

REDIRECTING TECHNICAL EDUCATION TO MEET THE MANPOWER NEEDS OF NIGERIA

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Abstract

Education has widely been acknowledged to be an effective instrument for social, cultural, economic and political change of a nation. How effective an education is, in effecting desired change in any society, is a function of education planners' ability to identify the nation's needs, available resources and organize the educational programmes towards unfolding and directing the potentialities/natural endowments of the recipients towards meeting the needs. In other words a nation is as developed as much as its citizens are educationally developed. With the inherent potentialities of Vocational/Technical Education in equipping individuals with skills and competencies for gainful employment, Anyakoha (2001) argued that Vocational/Technical Education is the type that should be emphasized in manpower development for poverty alleviation. This paper is, therefore, exploring ways of redirecting Technical Education to answer for manpower needs of Nigeria.

Introduction

The sovereign state of Nigeria is today yearning for sustainable development. The rate at which developed nations are daily advancing in technology is widening the developmental gap between the developed and developing nations. Western education which is acclaimed to have the ability for social, cultural, political, as well as technological transformation of a society has been with us for more than a century now, but the magic for which it is known has not fully manifested. This is blamed by scholars on the liberal art type of education, which the system was designed to be then.

Now that the error has been realized and attempt towards correcting it made by Nigerian education planners in entrenching the neglected technical education into the curriculum, it is therefore left for educators to proffer solutions that will make the proposals to work accordingly. This paper will, however, be discussed under the following headings:

- National needs (aims and objectives) for which education is aimed at addressing;
- Technical education as perceived by curriculum planners;
- Present status of technical education;
- Technical education and manpower development;
- Recommendations.
- Conclusion.

National Needs (Aims and Objectives) for which Education is Aimed at Addressing

A sovereign nation is alive only as much as it is able to satisfy the yearning and aspirations of its citizens. Some nations are naturally endowed but are lacking, because the citizens are not equipped with competencies needed to exploit what nature provided, while some other nations like Japan and Israel that are potentially poor are today thriving simply because they have technologically developed manpower. Nigeria is among the nations that are richly endowed with natural resources but is classified as undeveloped simply because her citizens have not acquired the necessary competencies for exploiting what nature provided; and that is therefore the need to be addressed.

Alodele (1987) referred to Maslow as saying that every need arises from an imbalance or disequilibrium between what human nature deems necessary for the health of a person, and what a person's environment provides. When environment provides people with what they need, equilibrium occurs. Maslow proposed five types of human needs in a hierarchy, which reflects the sequence in which needs must be fulfilled:

- i. Physiological needs,
- ii. Safety.
- iii. Love and Belonging,
- iv. Self-esteem,
and

v. Self-actualization.

The needs are further classified as primary and secondary. Physiological needs which Maslow classified as primary include those for food, drink, hunger, thirst and shelter. Secondary needs are learned, e.g. affection, aggression, authority, dominable and other personality needs which include need for status and security.

To an average Nigerian today, physiological needs are not satisfied not to talk of security needs. A relevant education for Nigerians today will be such that will address the need for hunger, poverty, diseases, illiteracy, shelter, security of the masses of this country. It was the realization of the need for comprehensive development of Nigeria as a sovereign state that the national curriculum conference of September 1969 was held, and a clear National Policy on Education emerged therefrom in 1977, revised in 1981 and 1998 respectively. The policy spelt out a vision, which the nation's education system will target to realized as follows:

- i. A united, strong and self-reliant nation,
- ii. A great and dynamic economy,
- iii. A just and egalitarian society
- iv. A land of bright and full opportunity for all citizens,
- v. A free and democratic society.

It was envisaged that the realization of the above vision would launch Nigeria into a developed country. The question then is how far have we sincerely realized our dreams. The truth is that the leadership of this country has not provided a conducive atmosphere for educators to really operationalize the policy. For instance, for item number 'V', we may be forced to ask how one can be talking of a free and democratic society in a country of military dictatorship? In fact, wrong type of leadership has affected the realization of all the targets because one does not talk of a united, strong and self-reliant nation, and a great and dynamic economy in a charged atmosphere.

Technical Education as Perceived by Curriculum Planners

In preparing the National Policy on Education to meet the educational needs of Nigeria, education planners emphasized the importance of science and technology programmes and consequently provided for them in the document thus:

1. A greater proportion of education expenditure will be devoted to science and technology.
2. Universities and other levels of the education system will be required to pay greater attention to the development of scientific orientation. To this end, more Colleges of Technology and Polytechnics will be opened in a bid to improve technological and scientific education.
3. The ratio of science to liberal arts students in our universities has been fixed at 60: 40 during the third National Development Plan Period. This ratio, the document stated further, will continue to be reviewed in accordance with the manpower needs of the country, (FRN, 1998).

