

# JONATT



**THE JOURNAL OF NIGERIAN  
ASSOCIATION OF TEACHERS  
OF TECHNOLOGY (NATT)**

**Vol. 9 No. 2, 2013**

**ISSN 1118-4558**

## TECHNICAL VOCATIONAL EDUCATION AND TRAINING FOR NIGERIA: HISTORY AND NATIONAL INDUSTRIALIZATION FOR SUSTAINABLE DEVELOPMENT IN THE 21<sup>ST</sup> CENTURY

Dominic A. Akpan, Ph.D

*Department of History/Int. Studies*

*University of Uyo*

&

Patrick S. Williams Ph.D

*Department of Vocational Education*

*University of Uyo*

### Abstract

*The current development paradigm in the international economy is anchored on what nations can exchange through the use of skill whether from science and technology or knowledge economy but must be advantageous for their development. Basically, Nigeria has not achieved much because of her false start on technical vocational education. This false state had made Nigeria to depend heavily on the products of the advanced economies for her existence and by extension create inert problems for herself-youths unemployment and dependence on white collar jobs that are not readily available. The paper expresses that it is not too late for a start – that priority be given to the establishment of technical colleges, trade centres, skill acquisition centres at least two in each local government area; encourage young engineers and bring creative and talented youths together for adequate training; that adequate funding of education is a panacea for sustainable development, Nigeria should adopt and implement the UNESCO and OAU (AU) Lagos plan of Action of 1980. Educational policy reversals and unnecessary politicking on education be played down if we must progress and be part of the global trend – globalization.*

### Introduction

The challenge of the current global market economy is predicated on the utilization of science and technology as a tool for the production of goods and services for internal and international markets. Production of tangible goods depend on the acquisition of skills and the transfer of such skills to develop market economy that would be beneficial for internal growth through provision of employment to youths for external use through foreign exchange and reduce dependence on foreign nations. However, since the present century is built on the past, how was Nigeria preparing to meet the future challenges? Is it possible that Nigeria would be part of international project to meet the new demand of the new world order? Or now that Nigeria is making efforts to belong to the league of 20 most developed economies by 2020, would that be achieved at the present scenario? All these are begging for answers.

At present, Nigeria is on a fast lane for development, but for now she is saddled with youth restiveness, insecurity challenges – terrorism, kidnapping, militancy etc. This is so because Nigerian youths are unemployed and restless owing to lack of vocational and technical skills. Acquisition of vocational and technical skills involve the possession of vocational and technical abilities needed for the survival of individuals in these capitalist societies. Development and transferring of vocational and technical skills in youths have been the nucleus and focus of vocational technical education. How has Nigeria been preparing or is still preparing for vocational and technical skills to be acquired in 21<sup>st</sup> century if she wants to be relevant in this new market economy – globalization. Some of the questions earlier asked would be answered as discussion progresses.

The new market economy expects everyone and nations to be involved. The nation produces goods through the aid of individuals who acquired the needed skills for the production. In other words, employment of individuals is necessary for the economy to achieve maximum utilization of the profits either internally developed or imported.

The basic problem is that Nigeria had a false start in the preparation of vocational and technical manpower need of the country (Dumont, 1988:195). Or can one rightly say that Nigeria's vocational and technical manpower need was poorly routed? The colonial masters who ushered in Western education did not do much to encourage technical and vocational education; rather, it was the kind of education that would assist them to run the affairs of the colonial empire – the type popularly referred to as the euro-centric education.

The paper is divided into four sections; section one – introduction, explanation of few concepts; section two: history and attempts at introduction of technical vocational education, section three levels of industrialization to 21<sup>st</sup> century, expectations from government, private companies and individuals. Section four; challenges, recommendation and conclusion.

### **Concept of Sustainable Development**

Sustainable development has become a buzz term-meaning different things to different people. It has come to mean different things to ecologists, economists, planners and politicians, geographers. However, be that as it may, it has become within a short time a term to which every one can subscribe but also attached a different meaning. The concept of sustainable development like that of globalization, is hotly contested, with views ranging from those who reject the term as meaningless to others who see it or express it as the current development paradigm.

