

Vocational and Technical Education in Nigeria: Issues, Problems and Prospects' Dimensions (IPP)

Daso Peter Ojimba

Department of Technical Education,
Ignatius Ajuru University of Education, Port Harcourt, Rivers State, Nigeria

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Abstract

Vocational education deals with the training or retraining designed to prepare individuals to enter into a paid employment in any recognized occupation. On the other hand technical education deals with the training of technical personnel for the purposes of initiating, facilitating and implementing the technological development of a nation and create the basic awareness of technological literacy to our youths. In Nigeria, the training of technical personnel has witnessed formidable challenges ranging from poor funding to inadequate facilities, brain drain, poor staff training and defective curricular. This paper intends to critically examine the issues, problems and prospects of vocational and technical education in Nigeria and suggest ways to improve the teaching and learning of vocational/technical education with enhanced enthusiasm and vibrancy.

Keywords: Vocational, Technical, Education, Issues, Problems and Prospects.

Introduction

Vocational education is defined as any form of education whose primary purpose is to prepare persons for employment in recognized occupations (Okoro, 1993). It is obvious therefore that vocational education is a term that is more all-embracing than technical education which O. M. Okoro defines as post-secondary vocational training programme whose major purpose is the production of technicians. The Nigerian National Policy on Education defines technical and vocational education as a comprehensive term referring to those aspects of the educational process involving, in addition to general education, the study of technologies and related sciences and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life. Technical education can therefore be seen as the formal training of persons to become technicians in different occupations. Thus any education that is geared towards teaching technical skills and attitudes suitable to such skills can be regarded as technical education.

In his own views, Uwaifo (2009) posited that technical education is the training of technically oriented personnel who are to be the initiators, facilitators and implementers of technological development of a nation. He opined that this training of its citizenry on the need to be technologically literate, would lead to self-reliance and sustainability. He stressed that technical education more than any other profession has direct impact on national welfare.

Furthermore, technical education contributions are widespread and visible ranging from metal work technology, mechanical/automobile technology, electrical and electronic technology, building and woodwork technology etc. Consequently, technical education can serve as change agents not only for technical systems but also for many other societal changes. The practical nature of technical

education makes it unique in content and approach thereby requiring special care and attention. The inputs of technical education are, so visible to the extent that even an illiterate could see when failures occur.

Under critical examination, vocational and technical education have been an integral part of national development strategies in many societies because of the impact on human resource development, productivity and economic growth. Despite their proven contributions does Nigeria seem to give vocational and technical education the attention they deserve? Does that appear to be one of the reasons for the rising unemployment and poverty in the society?

This paper therefore seeks to explore the issues, problems and prospects of vocational/technical education in Nigeria.

Issues

It has been noted that vocational education is designed to offer training to improve individual's general proficiency, especially in relation to their present or future occupation. The provision of vocational and technical schools has a long history. Before the industrial revolution (between 1750 & 1830) the home and the "apprenticeship system were the principal sources of vocational education. Societies were however forced by the decline of handwork and specialization of occupational functions to develop institutions of vocational education. As the Columbia Encyclopedia of 2001 noted manual training, involving general instruction in the use of hand tools was said to have developed initially in Scandinavia (C. 1866).

However, vocational education became popular in the elementary schools in the United States after 1880 and developed into courses in industrial training, book keeping, stenography and allied commercial work in both public and private institutions. Some of the early private trade schools in the US include Cooper Union (1859) and Pratt Institute (1887). The number of public and private vocational schools has greatly increased since 1900.

However, vocational and technical education have continued to thrive in many societies. Unfortunately, Nigeria is not taking the issues of vocational and technical education seriously. Although vocational and technical education seem deficient in citizenship or leadership training (Friedman, 1982), they could provide student the skills to become productive entrepreneurs and engender creative and innovative ideas that would enlarge the nation's economic pie, and increase personal freedom.

Thus the neglect of vocational and technical education is socially injurious as it rubs the nation of contribution the graduates would make on national development. More importantly, the Nigerian society needs competent auto mechanics and truck drivers, carpenters, plumbers, electricians (to maintain the NEPA plants), computer database technicians and web/network technicians, medical technicians and vocational nurses to function well. The half-baked road-side mechanics in the society often cause more damages to vehicles when they are contracted to service them, and because of poor training some of the commercial drivers on the road and nurses assistants in the hospitals have sent many people to their early death.