Since after the introduction of the National Policy, Nigeria's education implementers have been making effort towards realizing the developmental dreams of Nigeria. Many Universities of Technology and Agriculture, Colleges of Technology and Agriculture, and Colleges of Education (Technical) have been put in place. But the admission ratio has not been met, reasons being that secondary school students are still under the influence of the old system and very many of them dread technology subjects.

Specifically, the National Policy on Education provided for Vocational/Technical Education. Technical Education is defined in the document as that aspect of education, which leads to the acquisition of practical and applied skills, as well as, basic scientific knowledge, (FRN, 1998). Okafor (1992) also cited Olojo as defining Technical Education as that education that is designed to prepare individuals for entrance into, and progress within technical occupations. It requires an understanding of fundamental laws and basic principles of Mathematics, Science and Technology, supported by appropriate general courses.

The National Policy on Education stipulated the aims of Vocational/Technical Education as that which:

- Provides trained manpower in applied science, technology and commerce particularly at sub-professional grades;
- Provides technical knowledge and vocational skills necessary for agricultural, industrial, commercial and economic development;
- Provides people who can apply scientific knowledge to the improvement and solution of environmental problems for the use and convenience of man; Gives as introduction of professional studies in engineering and technology;
- Gives training and impart the necessary skills leading to the production of craftsmen, technicians and other skilled personnel who will be enterprising and self-reliant, and enable our young men and women to have intelligent understandings of the increasing complexity of technology (FRN, 1988).

The document equally prescribed the expectations of Vocational/Technical Education at the different levels of the Nigerian education system:

- At primary level, 'Vocational/Technical Education will provide the child with basic tool for further educational advancement including preparation for trades and crafts of the locality.
- At the junior secondary school (JSS) level, provisions are made for pre-vocational electives which include Home Economics, Introductory Technology, Business Studies and Agriculture. The emphasis is on practice.
- At senior secondary school (SSS) level, which is comprehensive in nature with vocational electives, which includes Clothing and Textiles, Food and Nutrition, Home Management, Agriculture, Building Construction, etc.
- At the tertiary level, the Universities, Colleges of Education (Technical), Polytechnics, and Monotechnics, various forms of Vocational/Technical Education programmes are offered. These are aimed among others, at contributing to national development through relevant high-level manpower training in various technologies.

A closer look at the foregoing shows the elaborate plans that was made for development of competencies through Vocational/Technical Education in Nigeria. The planners took cognizance of the fact that some children will drop out after primary school, therefore, recommended that they should be equipped with desirable work attitudes, values and habit through well articulated and organized self-expressive, explorative and production oriented activities. At other levels, practical are emphasized. The question then is, how is the policy implemented? Are the students given opportunities to really carry out practical activities during their course of study?

Present Status of Technical Education

Much as it will look as if successive governments of Nigeria have invested so much in education sector, a lot more is still needed to be done. Technical education is capital intensive and since the inception of the national policy, there has never been a time this type of education was sufficiently provided for. The equipment needed for adequate implementation of Technical Education programmes are lacking in institutions offering them and where they are available, they are either obsolete or are lying idle due to lack of competent hands to manipulate the machines. The result is that graduates of practical oriented programmes could not remember ever touching machines and as such cannot impart the needed skills and competencies.

In support of the above claims, Anyakoha (2001) quoted Yolo (2001) as identifying obstacles that affect all types of education including Technical Education. The obstacles are:

1. The content of the curriculum of Vocational/Technical Education.
- ii. The instructional processes,
- iii. The competence of teachers,
- iv. Availability of instructional materials.

Others include: lack of awareness by policy makers and administrators, heavy emphasis on passing examination, home-related factors and gender construction.

Curriculum Content of Vocation/Technical Education

Highlighting on the above points, Yolo as quoted by Anyakoha (2001), maintained that what is of ultimate interest is achieved curriculum. At times the prescribed curriculum may look

impressive and contain all the important skills for manpower development, however, implementation and achievement would remain questionable. Thus, even though Vocational/Technical Education curriculum in Nigeria prescribed skills acquisition that leads to manpower development, the extent to which the achieved curricula really adequately cover all the Vocational/Technical skill needed by the learners is still to be attained.

Instructional Processes: These are vital for the implementation of the curriculum. The most relevant Vocational/Technical Education curriculum can be rendered ineffective when the wrong instructional processes are employed. Vocational/Technical Education programmes are skill-oriented and necessarily involve practical exercise. The teacher needs to cover both the knowledge and practical aspects. There is need for demonstration, project, problem solving, field trip and other related techniques and their appropriate utilizations.

