

# TECHNOLOGY EDUCATION AND NATIONAL DEVELOPMENT

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## **Abstract**

Some writers on social change and nation building see technology as one of the variables to be discussed, especially when it has to do with agents or factors of change and national development. On the other hand, a few feel the issue of technology in relation to social change and national development can be condensed into a separate theory. From whatever angle one approaches it, it is no longer in doubt that technology has come to be accepted as a major source of social change as regards nation building and development. The reason have been on many changes or modification in status and roles as a result of creativity and innovation on the technological level. However, there have been lapses in technology education despite the efforts being made to accomplish a breakthrough in the area of technology education. This paper points out the lapses and their implications in education and national development. Also, strategies for improving technology education were recommended.

## **Introduction**

Technology is that, study, mastery and utilization of manufacturing methods and industrial arts; a system application of knowledge to practical tasks in industry. Historically, technology is as old as man. It originated from man's quest to solve his environmental needs, which as a matter of fact are dynamic.

In Nigeria, it existed before the advent of formal education., but in structure and organization, it lacked institutionalization. Again, here in Nigeria, we are blessed with talents and the only major reason for our backward trend in technology has been traced to low priority accorded to scientific and technology education.

According to Fafunwa (1974), one of the major defects in Nigerian educational system is the low priority accorded to technical and vocational education. Therefore, in our quest for technological development, it is obviously recognized that, science and technology are indispensable agents of change that must be recruited to the task at hand.

## **Status of Technology Education in Nigeria**

Technology involves methods and processes by which people produce and process what they eat, drink, wear, provide shelter for themselves, move their goods from one place to another, and defend themselves from both internal and external enemies, tap their materials and mineral resources and ensure good health for the people and their animal (Iroegbu, 1992). At this point, one can suffice it to say that, technology education is the only way out.

The new emphasis of our secondary education is in the provision of basic technology and vocational skills necessary for useful living. This implies that, Nigerian youths should be adequately groomed to appreciate the role of such skills in the national economic survival and self-reliant production. From the above exposition, it follows that, the much desired technological orientation has been reflected in the 6-3-3-4 system of education.

In this system, some vocational and technological courses have been integrated into the junior secondary school curriculum. Also the Nigerian universities commission has recommended a 60:40 ratio (science and technology/humanities admission percentage with science and technology at 60% while humanities should have 40%). The technological oriented ones among them make up the introductory technology course. Some of the courses are: metal work, basic electricity, technical drawing, woodwork, building technology, etc.

Thus, the introductory technology courses become very crucial in our quest to build a land of bright and full opportunities for the citizens and to build a viable and self-reliant nation. Therefore, the role of technology is indispensable.

In our determined effort to acquire our own indigenous technology, it is obviously recognized that technological courses will play a very crucial role in order to make for the attainment of technological advancement. Indeed, should the present 6-3-3-4 system of education be meticulously executed? Nigeria will be a land of wide opportunities. And undoubtedly, technology, which opens the way for increase in production, is the eye opener for any nation's prosperity (Akindele, 1985).

### **Lapses in Technology Education and National Development**

Some of the philosophy of Nigerian education, according to the five main national objectives of Nigeria as stated in the Second National Development Plan, and endorsed as the necessary foundation for the National Policy on Education (1998), listed the philosophy of Nigerian education to include:

- a) a free and democratic society;
- b) a just and egalitarian society;
- c) a united, strong and self-reliant nation;
- d) a great and dynamic economy; and
- e) a land of bright and full opportunities for its citizens.

But unfortunately, the attainment of these goals have been attributed to the fact that, our colonial mentors brought the type of education which merely produced people who could only sing hymns and recite catechism, copy, memorize and assemble things which are brain children of others.

The shortcomings of our old educational system has been criticized by Ikejiani (1971) in the following words:

Our education has been consumptive instead of productive. We teach our youths to master their subjects, but have failed to relate those subjects to Nigerian needs in order to enable our school leavers and graduates solve the fundamental problems of living. We have imprisoned the minds our youths instead of releasing them to invent, discover, build and produce. Our education has been barren, so that, very soon we shall face the problem of having many "educated" people who none qualified to do the work for the welfare of the people.

