

TECHNICAL AND VOCATIONAL EDUCATION: EMERGING ECONOMIC ISSUES, CHALLENGES AND A WAY FORWARD.

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Abstract

Technical education, as encapsulate in the Nigerian National Policy on Education, is concerned with qualitative technological human resources development directed towards a national pool of skilled and self reliant craftsmen, technicians and technologists in technical and vocational education fields. In Nigeria, the training of technical personnel has witnessed many emerging economic issues and challenges ranging from policies which have no bearing with our problems, curriculum that has little or no relationship with workplace and social needs, embezzlement of fund meant for education development purposes, lack of teacher motivation, inadequate facilities, inadequate funding, brain drain, poor staff training, bribery and corruption. This paper intends to critically examine some of the issues, challenges and way forward of technical, vocational education and training (TVET) in Nigeria and to suggest ways of improving the teaching and learning of technical and vocational education with greater interest and enthusiasm.

Key words: Vocational education, emerging issues, technical education, technical personnel

Introduction

Technical and vocational education is used as a comprehensive term in the educational process involving, in addition to general education, the study of technologies and related sciences and acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (FGN, 2004). Okoro (1993) quoted in Agapu and Andural (2007) and Momoh (2012) defines vocational education as a form of education whose primary purpose is to prepare persons for employment in recognized occupation. In the same vein he defines technical education as a post secondary vocational training programme which the major purpose is the production of technicians.

The terms technical education and vocational education are often used interchangeably but, they are separate and distinct terms. For the purpose of this paper there is the need to do some clarifications. Vocational education refers to skill based programmes which are designed for skill acquisition at lower level of education. Vocational education programmes focus on specific vocations for entry into defined workplace. Technical education, in the other hand is not designed for any particular vocation but provides general technical knowledge. This type of education prepares people for entry into recognized occupation at a higher level but usually lower than the first degree. In fact technical and vocational education is usually a merger of

technical education and vocational education i.e the inclusion of basic technical and scientific knowledge with the skill based vocational programme.

According to Uwaifo (2009), technical education is the training of technically oriented personnel who are to be the initiators, facilitators and implementers of technologically development of a nation. In his opinion, this training of its citizens on the need to be technologically literate would eventually lead to self reliance and sustainability. He observed that technical education more than any other profession has direct impact on the development of the country.

Again, technical education contributes so much ranging from electrical and electronics technology, metal work technology, mechanical/automobile technology, building technology, woodwork technology etc, technical education is practical oriented education which makes it unique in its content and approach thereby demanding special attention.

Unfortunately, despite all the glaring contributions of technical and vocational education in our nation, Nigeria is yet to accord this type of education the attention it deserves. This is one of the major reasons for the rising unemployment, poverty and unabated crimes in the society today. This paper is an attempt to explore some emerging economic issues, challenges and the way forward for vocational and technical education in Nigeria.

Issues

Vocational/technical education is designed to offer people the opportunity of improving themselves in their general proficiency, especially in relation to their present or future occupation. Nuru (2007) opined that changes in any nation's economy is required to prepare young people for the jobs of the future of which technical and vocational education have crucial roles to play. May (2007) observed that technical and vocational education are very much still neglected in the aspect of adequate funding, personnel, modern facilities, staff motivation which consequently are robbing the country of the economic development to be contributed by graduates of technical/vocational education. Asogwa and Diogu (2007) maintained that there is an urgent need for the Nigeria's attention to be redirected towards self reliant and sustainable means of livelihood which technical education provides.

Most analysts agree that employers of labour today demand more skills than they did in the past (Yang, 2008). Oranu (2010) also observed that there are many factors that have contributed to the ever rising demand for skills in the labour market which include the following; technological and organizational change, trade, deregulation of key industries and the decline of unions.

The too much emphasis on University education in Nigeria has always reduced the economic opportunities of those who are more work oriented than academics (Ojimba, 2012). Not everybody needs a University education. Who would employ them if everybody becomes a University graduate? Many of the so – called “expatriate engineers” receiving huge sum of money in dollars for road construction in Nigeria are graduates of vocational colleges but in Nigeria, the issue of technical and vocational education is not taking seriously.

The nation's poverty level has increased to about 70% that many Nigerians now live on less than one dollar a day. As earlier stated, higher institutions in Nigeria lack the tools and machines to train students to acquire the skills needed by employers of labour; the challenges of vocational and technical education are quite enormous thus:

Challenges

Technical and vocational education cannot contribute greatly to the reduction of abject poverty, hunger and unemployment because it is handicapped by numerous challenges (Eze, 2013). Oranu (2004) observed that the good intentions of successive Nigerian governments about TVE programmes are still fraught with a lot of challenges which include;

