

# **The Role Of Vocational And Technical Education For Improving National Economy For Sustainable Development: Curriculum Issues**

**Masaruf Magaji**

*Dip. Accountancy, Dip. ICT, B. Tech (Architecture) and PGDE*  
*Department of Technical Education, School of Vocational and Technical Education,*  
*College of Education Azare, Bauchi state*

---

**Abstract:** *This paper focuses on the role of vocational and technical education for improving national economy for sustainable development and the curriculum issues. Curriculum is based on the needs of the labour market and that government responds to the needs of Vocational and Technical Education through sufficient funding and provision of adequate facilities, equipment and resources. Recommendations were given for further improvement.*

**Keywords:** *Vocational and Technical Education, Economy, Sustainable Development, and Curriculum*

---

## **I. Introduction**

The worldwide constant innovative changes have shown that the future is unpredictable especially as it concerns education, technology, Skills and competencies which were considered the bed rock of economic, social and political mobility and growth. In line with this view, Romer, (1990) stated that countries whose populations have high levels of education are fertile soil for information based technology. Topel, (1998), Krueger and Lindahl, (1999) also stated that increase in a country's overall level of educational attainment have caused corresponding increases in their overall rate of economic growth. Nigerian systems of education at all levels have witnessed dramatic changes in terms of purpose, organization, structure and changes in nomenclature of certificates awarded. For instance, 1970's to early 1980s witnessed the 6-5-4 system of education; late 1980s to 2005 witnessed a restructuring of the education system on a 6-3-3-4 system while 2008 witnessed a new reform of 9-3-4 system of education. The various reforms in education are reflected in the National Policy on Education (NPE) document.

Vocational technical education is defined by different authors in different ways. Okoro, (1999) defined vocational education as all those experiences whereby an individual learns to carry on successfully any useful occupation. These experiences may be organized and institutionalized or unorganized and haphazard. Simply put, vocational education may be looked at as a series of controlled and organized experiences arranged to prepare a person for socially useful employment. The statement explains that all education is vocational in so that the individual may serve happily and far as it prepares for satisfactory living.

In the views of Thompson, (2002) vocational education aims at the development of human abilities in terms of knowledge, skills and understanding so efficiently in carrying on the activities in the vocational pursuits of his choice. Winer, (2000) in his contribution opined that vocational education is designed to develop skills, abilities, understanding attitudes, work habits and appreciation encompassing knowledge and information needed by workers to enter and make progress in employment on a useful and productive basis. It is an integral part of the total education programme and contributes towards the development of good citizens by developing their physical, social civic, cultural and economic competencies.

For vocational education to be self-reliant and productive, it needs not be operated in a vacuum. It has to be hooked unto factors that will help learners and all stakeholders in vocational technical education to be practical and not only theoretical in their approach to making vocational technical education meaningful and life-long. These factors according to Ezekiel and Usoroh, (2009) are:

- Appreciation of dignity to work;
- Utility and culture in vocational education;

- Democracy in vocational education;
- Plights of school dropouts;
- Economics of vocational education;
- Needs of youths and adults;
- Needs of the society; and
- Basic rights of the citizenry

Vocational technical education can also be defined as an educational training which comprehends knowledge, skills, competencies, structural activities, abilities, capabilities and all other structural experiences acquired through formal, on-the-job or off-the job which is capable of enhancing recipients opportunity for securing jobs in various sector of the economy or even enabling the person to be self-dependent by being a job creator. Federal Republic of Nigeria, (2004) preached that vocational technical education is an 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 relative to occupations in various sectors of economic and social life. Manfred and Jennifer, (2004) advocated that vocational technical education comprises all more or less organized or structured activities that aim at providing people with the knowledge, skills and competencies necessary to perform a job or a set of jobs whether or not they lead to a formal qualification. These definitions show that the relationship between VTE and employments is undeniable.