Competence of Teachers: This involves the ability of the teacher to plan, implement and evaluate his/her lessons, carry out necessary classroom managerial activities, utilize instructional facilities and where possible improvise the non-available ones. Several factors may combine to hinder the teaching and learning of Vocational/Technical Education programme based on teachers' commitment/morale, teachers' condition of service, prolonged strikes that shorten periods when students are actually in school, which often lead to crash programmes etc. These and other related issues are challenges to the potentials of the Vocational/Technical teachers to teach the Vocational/Technical skills.

Instructional Materials: Anyakoha (2001) cited Olaitan, as saying that Vocational/Technical Education basically has to do with developing individuals to be masters of equipment -if they are to effectively use technology in producing goods and services. Graduates of Vocational/Technical Education programmes can only be effective to the extent that they are able to demonstrate mastery of modern technologies or even obsolete ones. They are expected to have sufficient practical experiences and doubtlessly going to be efficient in a system that emphasizes self-reliance.

About the issue of examination, Ezewu (1994) claimed that what we are practicing now in our school system is examination cum certificate system of education, which according to him is weak in the sense that many of those adjudged proficient in the system are not able to defend their certificate. This paper upholds Ezewu's view because the examination cum certificate system of education especially technical education is weak. This is true because in the nation's labour force today are many employees who cannot face the challenges of the tasks they were engaged to handle. This class of workers employ confrontation as means of covering their inadequacies.

Technical Education and Manpower Development

This paper had earlier defined the concept of Technical Education as that aspect of education that is charged with preparing people for work. It is the type that prepares people for work and it is also the backbone of the nation's employment related education and training programmes. It has the characteristics of preparing persons for entry and progress in paid employment in any organization.

Okafor (1992) cited Encyclopedia of Education, as defining manpower as the portion of a nation's population that is capable of engaging in productive employment -its broad concept including all who are potentially employable, ranging from unskilled to the most highly-skilled workers. Manpower development, Okafor went on, is the training of skilled labour force for the public and business services, industrial development and self employment. It is a strategy to meet the quality and quantity of goods and services available to the community. Human development is the ultimate focus of all types of development-economic, social, cultural and political. The focus of this development is what people are capable of doing or being. Can they live long? Can they be well nourished? Are they able to read and write, and communicate and develop their minds, escape avoidable diseases? Are their human right guaranteed? (Anyakoha, 2001).

It should be seen from the above concepts, that Technical Education is indispensable in developing competencies that are needed for technological development of a nation. Sustainable development is guaranteed only by developed technology and technology is developed and maintained by developed human beings.

Okafor (1992) however, observed that almost all developing countries including Nigeria are lacking qualified manpower at all levels and in all key posts in industry; for example plant managers and administrators; graduate engineers in design, production and research; technicians, workshop supervisors, draughtsmen, foremen and supervisors, and highly skilled production workers. These

shortages exist side by side with unemployment and massive under-employment.

Recommendations

After critical review of literature on the above subjects, this paper holds that Technical Education that should address the manpower needs of Nigeria should be adequately provided for. The underlisted are recommended:

1. Adequate provision be made of the relevant equipment to the training institutions.
2. Government should make sure that only competent hands are recruited to teach at the whole levels of Nigerian education system.
3. There is need for constant review of Technical Education curriculum as new technology renders the old ones obsolete. For example, the introduction of computer has rendered typewriters obsolete.
4. In evaluating Technical Education, emphasis should not be on examination and certificate but on the ability to demonstrate the relevant skills and competences. There should be a balance between theory and practical. A child should be considered proficient only as he/she manifests enough evidence of the ability to manipulate machines and equipment.
5. The instructional materials should be made available and must be of the right type.
6. Appropriate instructional process must be adopted for the delivery of Technical Education programmes.
7. There is need to re-organize the school-industry linkage to ensure that relevant skills are inculcated in the students. This is necessary because our institutions are poorly equipped.
8. Fund should be sufficiently made available to the training institutions for day to day running of Technical Education programmes.
9. There is need for regular inspection of the facilities as well as supervision of the teachers. This is necessary to ensure that standards are maintained.

Conclusion

Technical Education as is prescribed by curriculum planners has the potentialities of transforming the economy of a developing nation like Nigeria. The curriculum content is adequate enough but the implementation is where we are having problems. It is true this type of education has not been entrenched in the curriculum but parents, as well as, the government have not been liberated from the negative impression they have on Technical Education. The effect is the loss of interest by students at the JSS and SSS levels of our secondary school system. Nearly every students is opting for courses outside Technical Education thereby swelling the labour market with job-seeking graduates. This paper has made some proposals which if tried will be great help to meet the manpower needs of Nigeria as a nation.

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