1. Inadequate funding of Technical and Vocational Education:

No doubt, vocational technical education has made some notable impacts on the Nigerian society, especially in respect to the products of the training programme who are contributing their quota to the economic growth and development of the nation through various industrial establishments (Odu, 2013). Inadequate funding of vocational institutions has caused the turning out of half baked graduates because there is no fund to build and maintain workshops, laboratories or even purchase modern equipments (Aghenta, 1985). Staffing of Vocational technical education is generally inadequate because of poor funding. Experienced and skilful teachers may not be employed. Those that are employed, because of poor remuneration do not stay long in the teaching profession, but drift to some other more lucrative jobs especially in the industries and abroad. Consequently, inexperienced and unqualified technical teachers are employed thereby lowering academic standard, resulting to wastage in the achievement of technical education goals (Agbionu, 2003). Inadequate funding of Vocational technical institutions has often caused a lot of difficulties in the payment of staff salaries. It has also resulted to the retrenchment of teachers or retirement of teachers at early age. Furthermore, Momoh (2012) and Mohammed (2001) observed that government lack of commitment to technical education and inadequate funding has weakened technical education in Nigeria. A direct consequence of this is that while the number of technical education institution is declining that of general education is growing in bounds (Momoh, 2012).

2. Inadequate facilities:

Most technical education departments in Nigerian Universities do not have laboratories or workshop space, let alone useable equipments and where they exist, they are grossly inadequate, as the workshops only have items or equipment that were provided when the departments were first established of which most of them are already obsolete or grounded (Ojimba, 2012). It is quite unfortunate and surprising too to know that most technical education departments still depends on engineering workshops and lecturers to teach technical education concepts in this 21st century. The available facilities, programme as at today are inadequate quantitatively and qualitatively and besides they are out- dated. Oryem Origa (2005) opined that only 40% of institutions of Higher Education in Nigeria have laboratory or workshop space for technical education programmes. The remaining 60% do not have laboratory or workshop space and this has resulted to the low quality of technology programmes in our higher institutions. He also observed that the few schools that have laboratories, experience acute shortage of laboratory equipment and supplies. The conclusion is that the situation is partly the reason it has been very difficult to carryout experiments effectively for students. This has also made teaching and research in science and technology difficult and therefore the country was producing insufficient and ill prepared technical education graduates for driving the technological and socio-economic development of Nigeria. The shabby performance of technical education graduate is no longer news as very important projects in the country, particularly, the construction industry are now run by technicians and craftsmen from neighbouring West African countries (Nworlu – Elechi, 2013).

3. Brain Drain:

This refers to the movement of technical teachers and lecturers of technical education which are very much needed for the socio-economic and technological development of Nigeria from one University to the other or to other professions where they feel will offer them better conditions of service. According to Bassi (2004) about 45% of all Nigerian professionals including technical educators have left the Nigerian shores over the years. Between 1997 and 2007 alone, Nigeria lost over 10,000 middle level and high level

managers to the western economies. About 500 lecturers from Nigerian tertiary institutions have continued to migrate each year, particularly to Europe, America and other African countries.

4. Staff Training and Retention:

Training of academic staff is a continuous exercise to ensure consistent improvement in the quality of their products. The training can be acquired either locally or overseas. Usually, local training within the country is cheaper than overseas training but more strenuous because of inadequate facilities, literature and distractions rising from the need to meet the necessary demands. Overseas training requires a lot of foreign exchange but the enabling environment exist to achieve success in a record time. However, overtime, it has always been difficult to get the trainees back to their respective countries after the completion of their study. The salary and service benefits paid to technical education teachers in Nigeria is about the lowest in the world (Ojimba, 2012). This leads them to migrate to other countries for better pay.

5. Curriculum of Technical Education:

The curriculum of a subject with practical content is generally organized into an average of 67% for the theoretical classes and 33% for workshop. 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 formal to Information Communication and Technology (ICT) paradigm in technology practice.

The slow pace of industrialization and technological growth in Nigeria can be attributed to the widening gap between science and technology as a result of the inability of technical education to adequately utilize the scientific ideas to promote technology. This suggests the need to overhaul technical education curricula in Nigeria. The overhauling of the curricula may not necessarily translate to the production of highly literate technical education experts of ready-made graduates for the industry which may result in rapid industrialization or economic growth of the nation unless solutions are proffered to some constraints that may militate against positive outcomes, but will adequately equip our youths with the relevant skills needed for their daily living. Ojimba (2012) identified six problems associated with the current curricula in Nigeria. They are:

- i. The curricula are based on foreign model which has evolved under ideal conditions (staff, equipment, infrastructure, training opportunities, etc) that are not easily duplicated in developing countries.
 - ii. There is a basic lack of textbooks in the area and most of the available textbooks have foreign background and often illustrated with examples from outside the local environment.
 - iii. There is usually a shortage of highly competent indigenous teaching and support staff with sufficient practical experience of technology.
 - iv. The curricula are adjudged to be too academic and overloaded with intellectual content in pure science and mathematics at the expense of basic engineering and technology.
 - v. Inadequate provision of humanities, social sciences, business management concepts and entrepreneurial skills development. Because of the inadequate preparations of the students for the industry, some employers retain the graduates to make them productive in their organizations.
 - vi. The teaching approach follows the conventional method of transferring knowledge across through the lecturer reading out to the students, who would then take down notes.
- The educational system continues to place considerable value on this method of teaching

