

EFFECTIVE UTILIZATION OF TRADITIONAL TECHNOLOGIES TOWARDS THE DEVELOPMENT OF NIGERIAN ECONOMY

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ABSTRACT

Nigeria has been technologically backward in spite of the potentials inherent in our rich traditional technologies, Nigeria still rely on the importation of finished technology from the developed countries. This paper stresses on the effective utilization of our traditional technologies towards the development of the nation. The paper also highlights on the ways of improving our traditional technologies. Conclusion and recommendations are made to ensure that Nigeria evolve a truly Nigerian technology for the production and consumption of their goods and services which will lead to the socio-economic development of the nation.

INTRODUCTION

Technology could mean the way of doing things through the application of knowledge derived from systematic investigation of natural forces and materials. It leads to the development of processes and devices indispensable to the stable enhancement of the quality of life and to human progress. As the "act of know how", technology leads to the rational utilisation of matter and energy in any process designed to satisfy a need. It is a propelling force that must be internally induced if goals of improving the quality of life of the people is to be realized and sustained over the long run. Technology is the cornerstone of progress upon which Nigeria can depend to attain self-reliance and self-sustaining development (Anyakoha and Osuala, 1994). However, it is very unfortunate that in spite of the potentials inherent in our rich traditional technologies such as metal work, pottery, woodwork, leatherwork, artistic design etc. which could have served as ideal springboard for our technological development, we still rely on the importation of finished technology from the developed countries. The fact is that Nigeria will never achieve self-reliance without technological innovations, which demand initiative, resourcefulness, hardworking and management of determined effort. We must replicate and improve on the acquired technology without external assistance. The present economic predicament calls for re-examination of how well Nigeria as a nation is doing in the area of developing sound technological base.

Despite the achievement of highly sophisticated technology and innovations to transform her rich and varied natural resources into physical wealth. Tukura (1999) noted that this can be done through experimentation, refining, replication and commercializing technological innovations in our research institutions. Udofot (1994) cited

that in the present day Nigeria, there is abundance of the products of Western and other foreign technology, which require daily intelligent utilization. There is also a strong need for Nigerians to evolve a truly Nigerian technology for production and consumption of their goods and services. At this age of Nigerian independence hse should be able to export not only the products of her own technology but also sell her technological know-how to other developing nations.

AIMS/OBJECTIVES OF DEVELOPING TRADITIONAL TECHNOLOGIES IN NIGERIA

- To enable our craftsmen, technicians and engineers to have an intelligent understanding of the increasing complexity of technology
- To provide them with the technical knowledge and vocational skills necessary for industrial, commercial and economic development,
- To enable them to initiate, design, develop and copy technology activities in the area of machineries and tools with a view to expanding available capacity and thus localizing the production of heavy engineering machinery, tools and spare parts.
- To ensure that our team of technicians and engineers are able preventive, routine and corrective maintenance of all equipment, structures and infrastructures in a planned and coordinated manner in our industries.

IMPROVING TRADITIONAL TECHNOLOGY IN NIGERIA

It is common knowledge that the Nigerian blacksmiths, iron smelters and the likes have usually been making some implements, however, crude. Experiences have shown that most of these people were significantly used during the Nigerian Civil War, particularly in the then "Biafran" enclave

to sustain the war for 30 months. Most of the items they made in collaboration with university Dons who provided the educational or academic directives include, local tractors, armoured cars and spare parts of most these equipment (Ayodele, 1985). Importation of spare parts for most of their equipment was not possible due to mainly to the economic situation and lack of finance, these local blacksmiths in collaboration with iron smelters, university engineers and local electricians sustained locally the maintenance and servicing operations of the equipment. It may be argued that these local materials could only be relied upon during a situation of emergency as created by the civil war. It could still be further argued that the rapid pace of modern civilization cannot afford to waste time on allowing the local human resources to gain dexterity and then double the importance of self-reliant and self-sustained development as contained in the tenets of the Lagos Plan of Action of OAU heads to which the resolutions of ECOWAS 1982 Cotonou Heads Summit have been complimentary (ECOWAS, 1981).

