating laws or sanctioning each state that fails to adopt or implement the policy fully.
- c. Government should encourage interested persons by giving scholarships to students and technical teachers for further studies in vocational and technical courses. Technical Teachers Training Programme (TTTP) should be revived.
- d. Youths should be given the necessary vocational training that will keep them busy in order to reduce crime and juvenile delinquency.
- e. Seminars and Workshops should be organized to enlighten the public about the importance of vocational and technical education.

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