6. **Apathy of Political holders/law makers:** Education generally including technical and vocational education programme has been grossly neglected in Nigeria. Technical educators have the greatest challenge of convincing the law makers on the reason they should give priority attention to the programme in resources allocation. Many options of getting positive results have been advocated at different fora namely; lobbying, participation of technical educators in governance, wooing etc, yet the government is still playing a lopsided attitude to the proper development of the programme in Nigeria. Therefore, Nigeria will ever remain a technologically backward and dependent nation if this negative attitude and trend is not reversed.
7. **Nigerian Value System:** In Nigeria today too much emphasis is placed on University qualifications not minding whether the holder possesses the required knowledge and skill. But in advanced societies those with technical degrees are highly regarded. In fact, the value system in those countries depends on the person's skills and knowledge, and not on the stack of academic degrees one has. In the public service, graduates of technical education are often discriminated against and their career prospect limited. For this reason, secondary school leavers and parents prefer University education to technical education (Nworlu- Elechi, 2013).

Prospect of technical and vocational education and emerging economic issues.

It cannot be an over-statement to say that technical and vocational education is the engine of economic growth. No nation can prosecute a war without an army. In the same vein, Nigeria cannot develop without well – equipped technical and vocational institutions. It is a missing link in Nigeria's development policy (Dike, 2009). For this reason, the nation must invest heavily in education with particular attention given to vocational and technical education.

The National Board for Technical Education (NBTE) and teachers in this area should take up the campaign for more funds for vocational education and to launder its image in the society it has been this way in many societies (Ojimba, 2013). Nigeria should now begin to implement policies aimed at repositioning technical education for effective competition in the emerging global market. The United Nation Educational Scientific and Cultural Organization (UNESCO) has noted that revitalizing this sector is among the ways to improve economic opportunities for the youths. Nigeria Labour Congress (NLC) and the affiliated Unions could also give their support in this regard by setting up functional vocational training centres in the local government areas from where the people could go and acquire some job skills. Upgrading the skills of the workers which consequently would improves their capacity in productivity and attracts better pay packages (salaries, allowances and other benefits).

There is now the urgent need for NEEDS to include vocational education and job training in their laudable programme for economic growth and development strategies that is aimed at poverty reduction and job creation. Paying lip service by Nigerians in this regard will not solve the problem. The 1991 World Bank policy stressed on the development of a skilled labour force as an important factor for the development of any nation. Involving the private sector, employers of labour and training institutions can be the most effective and efficient way to develop the skills of the work force.

Recommendations

1. Adequate resources should be allocated to technical and vocational education. Inadequate funds affect the provision of essentials such as well – equipped laboratories and workshops, relevant textbooks and training manuals.
2. Vocational and technical education requires skilled and proficient teachers. Teachers preparation should be given a priority attention. There is the need for regular in – service training for teachers of technology to upgrade their skills. Periodical industrial training for teacher is a sine-qua-non in other to keep them abreast with the technological changes in the industry.
3. There is the need for our technical institutions to establish good relationship and linkages with similar institutions abroad as this will promote cross – fertilization of ideas and enhance technology transfer. By doing this the technical institutions will have access to new developments, exchange programmes and other numerous benefits available at those institutions whose technical programmes are well developed.
4. When there is collaboration between technical institutions and industries, the relationship will enable the parties appreciate and understand their needs and proffer the right solutions for the benefits of the society.
5. The curriculum taught in our vocational education institutions should be reviewed to meet the demands of the labour market.
6. There is need to start the teaching of industry-based increase employment opportunities for school leavers of vocational and technical institutions. It will also provide ample opportunities for school dropouts.
7. The government should urgently remove the dichotomy that exists between University and technical institution. Polytechnic institutions should be made to award degrees. This will not only attract more qualified students to vocational/technical education but will also encourage exchange of qualified lecturers/instructors between the two systems.
8. It is important to monitor and regulate the informal sector that produces most of our artisans. Such training outfits can be licensed to certify trainees at the end of the apprenticeship period on behalf of the government. Through this way, charlatans can be easily identified and separated.

Conclusion

Technicians and all who pass through the technical oriented institutions should be adequately and equitably remunerated. The dichotomy in the civil service between holders of ‘General Studies’ certificates and technical certificates must not only be eradicated as a matter of policy but in the thinking and attitude of government official. Technicians or technologists are not inferior to their counterparts. It is a matter of choice and we should make this known to our children right from the primary schools. There is an urgent need to overhaul the educational system in Nigeria. Investment in Vocational and technical Education and Skill training must be accorded priority attention. Since no country can favourably compete in the emerging global market place with poorly and unskilled labour. The Nigeria law makers, stakeholders in the education sector need to learn from the international experience as we struggle to establish a more responsive Technical Vocational Education (TVE) system as to meet the ever evolving demands of Nigerians towards our technological development.

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