Without gainsaying, the current preoccupation with university education in Nigeria reduces economic opportunities of those who are more oriented toward work than academics. Not every one needs a university education. But who would employ them if everyone became a university graduate? As mentioned earlier, 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 dollars to build the roads and bridges in Nigeria are graduates of vocational colleges, yet, Nigeria is not taking the sector seriously.

The issue of youth unemployment appears to be shooting up the sky because many of them lack "employability" skills that are often acquired from vocational schools. 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. Also it has been well documented that Nigeria's higher institutions lack the tools to give students the skill employers need. It is evident that Nigeria has teething problems in vocational and technical education. Let us examine some of these major problems.

Problems

The challenges or problems mitigating the training of technical education or vocational education are:

- 1) **Funding:** Universities in Nigeria are owned and funded by the Federal Government, state government and private individuals. Over the years, government subventions to universities have never been adequate but at the same time governments maintain the policy that universities should not charge fees it deemed adequate to complement the financial effort of the government. In Nigeria, the allocation to education as a share of the GDP is quite minimal. Till date, government funding of vocational and technical education programmes have not been impressive.
- 2) **Facilities:** Most technical education departments in Nigerian universities do not have laboratories or workshops space let alone usable equipment and facilities and where they exist, they are grossly inadequate, as the laboratories only have the items or equipment that were provided when the departments were established. It is however most surprising to know that most technical education departments still depends on engineering workshop 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 obsolete. Oryem Oriya (2005) indicated that only 40% of institutions of Higher Education in Nigeria have laboratory or workshop space for technical education programmes. The others, 60% do not have laboratory or workshop space and that this reflects the low quality of technology programmes in higher institutions. He further noted that these few universities that have laboratories, experience acute shortage of laboratory equipment and supplies. He concluded that this situation is partly responsible for the reason why it has been increasingly difficult to run experiments effectively for students and made the teaching and research in science and technology difficult and therefore the country was producing insufficient and ill-prepared technical education graduates necessary for driving the technological and socio-economic development of Nigeria as a nation.

The inadequacy in teaching, laboratory and workshop facilities has contributed to the diminution of the quality of technical education graduates in Nigeria. Reyes – Guerra (1989) categorized students into three, namely: verbalizers, visualizers and doers. The verbalizers are those who learn easily if information is in written or spoken form. They benefit from lectures, tutorials and hand-outs. Visualizers learn easily when information is presented in pictorial or diagrammatic form while the Doers learn more easily when information is presented by practical demonstration by the lecturers.

The inadequacy of facilities both qualitatively and quantitatively has put the visualizers and the Doers at a disadvantage. The verbalizers may also have problem in a class with large students population. The implication of this scenario is that only a small proportion of the students benefit from the current pedagogical system.

- 3) **Brain Drain:** In the context of this paper, brain drain refers to the movement of lecturers of technical education which are needed for the socio-economic and technological advancement of Nigeria from one university to other universities or to other professionals (including politics) calling for better conditions of service. Akintunde (1989) identified five different components of brain drain:
- Experts in academics who moved to the industry where they get better pay for their services.
 - Lecturers and students who leave the country to acquire more knowledge and skill but later refused to return.
 - Lecturers who move from one country for other conditions of service.
 - Skill professionals who abandon the practice of technical education in favour of other more lucrative economic activities and political appointments which are not related to their training.
 - Skilled professionals, although in their field of training who do not devote their full attention to their job because of their effort to supplement their earnings through other unrelated economic activities.

Bassi (2004) reported that:

- About 45% of all Nigerian professionals including technical educators have left the Nigerian shores over the decades since colonization.
 - 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 universities continue to emigrate each year, particularly to Europe, America and other African countries where the condition of service is relatively better. These Nigerians in Diaspora contribute 35 times more wealth to Europe, America and other African economy.
- 4) **Staff training and retention:** The training of academic staff is ordinarily a continuous exercise to ensure consistent improvement in the quality of their outputs. The training is two-fold: training to acquire minimum qualification (Ph.D) to teach and continued professional training. Both types of training can be acquired either locally or overseas. Usually, local training within the nation is cheaper than overseas training but more strenuous because of inadequate facilities, literature and distractions arising from the need to meet the necessary demands. Overseas training requires a lot of foreign exchange but the enabling environment exists to achieve success in a record time. However, over time it has always been difficult to get the trainees back to their respective countries after the completion of their study.