For some, sustainable development implies commitment to sustainability with a consequent reduction in economic growth while for others the concept is seen as integral to a new era of economic growth (O'Brien and Williams, 2010). While some analysts question the utility of a concept subject to multiple meanings, it should be pointed out that contestation over its meaning is not unique to sustainable development.

The concept-sustainable development was brought and used locally and internationally in 1987 by the world commission on environment and development (the Bruthland commission) calling for development that meets the needs of present generation without compromising the needs of future generations. Jhingan (2005), "sustainable development" means development that should "keep on going". It lays emphasis on the creation of sustainable improvement in the quality of life of

all people through increases in real income per capita, improvement in education, health and general quality, natural environmental resources. In this connection sustainable development should be continuous and permanent. It should be an inelastic kind of development devoid of want and insecurity of both life and property. In another perspective, sustainable development refers to economic growth that does not deplete resources and destroy ecosystem so quickly that the basis of that economy is itself undermined (Goldstein, and Pevehouse, 2008).

### **Concept of Industrialization**

It is a terminology widely used but often not espoused to meet the meaning in contemporary time. Industrialization is associated with high productivity and incomes and has been a hallmark of modernization and national economic power. It shows the structure of employment of men and women and value added in the agriculture, industrial and service sectors (Todaro and Smith, 2009:65).

It is a process which involves large scale mechanized production of consumer and capital goods and services. That is industrialization progresses and the industrializing countries gain more technical and managerial experience. Large-scale industries that use more machinery than labour may then be established. These large-scale capital intensive industries produce capital goods such as automobiles, ships and electronic equipments. In many countries in their early stages of industrialization, they prefer to establish small-scale industries that use more labour than machinery in their production processes. This is typical of the developing countries (Onunka, 1989).

### **History and Development of Vocational – Technical Education**

The foundation of Nigerian education was laid by the early missionaries and the colonial government, but the era of self-determination in education by Nigerians spanned between 1951 – 1970. The 1951 era of education became important since it was the beginning of internal self-government by Nigerians (Fafunwa, 1977:166). According to Fafunwa, "one of the major defects in the Nigerian educational system is the low priority accorded to Technical and Vocational Education. The British colonial education was conceived and promoted as purely literary education – for the civil service. Literary education became a symbol of prestige in Nigeria, and by contrast, technology, agriculture and other practical subjects particularly of the sub-professional level, did not receive wide acceptability or won esteem. It was that any training for qualification outside degrees, especially in technology was unpopular" (Fafunwa, 1977, 166; Ukeje, 1978:97).

Indeed, Indigenous Technical and Vocational Education was in vogue before the Western education in Nigeria. Indigenous system of education taught various skills to Nigerian children – weaving, blacksmithing, carving, fishing, hair plaiting, leather-working, pottery-making, glass and bead-working, dyeing, tinkering, catering, cattle-rearing etc. It was expected that Western education would be built on the existing skill of the people and institutionalized for the growth of this sector. That was not to be, at least when western education began.

In the later part of the 19<sup>th</sup> century some mission schools introduced farming, bricklaying and carpentry as part of the curriculum but these skills were not seriously regarded by the pupils and parents as integral part of Western education and the practice virtually died out before the turn of

the 20<sup>th</sup> century, except for the Blaize Memorial Industrial School in Abeokuta, founded by some Nigerians and West Indians and the Hope Waddell Institute in Calabar established by the CMS in 1895.

### **Beginning of Organized Technical Schools in Nigeria**

When the British took over the full responsibility of running the government in Nigeria from 1900, it was necessary to coordinate the various government departments for useful results, thus certain courses were necessary for some departments. In this connection, the establishment of courses in various sphere of government such as the Nigerian Railway, Marine, Public works, etc between 1908 and 1935 marked the beginning of organized technical and vocational education in Nigeria. These were followed by the engineering course at the Yaba Higher College in 1932. Besides, only a selected few could benefit from this type of arrangement. Even at that, the courses were of post-secondary school in nature. This may be translated to mean that, there was no formally organized technical or vocational education at the post primary or secondary school level (Onibonoje, 1975:132).