### **The Appearances of Vocational and Technical Education in Nigeria**

As technological developments magnet the world more closely together, vocational preparedness becomes increasingly significant. JeanClaude, (2003) stated that there is ample evidence that better qualifications and skills protect individuals from unemployment while macro-economic perspectives show that higher skill level work force go hand in hand with better overall performances and also have positive impact on social capital. It is in line with this that Lyons, Randhawa and Paulson, (1999) stated that “muddling things in education industry” will no longer work in an era of international cartels. Prior to the present dispensation, Nigerians have historically considered VTE as an education programme meant for low level, low brilliant and less privileged or second class citizens (Okoro, 1993, and Eze and Okorafor, (2012). The major educational reforms according to Daniel, (2001) have, however, been on vocationalisation. It is in line with this, that different countries have come up with different framework towards repositioning their VTE programmes. Michael, (2002) outlined some of efforts of European Union member states in reforming and repositioning VTE in their countries. According to Michael, (2002) the French National Assembly approved the law on social modernization which contains important measures concerning vocational education and the right to employment. The French Minister for Vocational Education officially launched the “craft high school” programme, which is aimed at reinforcing the synergy between different vocationally oriented education pathways, particularly the vocational and technological ones.

Nigeria therefore has joined her world counterparts in restoring and repositioning VTE programme geared towards ensuring a national system of vocational education. A system that ensures that, young people see vocational education as challenging and worthwhile. To achieve the objective of restoring of repositioning VTE in Nigeria, the Federal Government according to Olakunri, (2006) came up with the strategy of using the Education Trust Fund (ETF) which was set up by law in 1993 to fund and upgrade the quality of VTE in Nigeria. The federal government recently mapped out a three-year action plan to revamp TVE through ETF. The sum of N5 billion annual allocations (Olakunri, 2006) was mapped out for three-year action plan as follows:

- a. 2005 - N1.5 billion
- b. 2006 - N 2.0 billion
- c. 2007 - N2.5 billion

### **Objectives of Technical and Vocational Education in Nigeria**

The objectives of technical and vocational as costive in the National Policy on Education (2013) shall be.

- To provide trained manpower in the applied science and technology and business particularly at craft, advanced craft and technical level.

- To provide the technical knowledge and vocational skills necessary for agriculture, commercial and economic development.
- To give training and impart the necessary skills to individual who shall be self-reliant economically.

### **The Place of Vocational and Technical Education for Economic growth and Sustainable Development.**

Nuru, (2007) stated that changes in a country's economy is required to prepare young people for the jobs of the future and technical and vocational education have important roles to play in this process. Vocational and Technical education has been an integral part of national economy development. According to van Ark, (1992) the Dutch school system is said to pay attention to "high standards in mathematics and the provision of technical education at ages 14-16 for a third of all pupils, and widespread vocational education at 16 +. Unfortunately, Nigeria does not seem to give vocational and technical education the attention they deserve and this appears to be one of the reasons for rising unemployment and poverty in the society. Ajayi, Arogundade, and Ekundayo, (2007) also suggests that the neglect of vocational and technical education in the area of adequate personnel, financial support and facilities to encourage vocational and technical education are robbing the nation of the contribution their graduates would make in the economy. Furthermore, Asogwa and Diogu, (2007) maintained that there is an urgent need for the people's attention to be redirected towards self-reliant and sustainable means of livelihood which vocational and technical education provides.

Youth unemployment appears to be rising-up to the sky because many of them lack "employability" skills that are often acquired from vocational and technical schools. As Edukugho, (2004) noted, youth unemployment rose to 4.3% in 1985 to 5.3% in 1986, to 7.0% in 1987 and jumped to 60% in 1997. The report shows that in 2003 primary school accounted for 14.7% unemployment, secondary school 53.6%, and tertiary schools constituted 12.4%. The nation's poverty level was put at 70% and more than 91 million Nigerians are said to live on less than one dollar per day. Most analysts agree that today's employers demand more skills than they did in the past (Yang, 2008). Oranu, (2010) reported the several factors that have contributed to the rising demand for skills in the labor market to include: technological and organizational change, trade, deregulation of key industries, and the decline of unions. Bennell, (1996) observes that all countries, especially developing countries, need balanced development through all of the educational sectors in order to make significant progress in terms of national development.

Presently Nigeria is offering education in general subjects, but to achieve development, it must offer a variety of courses for disciplines such as technical, vocational, professional, agricultural, and so on, because the country needs a balanced distribution of manpower for all professions (Alam, 2003, 2007), so that the vast population of Nigeria can contribute to economic growth by participating in different professions.

Vocational and Technical Education (VTE) systems play a crucial role in the social and economic development of a nation. Owing to their dynamic nature, they are continuously subject to the forces driving change in the schools, industry and society. Mechanized farming requires technical skills that could be obtained in technical and vocational schools.