Invariably, the salary and service benefits paid to technical education teachers in Nigeria is about the lowest in the world. This leads them to migrate to other countries especially the United States of America or local industry for better pay. Academics from within and outside Nigeria also migrate to Botswana and South Africa because of high wages that they pay to the academics and the relatively better equipped laboratories.

- 5) **Staff situation:** Many universities across the country are inadequately staffed both qualitatively and quantitatively. In most departments especially in technical education programme, the proportion of staff without Ph.D out numbers those with Ph.D. Uwaifo (2005) asserted that it is difficult to get people trained to the level of Ph.D because academic is not as attractive and commensurate to the effort, commitment and finances put in to acquire it; whereas a first degree graduate can function well in the industry and politics etc and earn good money.

Table 2: Shows the relative percentage of academic staff with Ph.D in technical education across the southern universities in Nigeria as at 2010.

S/N	Names of university	Course areas				No. of Ph.D holders	Percentage %
		Building/ wood work	Electrical/ electronics	Metal/ auto mechanic	Total		
1	Nnamdi Azikiwe University, Awka	5	4	4	13	2	8
2	University of Benin, Benin City	5	4	6	15	2	8
3	University of Nigeria, Nsukka	6	4	5	15	5	21
4	University of Uyo, Akwa Ibom State	3	5	5	13	3	13
5	Ambrose Ali University, Ekpoma	6	4	3	13	1	5
6	Delta State University, Abraka	5	4	4	13	2	8
7	Enugu State Uni. of Sc. & Tech, Enugu	5	4	3	12	2	8
8	Rivers State Uni. of Sci & Tech, P.H	5	3	5	13	2	8
9	Ebonyi State University, Abakaliki	4	5	4	13	2	8
10	Rivers State University of	8	6	14	28	3	13
	Total	52	43	53	148	24	100

Author's input

It could be seen from table 1 that no department offering technical education in Nigerian universities have adequate Ph.D lecturers, as the university with the highest Ph.D lecturers is the university of Nigeria, Nsukka; established in 1960. Of the 15 lecturers in the department, only 5 of them have their Ph.D, while others are yet to acquire it. Most lecturers in technical education department in these schools who have obtained their Ph.D, have been drained away from these schools because of the unattractive nature of the lecturing profession in Nigeria.

In order to spur locally needed science and technology activities, it is imperative that Nigeria governments should seriously consider proper retention schemes for their best talents by providing special working conditions including income supplements and adequate research supports to stem this problem of brain drain.

- 6) **The 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 laboratory. Students also use the laboratory to develop case examples on their own time. 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.

The low 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.

However, 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 growth in the economy of a 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 day to day living. The problems associated with the current curricula are:

- (i) They are based on a 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 this area and most of the available textbooks are often illustrated with examples from outside the local environment and which are irrelevant to the particular country.
 - (iii) There is usually a shortage of highly competent indigenous teaching and support staff with sufficiently wide practical experience of technology.
 - (iv) The curricular 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 for humanities, social sciences, business management concepts and entrepreneurial skills development. Because of the inadequate preparation of the students for the industry some employers retrain the graduate 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 students, who would then take down notes. The educational system continues to place considerable value on this method of teaching.
- 7) **The apathy of political office holders/law makers:** Education generally, including technical education programmes has been grossly neglected in Nigeria. Technical educators have the greatest challenge of convincing the law makers on why they should give priority to the programme in allocating resources. 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 playing a lopsided attitude to the proper development of the programme in Nigeria. Thus, Nigeria will ever remain a technologically backward and dependent nation if this attitude and trend is not reversed.

Prospects

It is evident that Nigeria lags behind in preparing her workforce for the challenges of the rapidly changing global economy. For that, the nation must invest copiously in education with particular attention given to vocational and technical education. No nation would make any meaningful socio-economic stride without viable educational institutions. 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.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) has noted that revitalizing this sector is among the ways to improve economic opportunities for the youths. The Nigerian Labour Congress (NLC) and the affiliated unions could also help in this regard by setting up vocational training centres in local government areas from where the people could acquire some job skills. Upgrading the workers' skills would improve their productivity and advance their values (wages/salaries and benefits) and voices on the job; calling out the workers for strike actions is not the only way to fight for their welfare.