However, as earlier mentioned, technical/vocational education did not command attention in Nigeria education, this is seen even when Ashby Commission was set up to develop and implement various programmes of economic development. The 1946 ten-year education plan that later incorporated a programme of technical education for the supply of the much needed technicians and artisans; and the founding, in 1947, of a Technical Institution at Yaba-the aim of the Yaba college or institute by the founders was that, as time went on, it would develop into a university (Ukeje, 1978:97). Thus, by 1952 there were three technical institutes, seven trade centres, and eighteen handicraft centres. By 1960 technical institutes had increased to six, trade centres to twelve and several handicraft centres which Eastern Region had the highest number (Ukeje, 1978; 98).

Indeed, trade centres offered training in some ten trades as follows: motor mechanic, sheet metal work, electricity, painting and decorating, blacksmithing, welding, general mechanics, woodwork, bricklaying, cabinet making and carpentry. The beneficiary of these programmes was selected from primary school leavers through a competitive entrance examination. The courses vary from two to five years.

On the other hand, the technical institutes, the first which was founded at the site of old Yaba Higher College in 1947, were until 1960 the highest institutions for technical education in Nigeria. The Yaba Technical Institute was a combination of secondary and post-secondary courses and offered three types of programmes. The programmes were, a two-year course for the preparation of manual training instructors for the handicraft centres; a four-year pre-professional junior technical programme for pupils who have completed the full primary education; a senior technical programme which admits students who have completed either a regular secondary education or the junior technical course. The course prepared candidates for sub-professional training in mechanical, electrical, and civil engineering. The students on completion were qualified as engineering assistants (Ukeje, 1978:99).

Handicraft centres were created or designed primarily for the purpose of providing young people with an opportunity for the development of mechanical skills that was not common among Nigerian youths. It was considered as part of their general education, not necessarily vocational. However, the centres concentrated primarily on woodwork and metal work. It was an avenue to engage children and prepare them as means to discovering mechanical aptitudes in children.

### **Shaping Industrialization Policy for Nigeria**

The Ashby Commission made far-reaching recommendations on the structure of Nigeria education as an emerging nation. One of the recommendations of the commission was consideration of technical, commercial, agricultural and veterinary education; thus proposed the inclusion of courses in engineering and agriculture in the courses to be offered in 'New' Nigerian Universities. In spite of this there still exists a very low level of development in both technical and vocational education.

In 1969, National Curriculum Conference was one of the turning points in the effort for the inclusion of technical/vocational education in the school curriculum. One of the objectives of the conference was to consider the functions of science and technical education, education for living among others. The National Curriculum Conference Recommendation No. 35 posited the need for science and technical education-technical education should not be restricted to school children alone but provided on a mass basis to adults who have little or no advantage of formal education (Fafunwa, 1977:210 & 239). In spite of this, the issue involving technical/vocational education did not receive much attention. In this connection, Nigeria's feverish attitude to development and the changing scenario in the international system-that of development in science, technology and skill in the production of goods and employment became necessary. Thus in 1983 the country introduced the 6-3 – 3-4 system of education with some policy guides. One of such policies stipulated that:

*The junior secondary school would be prevocational and academic. The curriculum was structured into three. They are the core subjects, prevocational and non-vocational subject. The prevocational subjects are the following; woodwork, metal work, electronics, mechanics, local crafts, home economics and business studies (Ugbe, N.; Ofoedu, A.; Dureke, C. 1985;fafunwa, 1977).*

The policy stipulates that students who school at the junior high school stage could go on to an apprenticeship system or some other scheme for out of school vocational training (Fafunwa, 2010). Those who were moving to senior high school offered nine subjects including three core subjects. The subjects included English language, Biology, Physics, Chemistry, additional Mathematics, Commerce, Economics, Book-keeping, Typewriting, Shorthand, History, Literature in English, Geography, Agriculture Science, Home economics, Bible knowledge, Islamic studies, Arabic studies, metal work, Electronics, technical drawing, woodwork, auto mechanic, music, art, French, Physical education, Health science, government etc (Fafunwa, 2010).