Irrespective of the afore-stated expositions, the wealth acquired by Nigerians in the past as a result of the oil boom blind-folded Nigerians from thinking about technology reality.

Now, more than half of the workforce in the country had been retrenched, while the few who still keep their jobs are ever so afraid that, they could lose them anytime and without the slightest notice. This goes contrary to our national aspirations as stated in the National Policy on Education. All these failures, problems and predicaments point to one simple all - important fact, that Nigeria is lacking skilled manpower, people who have the technological know - how, people who can be self-sustaining.

Rather than industrialized by a policy that put emphasis on development of home - grown technology, government encouraged industries that do nothing but put together almost finished products from the advanced nations, because of the misconceive belief concept of technology transfer. Now, everybody is suffering the crunch because the foreign exchange to finance industries has dried up.

On another development, Ukeje (1966), maintained that, with the coming of the missionaries in Nigeria, formal education was introduced which was more or less literary, little consideration was given to Crafts, Arts and Trades. The negative orientation offered to technological education by our old educational system made our society to regard technology education as somewhat inferior to other types of education. For example, in the olden days people' taught it useless to specialize in any practical skill, as it was then regarded that technical schools are meant for academic dropouts while grammar schools are meant for superior brains.

In recognition of the need for homegrown technology, Olutoye (1975), stated inter-alia, any nation which fails to keep pace with modern trend in technology will be doomed with perpetual under-development. All these points to the fact that technology education curriculum in Nigeria is not very sufficiently and effectively fit and sound for national development.

In the light of this, Azikiwe (1985), contended that, the only prospect we have is to develop our technology pertinent to our culture, problems and aspirations. Major among the problems as noted by Anyaeze (1997) is the curriculum lapses, which include:

- a) theory based technology education curriculum;
- b) adaptation of foreign curriculum;
- c) negligence of indigenous skills;
- d) negligence of the country's technology development of needs;
- e) non-consideration of facility availability;
- f) non-consideration of manpower availability;
- g) non-consideration of fund availability; and
- h) negligence of time factor.

What this points to mean is that, for the achievement of the goals of technology education, the curriculum has to be defined and implemented. This is crucial because, there is no education without curriculum. And education without curriculum is like a motorcar without stirring.

### **Educational Implications**

1. According to Ikejiani (1971), our education will be consumptive instead of productive.
2. There will be educated people but none qualified to do the work for the welfare of the people.
3. Our education will lack manpower and equipment for acquisition of skills that prepares one for self-reliance.
4. As a result of theory based education, there will be mass unemployment.
5. The rate of crime rate will increase due to lack of entrepreneurial skills.
6. Poverty rate as a result of negligence of the country's technological development needs.
7. Decrease in advancement of technology and scholarship.

### **Recommendations**

- 1) Indigenous technology should be encouraged to enhance availability of resources, easy impart of skills and consumption of services.
- 2) Foreign curriculum should be discouraged. According to Azikiwe (1985), we should develop our technology pertinent to our culture, problems and aspirations.
- 3) When planning the curriculum for technology education, time factor, fund and availability of resources should be considered.
- 4) Vocational/entrepreneurial skills should go hand in glove with technology education in order to agree.
- 5) The 6-3-3-4 system of education should be implemented to help catch them young.
- 6) The NUC guideline of 60:40 ratio (Science and Technology/Humanities) of admission to the universities with science and technology at the higher percentage should follow, as to encourage science and technology education enrolment.

### **Conclusion**

Transfer of technology and development of technology which is not pertinent to our culture, problems and aspiration is a major lapse in technology education in the country. The education implication of this inadequacy is the production of technologists who lack the technical know-how and whose services are not needed, thereby, creating mass unemployment and retardation in technological advancement. However, the writer is of the opinion that, if the proffered recommendations are followed, there will be a tremendous break-through in the area of technology education in the country.

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