The real tests of success of VTE are the employability of the graduates, personal development, opportunities for further education and career development, public acceptance and image. Ultimately, the effectiveness and responsiveness of a VTE system would be measured by its impact on the social and economic development of the nation.

Promotion of the Nigerian Economy: It promotes the national economy through foreign exchange by exporting our products. The knowledge of technical and vocational education helps in the conversion of local raw materials, this reduces the importation of foreign goods which lessen our import dependency and encourage exportation of our local products.

For instance, Haq and Haq, (1998) observed, unemployment rates in the East Asian economies remained low essentially because the population possessed employable vocational and technical skills. However, the relationship between demand for vocational education and economic development may not be linear. When the economies move away from reliance on its agricultural and manufacturing sectors and in favour of service sector, the demand for VTE may indeed decline. A review of the experience of the East Asian countries led Mundle, (1998) just to conclude the same: enrolments in vocational education in the region has been substantial until a threshold level of gross national product (GNP) per capita (say about \$8000) was reached; thereafter the share of vocational education in senior secondary education seemed to have declined.

### **Vocational and Technical Education and Curriculum Issues**

Vocational Technical Education Curriculum according to Grubb, (1985) has always had to battle against not only the resistance of academic curricula, but also the suspicion that they provide second-class education and tract to some individuals' of lower class. Today, the innovative system of the current time is shifting towards skill acquisition courses, which are capable of making the youths and adults self-dependent.

There is an established positive linkage between economic growth and investment in human capital. The establishment of National Business and Technical Education Board and a resultant coherent national policy for technical education and vocational training is expected to be a key driver of Nigeria's economic growth. Nigeria's global competitiveness depends on ability of our VTE system to adapt and innovate.

The curriculum of a subject with practical content is generally organized into an average of 67% for the theoretical classes and 33% for laboratory. Olunloyo, (2002) noted that one of the issues confronting the design of appropriate curriculum for technical education is preparing students for the shift from the fordist to ICT paradigm in technology practice. However, some problems inherent in curricular include:

- They are based on a foreign model
- There is a basic lack of textbooks and available ones are illustrated with examples from outside the local environment.
- There is usually a shortage of highly competent indigenous teaching and support staff with sufficiently wide practical experience of technology.
- The curricular are adjudged to be too academic and over-loaded with intellectual content in pure science and mathematics at the expense of basic engineering and technology.
- The teaching approach follows the conventional method of transforming knowledge across through the lecturer reading out to students, who would then take down notes. The educational system continues to place considerable value on this method of teaching.

Despite the best intentions of successive Nigerian governments, vocational and technical education programmes are still fraught with problems, including: administrators' misconception of the nature of vocational education, inadequate political will by the government, deficient educational monitoring and evaluation procedures, poor funding, poor incentives for teachers and a rapid rate of technological changes. I will not expand on these problems, but be enough to state that the problems have to varying degrees, affected the advancement of vocational and technical education.

Precisely certain problems have related directly to the curricula of vocational and technical education. These problems include among others: inadequate emphasis on pre-vocational subjects at the primary and junior secondary levels, inadequate facilities, and short fall in recruitment and exodus of teachers, low student morale, poor funding and examination-oriented approaches to curricula implementation.

Teaching pre-vocational subjects in the primary and junior secondary schools should be taken more seriously to raise the interest of students for these vocational programmes. All stakeholders, especially those within the private sector, should provide more funds for the purchase of instructional facilities. The Educational Tax Fund should consider vocational education a priority area for funding. There should be less emphasis on certificates/examinations in implementing the curricula content of the various programmes. Acquisition of practical skills should be stressed on the final outcome.

Ezekwe, (1990) made his contribution towards the promotion of vocational and technical, science equipment utilization and technological, management of materials in Nigeria. In this regard, in collaboration with UNESCO, he hosted the international workshop on the management of science equipment and technology in Africa, in February 1990. The workshop recommended the establishment of an African Network of training institutions in science and technology equipment management and utilization for sustainable development in Nigeria.