The new education system required the expansion of trade centres and other vocational centres to absorb those junior secondary school leavers who cannot proceed to senior secondary school. What should be noted is that;

1. The new educational system was to provide vocationally talented youths a sense of belonging and as prevention against juvenile and adult delinquency and crime.
2. To bridge the gap of unemployment as found among graduates of the universities, colleges of technology and polytechnics, who find it difficult to secure jobs as they were not trained to be self reliant.
3. The 6-3-3-4 was to make the old educational system more efficient and its products more numerous with distinct bias towards the vocational and technical education. This did not mean Nigeria had no need for technicians and scientists. However, the kind of technician envisaged was that which can only pay back by tirelessly using his skills and intellect for the promotion of society's welfare. De-emphasize the theory but master the practical. Carpentry, brick masonry, motor and aviation mechanics, plumbing, painting, electronics, domestic sciences, cosmetology-can prepare individuals for an independent and productive life (Ugbede, N.; Opoedu, A.; Dureke, C. 1985; Fafunwa, 2010).

#### **Level of Nigeria's Industrialization in the 21<sup>st</sup> Century**

Nigeria's industrialization pendulum is tilting towards the negative positive. This is translated through the level of manufacturing whether of large scale or small scale industries. By illustration, between 1960 and 1970 manufacturing sector contribution to the economy was between 4.4 percent; rose to 11.4% in 1981. This expansion was as a result of tariff manipulations which encouraged the expansion of assembly activities which was highly import dependence, which kept away indigenous value added or to employment and in the long run reduced industrial growth (Omoragbon and Okeke, 2010; Oduwale, 2010). Today, it has declined to as low as 4%.

#### **The Expected Role of Technical Education on Nigeria's Industrialization Process**

It was expected that technical/vocational education would have laid the foundation for industrial take off if the policies were strictly implemented. This is so because even in the era of industrial revolution in Europe most inventors did not have formal education. For instance, Michael Faraday, the man who discovered electricity did not discover it through a formal school setting. Most inventions were individually made possible (Buah, 1969:29). Besides, the greatness of Asian tigers today came through skill acquisition translated into small and medium scale industries. Secondly, it was also expected that the skill acquired by the products of these technical and vocational schools train apprentice that would be self employed. By that, pressure on the formal sector for jobs would have been reduced minimally. However, the large pool of employable individuals in the informal sector of Nigeria economy would be an added advantage to the economy because employment has a linkage effect on the growth of economies. This is an area that would have set up Nigeria to belong to the group 2020 economies in the 21<sup>st</sup> Century.

### Challenges of Nigeria Educational Sector

Some of the challenges of educational is its poor level of funding. Although, the UN Educational, Scientific and Cultural Organization, UNESCO, recommends that countries allocate 26% of their budget to education, Nigeria has consistently allocated less than 15% since 1999. Even that is better than the previous record where the country only commits 9% of its annual budget to education. While Nigeria finds it difficult to spend on education, Ghana commits between 28% and 40% of its annual budget on education.

Beyond budgeting, the education sector has also suffered considerably in the area of policy. In 1983, the country introduced the 6-3 – 3-4 system of education to promote technical education, especially for students who may opt for it in the last three years of their secondary education... Though the Ministry of Education insists that the country still runs the system, with the introduction of the Universal Basic Education requirement (Bilewomo, 2010; Fafunwa, 2010).

But despite the shift in systems, the country has so far failed to attain the overall objectives of neither the 6-3 – 3-4 system nor the UBE. In September 2011 for instance the Federal Ministry of Education practically made a volte-face with the reintroduction of technical and vocational subjects into the secondary school curriculum (Fafunwa, 2010). The federal and state governments have not committed enough energy to establishing vocational and technical school as much as they do to grammar schools.