The NEEDS and SEEDS programmes should include vocational education and job training program in their economic growth and development strategies as part of poverty alleviation and assist the unemployed for job search. This is the way things are set up in many societies, and Nigeria should adopt and adapt the system if she wants to move forward. Furthermore, political rhetoric without action will not solve Nigeria's problems. The progress of Nigeria lies in the productivity of its citizens and quality education and genuine vocational programs hold the key.

Furthermore, the 1991 policy of the World Bank harped on the development of a skilled labour force which makes an important contribution to development. The challenges are to use employer, private and public training capacities effectively to train workers for jobs that use their skills and to do so efficiently in developing economies increasingly influenced by technological change and open to international competition. Training in the private sector by private employers and in private training institutions can be the most effective and efficient way to develop the skills of the work force.

Harping on the above prospects, it is pertinent to note that government at all levels must be pressured to devote the recommended 26% of their budgets to education. Out of this we should demand that at least about 50% should be allocated to technical vocational education representing roughly 10% of the total budgets. Rather than spend tax payers' money establishing General studies universities in all the local government areas, and claiming that as an achievement the existing ones should be well funded so that both staff and students will be motivated to make their contributions to the development of the country.

Furthermore, one of the greatest problems of our education is that every government wants to give an impression that it is doing something. Thus policies that are not well thought out are introduced and changed arbitrarily and whimsically. There should be an end to policy somersaults. We should build an architecture of technical schools with the universities of technology at the apex. Those who choose the technical career path should be able to proceed from the senior secondary schools to doctorate degrees without feeling inferior in the least to graduates of the general studies institutions.

Technicians and all who pass through our technical-oriented schools ought to be adequately and equitably remunerated. The dichotomy in the civil service between holders of 'General Studies' certificates and technical certificates must not only be abolished as a matter of policy but in the thinking and attitude of government officials. The truth of the matter is that technicians or

technologists are not inferior to their counterparts. It is a matter of career choice and we should make this very clear to our children right from the primary schools.

Conclusion

Jimn gang (2004) posited that there is need for a total overhauling of the educational system and that in many fields, course work available only lead to rising unemployment, poverty and misery. He concluded that the situation could only be curbed if syllabuses were innovated, re-engineered or re-designed to include disciplines that build up the fighter – spirit needed for today's intellectual battles of life. For progress to be made in Nigeria the challenges confronting technical education must be recognized and fought vigorously. Adequate resources should be allocated to the programmes in order to achieve positive outcomes. A comprehensive reform towards technical and vocational education and a deliberate attempt to uplift the programme is the only panacea to a technological nderado in this country.

References

- Akintude, M. I. (1989): *History of Development in Vocational and Technical Education*, London: George Allen and Unwin Ltd.
- Bassi, S. Y. (2004): *The Role of the Directorate of Technical Cooperation in Africa (DCTA) in Technology Transfer and Acquisition in African Countries' Proceeding, 2nd African Regional Conference on Engineering Education, University of Lagos, Nigeria 20th – 22nd September, pp 35 – 42.*
- Friedman, M (1982). *Capitalism and Freedom: University of Chicago Press, 2nd Edition.*
- Jimngang, K. I. (2004): *African Human Development Department. Nigeria Science and Technology Education at Post-Basic Level (Step B) – Review of Science and Technology Education in Federally – Funded Institutions, Nigeria Country Office, Nigeria.*
- Okoro O. M. (1993). *Principles and Methods of Vocational and Technical Education*, Nsukka: University Trust Publisher.
- Olunloyo, V. O. S. (2002): *The Challenges of Globalization for the Design of Technical Curriculum in Developing Countries' First Edition, University of Lagos Press pp 217 – 237.*
- Oryem – Origa, S. O. (2005). *Vocational Education and manpower Development, Lagos: Nigerian Vocational association monograph series.*
- Reyes – Guerra (1989). *Concepts and issues of Globalization in Nigeria Education: Implications for teaching and learning. Paper presented at the 50th ICET World Assembly, University of Pretoria, South Africa.*
- Uwaifo, V. O (2005). *Vocational Education and General Education: Conflict or Convergence: Nigerian Journal of Educational Research 4 (1): Institute of Education, Ambrose Ali University, Ekpoma.*
- Uwaifo, V. O. (2009). *Technical Education and its Challenges in Nigeria in the 21st Century. International NGO Journal vol. 5 (2) pp 40 – 44.*