Ayodele, (1986) noted that handcraft both in primary and secondary schools should be given priority attention, knowledge acquired at these stages could further be improved upon in the Colleges of Technology, Polytechnics and Universities. At these stages of learning emphasis should be placed on the vocational aspect rather than total emphasis on the academic aspect. Students to be admitted into various engineering, technological environmental departments in higher institutions should show evidences of practical experiences in design making. In addition certificates showing aptitudes in these fields from competent authorities should be boosters for admission. However, consequent upon admission, courses should so structured as to provide at least two years practical experience in the relevant field e.g. Energy institutions like NEPA, NNPC, Oil Refinery plant, Mining and Installations etc.

In order to protect the local resources due mainly to their lack of academic education, there should be a link between human resources and those in the academic for possible exchange of ideas in the area of modification e.g. the introduction of measurement into their local inputs and outputs. Given this sort of education, these local blacksmiths, welders, iron smelters etc. could be employed as instructors in the lower schools. Given this structure in the school most of the operations like building, carpentry work, electrical wiring etc. can be performed by these students with little supervision from

local human resources who have virtually been given little academic education for standard improvement. The cost of these operations to the school is significantly less than it would otherwise have been, had these students not been involved.

UTILIZATION OF OUR TRADITIONAL TECHNOLOGIES

For practical application of these trainings, it will be necessary for a manufacturing department to be established in places like NNPC and NEPA. This department will, of course be an assembly of local blacksmiths, iron smelters, technologists, academic engineers etc. The duties of these people will include the under study of the "imported technology" for possible adaptation to the local resources. With the little education provided to the local black-smiths and iron smelters, it is strogly believed that carbon copies of most of these spare parts would be moulded locally by these various experts working together. There is no doubting the fact that getting the necessary raw materials to mould these spare parts would be difficult. Initially, there may be need to import the raw materials which will further drain Nigeria's foreign exchange currency. However, with an effective take-off of Nigeria's iron and steel industry there may be no cause for alarm with regard to the supply of raw materials. At a later date, it may be necessary to expand the entire national manufacturing sector to make for the provision of spare parts not only to NNPC and NEPA but also to other sectors. The additional investment required is appreciated but the process could be a way of adapting both the local ideas and the modern technology to match the local endowments.

It is believed that with expertise gained in making spare parts, maintenance and servicing exercise would be effectively taken care of by these local resources. These exercises would have been then compensated for by the high investment cost of establishing this department. In addition, the local technology of the local blacksmiths, iron smelters and technicians would have made significant advances as observed in some technologically developed countries. To create great incentive for working harder and breaking new grounds in this field and other fields, adequate reward should be worked out for any local technological solutions by those involved. The local technicians should occasionally be exposed to unfamiliar packages of technological problems which will hopefully create necessities, usually, regarded as the mother of invention.

CONCLUSION

It has been observed that Nigeria has not fully used its local technological resources in the development of its economy. Technology will help in the development of our local resources, our economy and make life more comfortable for man. Adeyemi, (2002) cited that the future of the entire world is technology and any nation that does not take it seriously is doomed because it is mortgaging the future of the generation yet unborn. This shows that no country will develop without technology.

RECOMMENDATIONS

In order to ensure effective utilization of our traditional technology towards the development of the nation. The following recommendations are made:

1. Policy makers, researchers and the government need to appreciate the presence of local technicians and accord them recognition. Most of their outputs have to be commercialised to create incentive for innovation.
2. Manufacturing departments within institutions like NEPA, NNPC etc. should be established for local technicians for adaptation, local resources should be exposed to unfamiliar packages of responsibilities to create necessities for innovation, which should be rewarded.
3. In order to protect and create incentives for innovation in the traditional technological field in Nigeria, the academic composition of Nigeria's educational structure should be modified to reflect more of vocational training.
4. Government should provide tax rebates and other financial incentives to groups that commission small-scale industrial technological research for the purpose of manufacture.
5. Government should ensure well-designed systems for recognition and award of compensation to institutions involved in research and development and diffusion of technology within the country.

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