### Recent Efforts by Government at Encouraging Technical/Vocational Education

1. The Industrial Training Fund (ITF) has been assisting in the training of Nigerian youths to acquisitional skills for self development. For instance, in 2012 it has trained over 140,000 Nigerians in various technical skills. The fund is also planning to set up industrial training centres in the 36 states and Federal Capital Territory to train Nigerians in the various fields of technical manpower (Olatunji, 2012).
2. The establishment of skill acquisition centres by MDGs, NGOs and private individuals are in the right direction. Millennium development goals in conjunction with state and local governments are assisting school leavers to acquire skills and be self-employed.
3. National Directorate for Employment: The Directorates recruits school leavers and later send them either to private individuals depending on the nature of trade an individual wishes to specialize. For instance, if the candidate wishes to specialize in plumbing, he would be sent to learn from the plumber that is known to have excellence in that aspect. This is so and functional because the NDE does not have a workshop of its own.
4. The National Technical Examination Board (NABTEB) was inaugurated to cater for the needs of candidates from Technical Colleges and Trade Centres.

### Recommendations

There are so much discussed issues on technological development on Nigeria. The following recommendations are set.

1. The government should be able to establish at least two technical colleges and two trade centres in each local government areas of Nigeria.



2. The Young Engineers Clubs where children with talents be assembled and encouraged to invent, produce and patent it.
3. Technical teachers be motivated in area such as – training and retraining with financial rewards attached; regular promotion and free accommodation in schools.

### Conclusion

In conclusion, the paper has attempted to address the issue of false start on technical and vocational education which was placed on us by the colonial masters. On achieving self-government, little efforts were injected into improving on the colonial position thus stagnating our progress and slowing down our technological development and forcing us to depend on advanced economies. Today, the reality is on us. Nearly everyone that leaves school is eyeing white collar jobs that are not readily available. To decrease the unemployment suffocation and plan for the future, there is need to adopt the educational policies that would prepare the young Nigerians for self reliance after school. Inventors outside the formal school setting by adopted be federal government, giving him/her adequate environment to excel, after all, most of the inventions of this age took place on non-formal settings. Proper funding of education is the beginning of our progress towards world economic integration. Nigeria cannot afford to be sidelined in the comity of nations – in areas of development and contribution to world economy.

### References

- Buah, F. K. (1969). *World History since 1950*, London: Macmillan Education Limited.
- Domont, R. (1988). *False Start in Africa*, London: Earthscan Publication Ltd.
- Fafunwa, A. B. (1977), *History of Education in Nigeria*; London George Allen and Unwin.
- Fafunwa, A. B. (2010), "Lack of Political Will Destroys Education" *Tell Magazine*, October 4, P. 86
- Goldstein S. J. and Pevehouse, J. C. (2008). *International Relations 8<sup>th</sup> Ed.* New York. Priscilla Mageechon.
- O'Brien, R. and Williams, M. (2010) *Global Political Economy 3<sup>rd</sup> Ed.* London, Palgrave Macmillan.
- Oduwale, F. (2010), *The Moribund Manufacturing Sector*, *Tell Magazine*, October 4. P. 40 – 41)
- Olatunji, S. (2012), *ITF trains 140,000 in vocational skill* *Punch*, Friday, September 21, p. 26
- Omoragbon, O. and Okeke, C. (2010), *Nigeria's Economy since Independence.. The Good and the ugly*, *The Economy Vol. 1 No 19*, October 31 P. 6 – 7.
- Onibonoje, G. O. (1975), *Africa in the Modern World: History Book Three* Ibadan: Onibonoje Press
- Onunka, M. W. (1989). *Economics* Ibadan: Evans brother (Nigeria Publishers) Ltd.
- Todaro, M. P. and Smith, S. C. (2009). *Economic Development*, 16<sup>th</sup> Ed. New York, Addison – Wesley.
- Ugbede, N., Ofoedu, A.: Dureke, C. (1985), "Education: The New 6 -3 – 3-4 system". *Times International*, December 9, P. 6-9.