Okorie, (2000) stated that many machines for training in the technical colleges may be out of use for a long time until parts of the equipments are ordered from country of manufacture. The Federal Government has already taken a gigantic step in this direction by setting up the Federal Science equipment manufacturing centre at Enugu, Enugu State. The establishment of second one in Minna, Niger State was another attempt made by government toward achieving the objectives of functional technical education for sustainable youth

empowerment in Nigeria. The centres were expected to manufacture over 200 items for science equipment and technology tools to meet all level of educational system from primary to tertiary institutions.

Abdullahi, (1990) further stated that as an on-going project, the federal science equipment centre, Ijanikin, Lagos and those set up by the states and some universities organize workshops on repairs, utilization, maintenance and improvisation of technical equipment for sustainable youth empowerment in Nigeria.

### **Implementation of Vocational and Technical Education Curriculum**

According to Nwachukwu, (2001) stated that certain factors are crucial for functional vocational and technical education curriculum implementation. The factors are as follows:

- ✓ The vocational and technical education curriculum must be humanized.  
The curriculum for vocational and technical education in Nigeria should not be something foreign to technical college students, and should not be chosen just because it is traditional. The vocational and technical education curriculum must speak of today, of real-life problems facing our communities and society and the process of living in its entire ramification. Nwachukwu explained that humanizing today's vocational and technical Education means making the curriculum responsive to the present situation of Nigeria. Humanizing vocational and technical education means training the youths for sustainable and self-reliant empowerment in Nigeria. Materials chosen in this vocational and technical education curriculum to be taught and utilized for learning should be derived from the need and environmental requirement of Nigeria for sustainable youth empowerment in the nation.
- ✓ Trainees must be ready to receive what is taught.  
The ability of the trainees to learn depends on that student's readiness to learn. In any teaching-learning situation, there is a period when effective learning takes place. This learning period varies among individuals even when they are exposed to the same learning environment. Many factors are known to influence the readiness to learn among students. The factors include age, family background, nutritional status, fatigue or lack of it. Others are belief and attitudes of learners. It therefore means that the art of good teaching lies in the ability of the teacher to find out those learning related problems, which students exhibit during classroom and workshop instruction, and utilizing the knowledge about it to structure the curriculum of vocational and technical education in Nigeria.
- ✓ The learning experiences must provide the development of the ability to think.  
In vocational and technical education, thinking is the process of realizing and finding solutions to problems. It has been defined as all those cognitive actions taken by an individual in advance of an action as a preliminary to deciding among alternative thinking. According to Nwachukwu, (2001), it characterized the whole process of solving a problem, which is very essential for handling problem-solving situation or for carrying out tasks in vocational and technical education situations.
- ✓ The vocational and technical education curriculum must be based on and contain experiences intrinsic to the life of the learner.  
There are stages in vocational and technical education and when students pass through the pre-vocational to the vocational concepts and characteristics, they develop new ideas, shape their values and can by so doing, solve their individual problems. These students can constantly undergo the process of exploring and testing out ways of getting to where they want to go. In this manner, these students will learn, and this learning process requires direct thinking. These students can in this process discover new materials relevant to the solution of their problems. Such materials must be intrinsic to them because they discovered the materials themselves and found it useful for solving their immediate problems. These intrinsic materials will remain internalized in the students because they have fixed the knowledge into the repertoire of their abilities and understanding.

## **II. Conclusion**

The aims of vocational and technical education in Nigeria will remain unachievable if the challenges posed by the contemporary needs are not met. The nation must therefore look ahead and project evolving strategies for a better implementation of the curriculum that can actualize sustainable development for National Economy.

### **III. Recommendations**

The following were suggestions for improvement on the implementation of vocational and technical education curriculum for sustainable development for National Economy.

- ✓ Government should organized the team of inspectors from Ministry of education or committee that will advise government on better ways of monitoring, controlling and implementing the affairs of vocational and technical education as it relates to our immediate situation in Nigeria.
- ✓ The government should train qualified vocational and technical education teachers and experts to operate the complex machines and equipment during the implementation of technical college programme and use such skills acquired by teachers to educate and empower the youths of Nigeria.
- ✓ The industries, non-governmental agencies and private enterprises should provide laboratories, equipment, workshops, facilities and machines in the existing technical colleges as stated in the curriculum for effective implementation of the technical college programme.
- ✓ Government should post minimum of five vocational and technical teachers to the technical colleges to handle the different areas, and the principals should be in the field of technical education field.
- ✓ Scholarship and research grants/loans should be given to individuals in the field of vocational and technical education to assist the technical education programme to grow academically and also to meet the target of sustainable youth empowerment and self-reliant individuals.
- ✓ Government should provide fund to enable the principals and teachers install the machines and equipment not installed in the different technical colleges and also to provide other facilities for effective implementation of the vocational and technical education curriculum.
- ✓ Accreditation should be carried out on regular basis in technical colleges to check the dwindling situation in our technical colleges.

### **References**

- [1]. Ajayi, I.A, Arogundade, B.B and Ekundayo, H.T (2007) Assessing the Realities and Challenges of Technical Education in Imo state Secondary School Education System; in Nigerian Journal of educational Administration and Planning. Volume (7) March
- [2]. Asogwa O and Diogwu, G.O (2007) Vocational and Textile Education in Nigeria in the 21st century, Journal of The Nigerian Academic Forum, Vol. 12 (2), Awka, National Association of the Academics.
- [3]. Daniel, N.S. (2001). African Education in the Twenty-First Century: The Challenge for Change. Journal of International Cooperation in Education 14 (1), 21-38.
- [4]. Edukugho, E. (2004) "UNESCO tackles decline in technical, vocational education;" The Vanguard, Nov 25,
- [5]. Eze, T. I. & Okorafor, O A. (2012). Trends in technical, vocational education and training for improving the Nigerian workforce. Ebonyi Vocational and Technology Education Journal. 1(1), 107-115.
- [6]. Ezekiel, O.A. and E.B. Usoroh, 2009. Recreating Vocational Education for Self-reliance and Productivity. J. Qualitative Education, 5(3): 89-94.
- [7]. Federal Republic of Nigeria (2013). National policy in Education (4th ed.) Lagos. NERDC Press
- [8]. Grubb, N. (1985). The Convergence of Education Systems and the Role of Vocationalization. Comparative Education Review, 29(4), 30-46.
- [9]. Hag, Mahbub and Haq, Khadija (1998) Human Development in South Asia 1998. Karachi: Oxford University Press.
- [10]. Jean C. B. (2003). Education and Vocational Training, a Mainstream for All Groups across All Member States. A paper presented at the conference Impulses for European Employment Policy, impulses for Germany BMWA.
- [11]. Krueger, B & Michael, L. (1990). Education for Growth in Sweden and the World. NBGR working paper 7190. Cambridge, M.A: National Bureau of Education Research.
- [12]. Manfred, T and Jennifer, W. (2004). Vocational Education and Training key to the Future. Greece: Colibri Ltd.
- [13]. Michael, A. (2002). Developments in the Field of Vocational Education and Training (VET) System of Brussels: Member States. European Center for the Development of Vocational Training.
- [14]. Nuru, A. (2007) The relevance of National Vocational Education Qualifications (NVQs) in TVE in Nigeria. unpublished conference paper.
- [15]. Okoro, O.M., 1999. Principles and Methods of Vocational and teachers education. Nsukka: University Trust Publishers.
- [16]. Olakunri, O. (2006, February 17:34). Revamping Technical Vocational Education. Daily Champion.
- [17]. Olunloyo, V. O. S. (2002). The challenges of Globalization for the Design of Technical Curriculum in Developing Countries. First Edition, University of Lagos Press, 217 – 237.

- [18]. Oranu, R.N. (2010) Vocational and technical education in Nigeria; <http://www.ibe.unesco.org/curriculum/AfricaPdf/lago2ora.pdf>, retrived August, 2010
- [19]. Romer, P.M. (1990). Indigenous Technological Change. *Journal of Political Economy*, 98(4), 48-60.
- [20]. Thompson, J.F., 2002. *Foundation of Vocational Education*. New York: Prentice-Hall Inc.
- [21]. Topel, R.H. (1998). Labour Markets and Economic Growth. In O. Ashefeller & D. Card (eds), *Handbook of Labour Economics*. Amaterdam, the Netherlands: Elsvier Science BV.
- [22]. Van Ark, Bart (1992). "Vocational education and productivity in the Netherlands and Britain." *National Institute Economic Review*
- [23]. Winer, R.K., 2000. Rung by up the health career ladder. *American Vocational J.*, 48(7): 18-27.
- [24]. Yang, Jin (2008) General or Vocational? The Tough Choice in the Chinese Education Policy, *International journal of Educational Development* 18 (4) (July): 289-304.